BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION, NEW DELHI

PETITION NO. ____/TL/2023

IN THE MATTER OF:

Fatehgarh III Beawar Transmission Limited ...Petitioners

Versus

Central Transmission Utility of India Limited and Ors. ...Respondents

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PETITIONER

THROUGH

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Mob: +91 9818833778

Date: 05.08.2023
Place: New Delhi

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION, NEW DELHI

PETITION NO. ____/TL/2023

IN THE MATTER OF:

Fatehgarh III Beawar Transmission Limited ... **Petitioner**

VERSUS

Central Transmission Utility of India Limited & Ors. ... **Respondents**

MEMO OF PARTIES

Fatehgarh III Beawar Transmission Limited
Having its office at:
DLF Cyber Park, Tower-B, 9th Floor,
Udyog Vihar, Phase-III, Sector 20,
Gurugram, Haryana – 1220008 ... **Petitioner**

VERSUS

1. **Central Transmission Utility of India Limited**
   Saudamini, Plot No.2, Sector 29,
   Near IFFCO Chowk, Gurugram,
   Haryana – 122001

2. **PFC Consulting Limited**
   First Floor, Urjanidhi, 1,
   Barakhamba Lane, Connaught Place,
   New Delhi – 110011

3. **Central Electricity Authority**
   Seva Bhawan, R.K. Puram,
   New Delhi – 110016

4. **Union Territory of Jammu & Kashmir**
   Power Development Department
   SLDC Building, 1st Floor,
   Gladani Power House,
   Narwal, Jammu – 180006

5. **Union Territory of Ladakh**
   Superintending Engineer, Distribution Circle,
   Power Development Department,
   Choglamsar, Leh – 194101

6. **Powergrid Corporation of India Limited**
B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi – 110016

7. **HVDC Dadri, Powergrid Corporation of India Limited**
B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi – 110016

8. **HVDC Rihand, Powergrid Corporation of India Limited**
B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi – 110016

9. **Union Territory of Chandigarh**
Electricity Wing of Engineering Department,
Room No. 511, 5th Floor,
UT Secretariat (Deluxe) Building,
Sector 9D, Chandigarh – 160009

10. **BSES Rajdhani Power Limited**
BSES Bhawan, Nehru Place,
New Delhi – 110019

11. **BSES Yamuna Power Limited**
B-Block, Shakti Kiran Building,
Near Karkadooma Court, Karkadooma,
New Delhi – 110092

12. **New Delhi Municipal Council**
Palika Kendra, Sansad Marg,
New Delhi – 110002

13. **Tata Power Delhi Distribution Limited**
NDPL house, Hudson Lines Kingsway Camp,
New Delhi – 110009

14. **Himachal Pradesh State Electricity Board**
Vidyut Bhawan, Kumar House Complex Building II,
Shimla, Himachal Pradesh – 171004

15. **Haryana Power Purchase Centre**
Shakti Bhawan, Sector-6,
Panchkula, Haryana –134109

16. **Punjab State Power Corporation Limited**
PP&R, Shed T-1, Thermal Design

Patiala, Punjab – 147001

17. **Ajmer Vidyut Vitran Nigam Limited**
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur, Rajasthan – 302017

18. **Jaipur Vidyut Vitran Nigam Limited**
132 kV, GSS RVPNL Sub-station Building
Caligiri Road, Malviya Nagar,
Jaipur, Rajasthan – 302017

19. **Jodhpur Vidyut Vitran Nigam Limited**
New Power House, Industrial Area,
Jodhpur, Rajasthan – 342003

20. **North Central Railway**
DRM Office, Nawab Yusuf Road,
Prayagraj, Uttar Pradesh – 211011

21. **Uttaranchal Power Corporation Limited**
Urja Bhawan, Kanwali Road,
Dehradun, Uttarakhand – 248001

22. **Uttar Pradesh Power Corporation Limited**
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg,
Lucknow, Uttar Pradesh – 226001

23. **A.D. Hydro Power Limited**
Bhilwara Towers, A-12,
Sector 1, Noida, Uttar Pradesh – 201301

... Respondents

PETITIONER

THROUGH

Gaurav Dudeja, Partner
PHOENIX LEGAL
Advocates for the Petitioner
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Email: gaurav.dudeja@phoenixlegal.in
Mob: +91 9818833778

Place: New Delhi
Date: 05.08.2023

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION, NEW DELHI

PETITION NO. ____/TL/2023

IN THE MATTER OF:

Petition under Sections 14, 15 and 79 (1) (e) of the Electricity Act, 2003 read with the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2009 with respect to grant of transmission license to Fatehgarh III Beawar Transmission Limited.

AND

IN THE MATTER OF:

Fatehgarh III Beawar Transmission Limited ... Petitioner

Versus

Central Transmission Utility of India Limited and Ors. ... Respondents

PETITION UNDER SECTION 14, 15 AND 79(1)(e) OF THE ELECTRICITY ACT, 2003 FOR THE GRANT OF TRANSMISSION LICENCE TO THE PETITIONER

MOST RESPECTFULLY SHEWETH:

1. It is submitted that Fatehgarh III Beawar Transmission Limited ("**FBTL**"), the Petitioner herein, is filing the present Petition under Section 14, 15 and 79(1)(e) of the Electricity Act, 2003 ("**the Act**") read with the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2009 ("**Transmission Licence Regulations**") for grant of a transmission licence for the establishment of "*Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III – Part G*" ("**the Project**") on build, own, operate and transfer ("**BOOT**") basis and to provide transmission services as per the terms of the

Transmission Service Agreement dated 01 August 2023 ("**TSA**"). The details of the Project, as per Schedule 1 of the TSA are as under:

Transmission System Evacuation of Power from REZ in Rajasthan (20GW) under Phase III Part G		
S. No.	***Name of Transmission Element***	***Scheduled COD in months from Effective Date***
1.	*Fatehgarh 3 – Beawar 765kV D/C (2nd) along with 330 MVAR Switchable line reactor for each circuit at each end of Fatehgarh 3 – Beawar 765kV D/C line.* - *Switching equipment for 765kV 330 MVAR switchable line reactor – 4 nos.* - *765kV, 330 MVAR Switchable line reactor – 4 nos.*	*18 months*
2.	*2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3* - *765kV line bays – 4 nos.*	

Note:

i. *Developer of Fatehgarh-3 S/s to provide space for 2 nos. of 765kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.*

ii. *Developer of Beawar S/s to provide space for 2 nos. of 765kV line bays at Beawar S/s along with space for 765kV switchable line reactors.*

2. The need for implementation of the Project was discussed in the 3rd meeting of Northern Regional Power Committee (Transmission Planning) ("**NRPCTP**") held on 19 February 2021 and the Project was approved National Committee on Transmission ("**NCT**") during its 5th meeting held on 25 August 2021 & 02 September 2021. The minutes of the 3rd NRPC meeting held on 19 February 2021 along with the minutes of the 5th NCT meeting held on 25 August 2021 & 02 September 2021 are attached herewith marked as **ANNEXURE – 1 (Colly).**

3. It is submitted that subsequently, the Ministry of Power ("**MoP**"), *vide* its Gazette Notification No. CG-DL-E-08122021-231686 (No. 4661) dated 06 December 2021 ("**MoP Notification**"), in exercise of the powers conferred by sub-para 3.2 of para 3 of Tariff Based Competitive Bidding process ("**TBCB process**") appointed PFC Consulting Limited ("**PFCCL**") as Bid Process Coordinator ("**BPC**") for conducting the bid process for selection successful bidder as the Transmission Service Provider ("**TSP**") for establishment of the Project. The MoP Notification dated 06 December 2021 is attached herewith marked as **ANNEXURE - 2.**

4. On 05 May 2022, the BPC incorporated the Petitioner company under the Companies Act, 2013, as its wholly owned subsidiary, to initiate various activities for execution of the Project and to subsequently act as the TSP. A copy of the Certificate of Incorporation of the Petitioner company is annexed herewith and marked as **ANNEXURE - 3** and a copy of the Memorandum of Association along with the Articles of Association of the Petitioner company is annexed herewith and marked as **ANNEXURE - 4 (Colly).**

5. PFCCL initiated the TBCB process in accordance with the "*Tariff Based Competitive Bidding Guidelines for Transmission Service*" and "*Guidelines for Encouraging Competition in Development of Transmission Projects*" issued by the MoP, dated 10 August 2021 under Section 63 of the Act ("**TBCB Guidelines**"), through single stage two envelope process of Request for Proposal ("**RFP**"). The RFP was issued on 19 January 2022. As per the RFP, the successful bidder was required to acquire 100% of the equity shares of the Petitioner company along with all its related assets and liabilities. A copy of the RFP dated 19 January 2022 along with all the clarifications and amendments issued thereto along with the notices issued by the BPC for extension of bid submission are annexed herewith and marked as **ANNEXURE – 5 (Colly).**

6. It is submitted that Sterlite Grid 19 Limited (**"SGL19"**) was one of the bidders who had submitted their bid for the Project. SGL19 submitted its Technical and Financial Bid-Initial Offer on 12 January 2023, and after the conclusion of e-reverse auction process, on 24 February 2023, SGL19 emerged as the successful

bidder having quoted the lowest levelized transmission charges of INR 1357.57 million per annum.

7. It is also highlighted that for the purposes of evaluating the bids, on 02 March 2023, the Bid Evaluation Committee ("**BEC**") held its 4th meeting ("**BEC Meeting**") and after discussing upon the detailed evaluation report prepared by the BPC ("**BPC Evaluation Report**"), declared SGL19 as the successful bidder and directed that a Letter of Intent ("**LOI**") be issued in favour of SGL19. Subsequently, the BEC issued a corresponding certificate on 02 March 2023 ("**BEC Certificate**"), *inter alia,* declaring that the entire bidding process had been carried out in accordance with the TBCB Guidelines. A copy of the BPC Evaluation Report along with the minutes of the BEC Meeting & the BEC Certificate dated 02 March 2023 are annexed herewith and marked as **ANNEXURE - 6 (Colly).**

8. Thereafter, SGL19 was issued a Letter of Intent ("**LOI**") on 03 March 2023 by the BPC which was unconditionally accepted by the Petitioner. A copy of the LOI dated 03 March 2023 is annexed herewith and marked as **ANNEXURE - 7.**

9. It is most respectfully submitted that the bidding was done on the based on the existing Standard Bidding Documents ("**SBD**"). However, the transmission charges will be shared and recovered as per the mechanism devised by this Hon'ble Commission which is the Point of Connection **("PoC")** mechanism. The transmission scheme would be included in National Transmission Pool for recovering transmission charges through PoC mechanism. The charges will be recovered from the designated Inter-State Transmission Service customers and disbursed to the Petitioner as per the Revenue Sharing Agreement.

10. Further, *vide* letter dated 26 July 2023, the BPC informed SGL19 that the acquisition price for the Special Purpose Vehicle ("**SPV**") is INR 19,66,96,207/- and requested SGL19 to make the requisite payment. The BPC also requested for issuance of a Contract Performance Guarantee ("**CPG**") in favour of the Nodal Agency i.e., the Central Transmission Utility of India Ltd. ("**CTUIL**"), the Respondent No. 1. A copy of the letter dated 26 July 2023 is annexed herewith and marked as **ANNEXURE - 8.**

11. Thereafter, by letter dated 31 July 2023, SGL19 furnished a CGP dated 27 July 2023 for an amount up to and not exceeding to INR 42,00,00,000/- (Rupees Forty-Two Crores), with the expiry date of the CPG being 31 May 2025, further extendable upto 31 May 2026 by the Nodal Agency, i.e., the Respondent No.1. A copy of the letter dated 31 July 2023 along with the CPG is attached herewith and marked as **ANNEXURE - 9.**

12. It is pertinent to note that Clause 2.7.2. and Clause 2.15.2 of the RFP provide for a timeline after issuance of the LOI, which requires signing of the project documents under the RFP and acquisition of the SPV within 10 days of the issuance of the LOI. However, the same was extended by the BPC, *vide* its letter dated 01 August 2023, whereby the BPC extended the timeline envisaged under the RFP, *inter alia*, for acquisition of the SPV and other activities from 13 March 2023 (10 days from the issuance of LOI) till 01 August 2023. A copy of the letter dated 01 August 2023 issued by the BPC is annexed herewith and marked as **ANNEXURE - 10.**

13. On 01 August 2023, after completing all procedural requirements as specified in the bid documents, the acquisition of the SPV was done and SGL19 acquired 100% equity shareholding in the Petitioner Company on 01 August 2023 upon execution of the Share Purchase Agreement (**"SPA"**). On the same day, the Petitioner also executed the TSA with Respondent No. 1/CTUIL. Copies of the SPA dated 01 August 2023 executed between the BPC, the Petitioner and SGL19 and TSA dated 01 August 2023 are annexed herewith and marked as **ANNEXURE - 11** and **ANNEXURE - 12,** respectively.

14. It is humbly submitted that Section 14 of the Act provides that the Appropriate Commission may, on an application made under Section 15 of the Act, grant licence to any person to transmit electricity as a transmission licensee, in any area as may be specified in the licence. The word 'person' has been defined in Section 2(49) of the Act to include any company or body corporate or association or body of individuals, whether incorporated or not, or an artificial juridical person. Therefore, the Petitioner in accordance with the TSA and under Section 14 of the Act, is filing the present Petition, *inter-alia* seeking grant of a Transmission Licence for the Project explained above.

15. Further, it is most respectfully submitted that Section 15(1) of the Act provides that every application under Section 14 shall be made in such manner and in such form as may be specified by the Commission and shall be accompanied with such fees as may be prescribed under Transmission Licence Regulations. As per Regulation 6 of the Transmission Licence Regulations, a person selected through the process under the guidelines for competitive bidding is eligible for grant of licence. It is submitted that the Petitioner company, incorporated under the Companies Act, 2013 is a wholly owned subsidiary of SGL19 who has been selected through the TBCB process, in accordance with the TBCB Guidelines and thus, eligible for the issuance of a Transmission Licence.

16. It is submitted that the grant of transmission license is a condition under the TSA and is also a requirement in law, without which, the Petitioner cannot proceed with the establishment of the Project.

17. It is submitted that this Hon'ble Commission, in the Transmission Licence Regulations, has prescribed Form-I and the fee for making filing application, seeking grant of a Transmission Licence. It is submitted the requisite fee for filing the present petition has been paid by the Petitioner and the prescribed Form-I along with the resolution passed by the Board of Directors of the Petitioner company, is annexed herewith and marked **ANNEXURE - 13 (Colly).**

18. It is submitted that Regulation 7 of the Transmission Licence Regulations, provides the procedure for grant of a licence. This Hon'ble Commission, in exercise of its 'Powers to Relax' under Regulation 24 of the said regulations, has modified/amended the procedure laid down under Regulation 7 of the said Regulations, *vide* its *suo-moto* order dated 22 January 2022, in Petition No. 1/SM/2022 (**"*Suo-moto* order"**). It is therefore submitted that the Petitioner is making the present application in accordance with the procedure established under Regulation 7 of the Transmission Licence Regulations read with the said *Suo-moto* order, passed by this Hon'ble Commission and the relevant provisions of the Act.

19. Pursuant to the above, the Petitioner, in accordance with Regulation 7(4) of the Transmission Licence Regulation, as modified by the *Suo-moto* order, has uploaded the complete application along with all the annexures and enclosures on

the e-filing portal of this Hon'ble Commission, so that the same is served electronically to all the beneficiaries of the Project, registered on the e-filing portal. Further, the Petitioner has served the copy of the present application through e-mail, on the beneficiaries, not registered on the e-filing portal of this Hon'ble Commission. It is submitted that as per Regulation 7(4) read with the said order, the copy of the complete application has been posted on the website of the Petitioner (www.sterlitepower.com), in English and in vernacular language.

20. It is submitted that, as per Regulation 7(5) of the Transmission Licence Regulations and the application shall remain of the Petitioner's website, till the time the licence is issued to the Petitioner or the application is rejected by this Hon'ble Commission.

21. It is further submitted that the Petitioner is submitting/furnishing a copy of the instant application to CTUIL, as required under Section 15(3) of the Act and Regulation 7(6) of Transmission Licence Regulations for its recommendations, simultaneously with the submission of the present Petition before this Hon'ble Commission.

22. It is submitted that the Petitioner shall, in future, comply with all the other requirements from time to time, as stipulated under the Act and the Transmission Licence Regulations read with the *Suo-moto* order, passed by this Hon'ble Commission, and place a report of compliance of the same before this Hon'ble Commission.

Re: Delay in acquisition of SPV

23. Pertinently, there has been considerable delay in acquisition of the SPV after issuance of the LOI, which is for reasons which are entirely beyond the control of the Petitioner. Accordingly, SGL19, *vide* its letter dated 01 April 2023, requested the BPC to expedite the process of acquiring the SPV and the signing of the TSA. Thereafter, on 07 April 2023, SGL19 issued a notice intimating Force Majeure to CTUIL informing that delay in acquisition of SPV has occurred due to reasons attributable to the BPC and was not within SGL19's control. SGL19 sought CTUIL's intervention for expediting the acquisition process. It was further

requested to CTUIL to facilitate the acquisition of the SPV. It was particularly mentioned that even though SGL19 was ready to comply with the conditions under the bid documents and LOI, the acquisition of the SPV has been delayed by the BPC, which has further adversely impacted the timely commencement of the Project, and thus, constituted as a Force Majeure event under the provisions of the TSA. A copy of the letter dated 01 April 2023 and 07 April 2023 are annexed herewith and collectively marked as **ANNEXURE - 14 (Colly)**.

24. It is submitted that simultaneously with the present Petition, the Petitioner has also filed another Petition before this Hon'ble Commission for adoption of the transmission charges.

25. In view of the above, it is submitted that the Petitioner satisfies all the conditions for the grant of an inter-state Transmission Licence under the Act and the Transmission Licence Regulations for the establishment of the Project. Therefore, the Petitioner humbly prays that the aforementioned be taken on record and its prayers be allowed.

PRAYERS

In view of the facts and circumstances stated above, the Petitioner respectfully pray that the Hon'ble Commission may be pleased to:

a) Grant Transmission Licence to the Petitioner;

b) Allow sharing and recovery of Transmission Charges for Inter-State Transmission System for establishment of "*Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III – Part G*" as per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and any other amendments issued thereon from time to time by this Hon'ble Commission; and

c) Condone any inadvertent errors omissions/ errors/ shortcomings and permit the Petitioner to add/change/modify/alter these filings and make further submissions as may be required at a future date.

d) Pass such other order(s) as this Hon'ble Commission may deem fit and proper in the facts and circumstances of this case.

PETITIONER

THROUGH

Gaurav Dudeja, Partner
PHOENIX LEGAL
Advocates for the Petitioner
Phoenix House, 254, Okhla Industrial Estate,
Phase III, New Delhi – 110020
Email: gaurav.dudeja@phoenixlegal.in
Mob: +91 9818833778

Place: New Delhi

Date: 05.08.2023

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION, NEW DELHI

PETITION NO. _____ / TL / 2023

IN THE MATTER OF:

Fatehgarh III Beawar Transmission Limited ...Petitioner

Versus

Central Transmission Utility of India Limited & Ors. ...Respondents

AFFIDAVIT VERIFYING THE PETITION

I, Balaji Sivan, S/o Shri Venkatraman Sivan, aged about 45 years, the Authorized Signatory of the Petitioner herein, having its office at DLF Cyber Park, Tower-B, 9th Floor, Udyog Vihar, Phase-III, Sector 20, Gurugram – 122008, presently in New Delhi, do solemnly affirm and state as follows:

1. I state that I am the Authorized Signatory of the Petitioner in the present matter and I am duly authorized and competent to swear and depose the present Affidavit on behalf of the Petitioner.
2. I state that I have perused the accompanying Petition and state that the facts stated therein are true and correct to the best of my knowledge and belief and based on the records of the Petitioner Company and that the legal submissions made therein are based upon information received by me and believed to be true.
3. I state that the documents filed along with the accompanying Petition are true copies of their respective originals.

I Identify the Deponent Who has Signed in my Presence

Fatehgarh III Beawar Transmission Limited

DEPONENT

VERIFICATION: 04 AUG 2023

Solemnly affirm at New Delhi on this ___ day of August, 2023 that the contents of the above affidavit are true to my knowledge and belief and no part of it is false and nothing material has been concealed therein from.

NOTARY RAM PAL SINGH DELHI Regd. No. 16973 GOVT. OF INDIA

CERTIFIED THAT THE DEPONENT Shri/Smt./Km. Balaji Sivan S/o, W/o, D/o Venkatraman Sivan R/o Delhi Identified ... has ... of the affidavit which ... that the contents ... explained to him are true and correct to his knowledge.

Notary Public, Delhi (INDIA) 04 AUG 2023

Fatehgarh III Beawar Transmission Limited

DEPONENT

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली योजना एवं मूल्यांकन–I प्रभाग

Power System Planning & Appraisal-I Division

सेवा में/**To**

-As per list enclosed-

विषय/Subject: Minutes of 3rd Meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)].

Sir/ Madam,

Please find enclosed the minutes of the 3rd meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)] held on 19.02.2021 through VC. The minutes are also available on CEA's website: www.cea.nic.in (path to access: Home Page - Wing - Power System-PSPA-I- Standing Committee on Power System Planning- Northern Region).

Yours faithfully,

Signature Not Verified
Digitally signed by ISHAN SHARAN
Date: 2021.05.09 22:26:37 IST

(ईशान शरण/ Ishan Sharan)

मुख्य अभियन्ता/ Chief Engineer

True Copy

1.	Chairperson, CEA, Sewa Bhawan, New Delhi-110066	2.	Member (Power System), CEA, Sewa Bhawan, New Delhi-110066	3.	Member Secretary, NRPC, 18-A Shajeed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi - 110016 (Fax-011-26865206)
4.	MD, SECI, Prius Platinum, D-3, District Centre, Saket, New Delhi - 17	5.	COO (CTU) POWERGRID, Saudamini, Plot no. 2, Sector -29, Gurgaon-122 001 (Fax-0124-2571809)	6.	Chief GM(C&SO), SJVNL, Corporate Office Complex, Shanan, Shimla- 171006
7.	Director (PP&D) RVPN, 3rd Floor, Room no 330, Vidhyut Bhawan, Janpath, Jaipur-302005.	8.	Director (Technical) HVPNL Shakti Bhawan, Sector-6 Panchkula-134109	9.	Director (Technical) HPSEB Ltd. VidutBhawan, Shimla -171004 Fax-0177-2813554
10.	Managing Director, HPPTCL, Barowalias, Khalini Shimla-171002 Fax-0177-2623415	11.	Chief Engineer (Operation) Ministry of Power, UT Secretariat, Sector-9 D Chandigarh -161009 Fax-0172-2637880	12.	Director (W &P) UPPTCL, Shakti Bhawan Extn,3rd floor, 14, Ashok Marg, Lucknow - 226 001 (Fax:0522-2287822)
13.	Director (Projects), PTCUL, Vidhyut Bhawan, Near ISBT Crossing, Saharanpur Road, Majra, Dehradaun-248002	14.	Director (System Operation), POSOCO B-9, Qutab Institutional Area, Katwaria Sarai New Delhi – 110010	15	Chief Engineer (System & Operation Wing), JKPDD, Grid Substation Complex, Janipur, Jammu-180006
16.	Director (Technical), Punjab State Transmission Corporation Ltd. (PSTCL)Head Office The Mall Patiala - 147001	17.	Development Commissioner (Power), JKPDD, Jehangir Complex, Exhibition Grounds, Srinagar		

Minutes of the 3rd Meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)] held on 19.02.2021:

List of participants is enclosed at **Annexure-A.**

1.0 Confirmation of the Minutes of the 2nd meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)] held on 01.09.2020

1.1 CEA stated that the 2nd meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)] was held on 01.09.2020 and the minutes of the meeting had been issued vide CEA letter no. CEA-PS-11-21(19)/3/2019-PSPA-I Division dated 12.11.2020.

1.2 As no comments/observations were received from the constituents, the minutes of 2nd meeting of NRPC(TP) issued vide CEA letter no. CEA-PS-11-21(19)/3/2019-PSPA-I Division dated 12.11.2020 were confirmed.

2.0 Transmission System requirement for additional 20GW REZ in Northern Region (Phase-III)

2.1 CEA stated that the transmission system for additional 20 GW REZ was envisaged in Rajasthan and was discussed in the 2nd meeting of NRPC(TP) held on 01.09.2020, wherein 2 alternatives were discussed, one with HVAC system and other with Hybrid system (HVAC+HVDC). After deliberations, it was decided that all the constituents would send their comments/suggestions and accordingly the same would be incorporated in the studies and would be deliberated in the next NRPC(TP) meeting.

2.2 Based on the load flow studies related observations received from POSOCO, Punjab, Haryana, Rajasthan and UP, revised system studies for 20 GW RE potential were carried out and two alternatives were proposed for evacuation of power from 20GW generations in Phase-III:

Alternative1 –HVAC

Proposed transmission system includes following transmission elements:

i) Establishment of 8x500 MVA 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor
ii) Establishment of 7x1500 MVA 765/400kV & 10x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor
iii) Establishment of 2x500 MVA, 400/220 kV pooling station at Ramgarh (ISTS) along with 2x125 MVAr Bus Reactor (provision to upgrade at 765kV level)
iv) Fatehgarh-3- Fatehgarh-4 400 kV 2xD/c(Quad) line (50 km)
v) Fatehgarh 4 - Bhadla-3 400 kV D/c line(Quad) (200 km) along with 80 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 4 - Bhadla-3 400kV D/c line
vi) Establishment of 2x1500MVA station at suitable location near Phulera along with 2x330 MVAr Bus Reactor & 2x125 MVAr bus Reactor
vii) Ramgarh (ISTS) – Bhadla-3 765kV D/c line (180 km) (Charged at 400 kV) along with 80 MVAr line reactor on both ends at each circuit
viii) Bhadla-3 – Phulera 765 kV 2xD/c line (340 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Phulera 765 kV 2xD/c line
ix) Phulera- Sikar-II 765 kV D/c(90 Km)
x) Phulera – Ajmer (PG) 400kV D/c line (Quad) (110km)
xi) Sikar-II – Khetri 765 kV D/c line (90 Km)
xii) Sikar-II – Narela 765 kV D/c line (260 Km) along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line

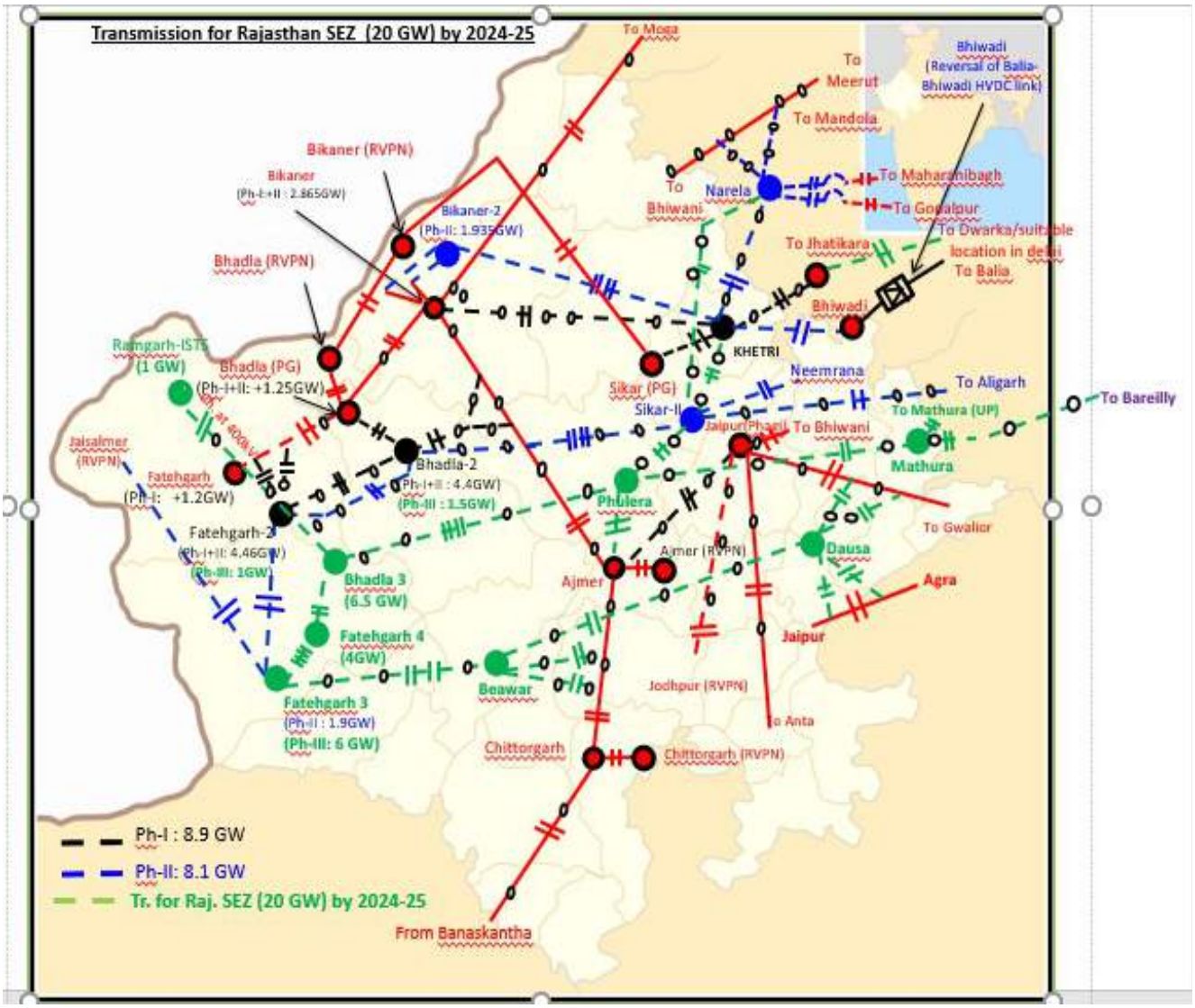
xiii) Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)
xiv) Augmentation with 400/220kV, 1x500MVA Transformer (10th) at Fatehgarh-2 PS
xv) Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS
xvi) Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG)
xvii) Jhatikara – Dwarka 400kV D/c line (Quad) (20km)
xviii) Establishment of 7x1500 MVA 765/400kV & 5x500 MVA 400/220 kV pooling station at Fatehgarh-3 (section-2-new section) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr,765kV & 2x125 MVAr, 400kV Bus Reactors
xix) Augmentation of 1x500 MVA ICT (5th), 400/220kV ICT at Fatehgarh-3 Substation (section-1)
xx) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Mathura along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor
xxi) Phulera – Mathura 765 kV D/c line (280 km) along with 1x240 MVAr Switchable line reactor for each circuit at each end of Phulera – Mathura 765 kV D/c line
xxii) Mathura – Mathura (UPPTCL) 400 kV D/c (quad) interconnection(10 km)
xxiii) Mathura – Bareilly 765 kV D/c line (220 km) along with 1x240 MVAr Switchable line reactor for each circuit at each end of Mathura – Bareilly 765 kV D/c line
xxiv) Establishment of 765kV switching station at suitable location near Beawar along with 2x330 MVAr 765 Bus Reactor
xxv) Fatehgarh-3– Beawar 765 kV 2xD/c (350 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line
xxvi) LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar (45 km)
xxvii) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor
xxviii) Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end
xxix) LILO of both circuits of Jaipur-Gwalior 765 kV D/c at Dausa along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line
xxx) LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa along with 80 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line
xxxi) STATCOM:
- Fatehgarh – III S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC , 2x125 MVAr
  MSR
- Bhadla–3 S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC , 2x125 MVAr MSR

Note:

1. *Provision of suitable sectionalization shall be kept at Fatehgarh-3, Fatehgarh-4, Bhadla-3, Ramgarh (ISTS) pooling stations at 400kV & 220kV level to limit short circuit level*
2. *400kV/220kV bays for termination of developer feeders are not considered under the present scope. It is assumed that bays to be implemented by applicant.*
3. *Reactive power support (both leading & lagging) from Solar Generation has been considered for 0.98 pf*

4. *Line loading limit of 765kV lines under N-1 contingency is considered as 3500MW.*
5. *UPPTCL to confirm space provision for 2 nos. of 400kV bays and 400/220kV ICT (3rd) at Mathura or Replacement of one 315MVA ICT with 500MVA*

Estimated Cost: Rs 19,900 Cr



Alternative 2: –HVAC+HVDC

Proposed transmission system includes following elements:

i) Establishment of 8x500 MVA 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor

ii) Establishment of 4x1500 MVA 765/400kV & 10x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor

iii) Establishment of 2x500 MVA, 400/220 kV pooling station at Ramgarh (ISTS) along with 2x125 MVAr Bus Reactor (provision to upgrade at 765kV level)

iv) Fatehgarh-3- Fatehgarh-4 400 kV 2xD/c(Quad) line (50 km)

v) Fatehgarh 4- Bhadla-3 400 kV D/c line(Quad) along with 80 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 4- Bhadla-3 400kV D/c line (200 km)

vi) Ramgarh (ISTS) – Bhadla-3 765kV D/c line(180 km) (Charged at 400kV) along with 80 MVAr line reactor on both ends at each circuit

vii) Bhadla-3 – Sikar-II 765 kV D/c line (350 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Sikar-II 765 kV D/c line

viii) Sikar-II – Khetri 765 kV D/c line (90 Km)

ix) Sikar-II – Narela 765 kV D/c line (260 Km) along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line

x) Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)

xi) Augmentation with 400/220kV, 1x500MVA Transformer (10th) at Fatehgarh-2 PS

xii) Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS

xiii) Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG)

xiv) Jhatikara – Dwarka 400kV D/c line (Quad) (20km)

xv) Establishment of 7x1500 MVA 765/400kV & 5x500 MVA 400/220 kV pooling station at Fatehgarh-3 (section-2-new section) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr,765kV & 2x125 MVAr, 400kV Bus Reactors

xvi) Augmentation of 1x500 MVA ICT (5th), 400/220kV ICT at Fatehgarh-3 Substation (section-1)

xvii) Establishment of 765kV switching station at suitable location near Beawar along with 2x330 MVAr 765 Bus Reactor

xviii) Fatehgarh-3– Beawar 765 kV 2xD/c (350 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line

xix) LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar (45 km)

xx) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor

xxi) Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end

xxii) LILO of both circuits of Jaipur-Gwalior 765 kV D/c at Dausa (40km) along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line

xxiii) LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa (30km) along with 80 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line

xxiv) 5000MW, ±500KV VSC HVDC terminal at Bhadla-3 substation

xxv) 5000MW, ±500KV, Fatehpur VSC HVDC terminal station at suitable location near Fatehpur

xxvi) Establishment of 5x1500MVA, 765/400KV ICT at pooling station at suitable location near Fatehpur along with 2x330MVAr (765kV) bus reactor

xxvii) ±500KV HVDC line (Quad lapwing-2 loops) between Bhadla-3 & Fatehpur (950km)

xxviii) LILO of both ckts of 765kV Varanasi – Kanpur D/c at Fatehpur(30km)

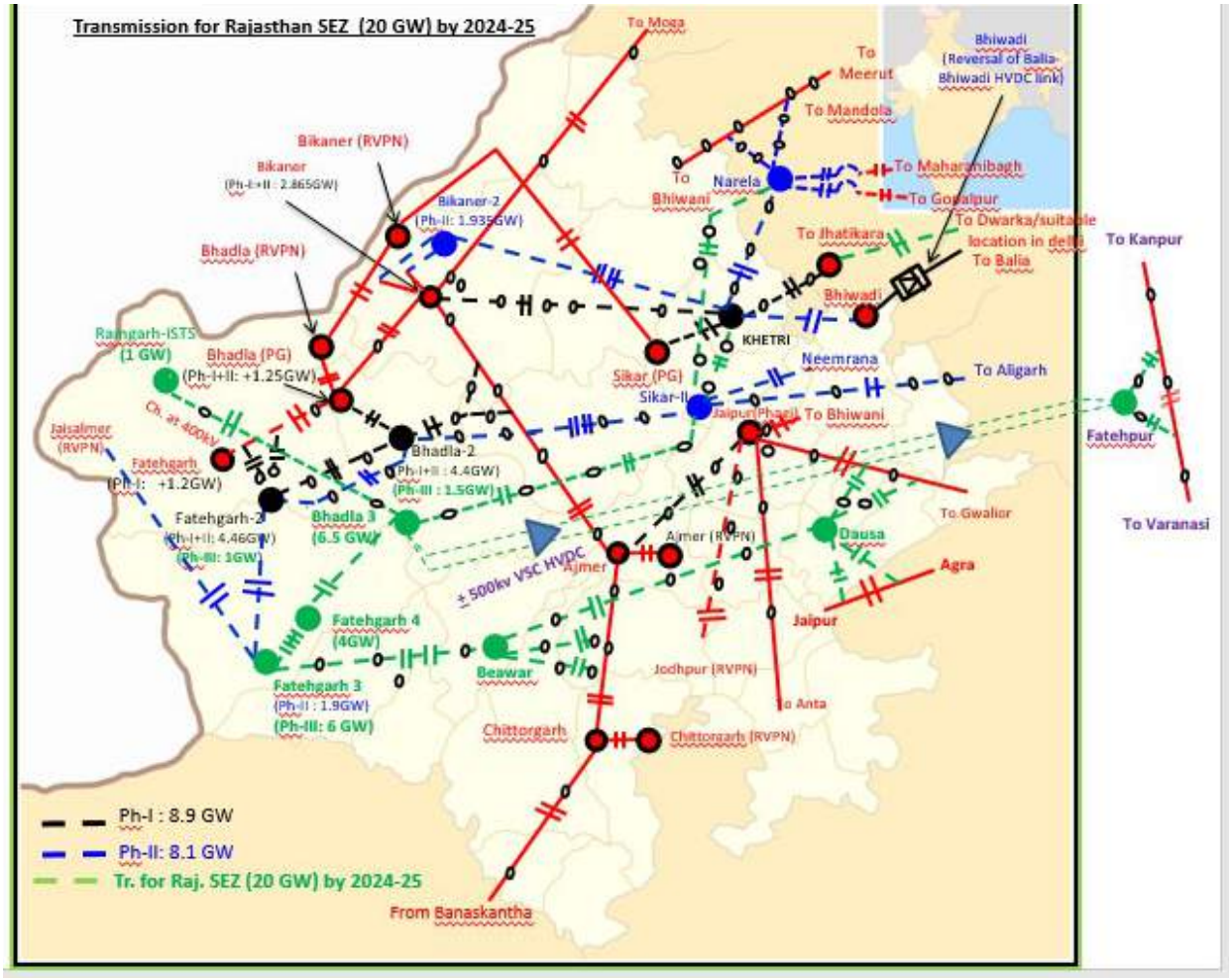
xxix) Augmentation of 1x1500MVA ICT 765/400kV at Kanpur 765kV substation

Note:

1. *Provision of suitable sectionalization shall be kept at Fatehgarh-3, Fatehgarh-4, Bhadla-3, Ramgarh (ISTS) pooling stations at 400kV & 220kV level to limit short circuit level*

2. *400kV/220kV bays for termination of developer feeders are not considered under the present scope. It is assumed that bays to be implemented by applicant.*
3. *Reactive power support (both leading & lagging) from Solar Generation has been considered for 0.98 pf*
4. *Line loading limit of 765kV lines under N-1 contingency is considered as 3500MW.*

Estimated Cost: Rs 25,900 Cr



2.3 The above proposed transmission system along with the load flow studies was shared with the constituents of Northern Region. Subsequently, to discuss the proposed system, a meeting was held on 22.01.2021 with the constituents in which following observations were shared by the constituents:

(i) RVPN indicated that out of REZ Ph-III (20 GW) Solar Potential, 3 GW solar capacity shall be planned under Intra state transmission, therefore ISTS may be planned for balance 17 GW under REZ Ph-III. RVPN also submitted anticipated locations of additional 3 GW Solar capacity vide letter dated 25.01.21. In addition, merit order dispatches for intra state (Rajasthan) conventional generators, were also shared. In the meeting, SECI indicated that Inter-state transmission system should be planned for REZ Ph-III (20 GW) only and RVPN may plan additional system for 3 GW intra-state solar.

(ii) SECI also indicated that evacuation for capacity of at least 2.9 GW at Ramgarh be planned under Phase III so as to match the total planned requirement of Phase-I, II &

III at Ramgarh. SECI indicated that 1.9 GW of planned capacity under Phase -II was shifted to Fatehgarh area due to technical constraints of GIB area earlier. Accordingly, evacuation for additional capacity only for 9.1 GW at Fatehgarh area be planned under Phase -III so as to match the total planned requirement of Phase-I, II & III at Fatehgarh and Ramgarh capacity may be considered as 2.9 GW. This will equalize the distribution of capacity at different areas as intimated by SECI in Feb 2020 and nullify the impact due to shifting of Ramgarh to Fatehgarh area. Further, Stage-II connectivity for a capacity of 2 GW at Ramgarh is already granted by CTU and this area is also of high RE potential for solar, wind and hybrid.

(iii) UPPTCL commented that though all their comments have been addressed but their anticipated peak demand of 31,500 MW for 2024-25 has not been considered to which CTU clarified that since UPPTCL encounters maximum demand in evening, above may be considered commensurate to evening peak scenario, however ratio of their afternoon & evening demand may be considered based on present trends. Accordingly, NRLDC/POSOCO was requested to share demand trends of all NR states for above scenario.

(iv) POSOCO gave the following observations:

(a) Demand pattern of WR may be reconsidered as load in afternoon is relatively higher than in evening. Further, Solar generation in NR is considered as 100% whereas in other region as 60% and needs to be reviewed.

(b) In HVAC scenario, all 04 no. 765 kV lines from Bhadla-3 and Fatehgarh-3 are terminating at one station (Phulera in case of Bhadla-3 and Beawar in case of Fatehgarh-3). These lines are evacuating more than 8000 MW from respective stations and in case of complete outage of any of the stations, 400 kV system will not be sufficient and this may cause large disturbance. Same case will be the case for Fatehgarh-3 in HVDC alternative also.

(c) Dynamic studies especially in cases where angular separation is crossing 20 degrees under 'N-1'contingency may be carried out to ascertain system stability in the proposed schemes.

(d) In peak solar dispatch case, loading of 765 kV Phulera - Bhadla 2xD/C, 765 kV Fatehgarh 3 - Beawar 2xD/C and 765 kV Phulera - Mathura D/C is very high and angular separation between stations is crossing 20 degrees for all these lines under 'N-1' scenario.

(e) In the study cases, instead of individual ICTs at a particular station, the whole transformation capacity has been modelled as a single transformer thereby, making it difficult to identify 'N-1' noncompliance at some stations like 765/400 kV Jodhpur Kankani ICTs (2316 MW total), Bikaner (2051 MVA total), Narela (3400 MVA total) etc.

(f) High fault level (>40 kA) has been observed at several 400 kV buses of northern region. Same needs to be addressed.

(g)0.98 lagging power factor has been considered for various solar generators in the complex which are providing reactive power support in study cases. However, in real-time, it has been observed that there is net MVAR drawl by solar generators.

(h)High loadings in base case:

- 400 kV Bhinmal - Zerda is overloaded in both HVAC and HVDC solar peak cases. 400 kV Barmer- Bhinmal is also 'N-1'non-compliant.

- 400 kV Singrauli - Anpara is overloaded in both HVAC and HVDC evening cases.
- 400/220 kV ICTs at several other locations such as Nakodar, Ludhiana, Sohna Road, Hindaun, Kota, Chittorgarh, Kashipur are 'N-1' non-compliant.

(v) On the above observations of POSOCO, CTU gave following clarifications:

(a) Regarding POSOCO's observation that solar generation in NR has been considered as 100% whereas other region as 60%, CTU had clarified that dispatch level of solar generations considered in other regions are based on the decision taken while carrying out all-India Studies for integration of power from identified Renewable Energy Zones in 2021-22 with CEA & POSOCO in September/October, 2019. However, it was agreed that sensitivity studies would be carried out for higher solar dispatches (90-100%) in contiguous regions like WR/Gujarat for Solar peak scenario to assess the transmission system requirement. However, it is observed that this would require further ramp down of dispatched central sector thermal units upto 40-45% instead of earlier assumed value of 55% (technical minimum) as well as state sector (Intra) thermal generation to lower limits of 55-70% instead of earlier assumed value of 55-85%.

(b) Regarding POSOCO's observation of the modelling of whole transformation capacity as a single transformer, CTU informed that it won't make any difference in load flow studies whether the transformers are modelled as 10 transformers of 500 MVA or one transformer of 5000 MVA. If all the transformers are individually modelled, then representing them in a PSS/E SLD drawing will be cumbersome and lot of overlapping will make it difficult to draw and understand. Therefore, for ease of representation and drawing clarity, transformers have been combined and represented as a single transformer with equivalent impedance. For identifying N-1 compliance, these transformers may be replaced by individual transformers and checked, if required.

(c) Regarding mitigation measures for high fault level (>40 kA) at several 400 kV buses of northern region, CTU stated that in the 32nd SCPSPNR meeting, a number of series line reactors, series bus reactors and bus split arrangement at Bawana and Dadri were proposed in order to contain the short circuit level of the substations associated with NCR ring. After detailed deliberation, it was agreed that only Series line reactor (single phase unit of 75 MVAr, 12 ohms) of 400 kV Dadri-Mandola-I & II at Mandola end along with Series Bus reactor at Mandola & Ballabgarh end were agreed to be implemented under Phase-I and it was decided that rest of the proposed elements may be taken up after gaining operational experience. The above agreed series reactors have been commissioned. Further, in 44th NRPC meeting held on 19.03.2019, NRLDC indicated that commissioning of above reactors has brought down the three phase short circuit level at Dadri, Mandola & Ballabgarh by ~ 10, 20 & 14 kA respectively.

CTU further stated that subsequently, in 39th SCPSPNR meeting held on 29-30 May, 2017, issue of high short circuit level in various substations in NR was discussed. Accordingly, measures to control high short circuit level i.e. bus split arrangement, installation of series reactors and reconfiguration of feeders in seven pockets namely Delhi NCR, Meerut Area, Kanpur Area, Bhiwani Area, Singrauli Area, Lucknow Area and Agra were proposed. It was also suggested that reduction of short circuit level by reconfiguration of feeders, wherever suggested, is a least

cost and least time taking solution and may be taken up for implementation immediately. The other measures suggested such as bus sectionalisation and series reactors may be taken for implementation subsequently in a phased manner. On this, CTU stated that corrective measure taken at one substation will have a dispersed effect in reducing short circuit current in neighbouring substation. It was further informed that if reactors are being implemented in a phased manner, the short circuit level may be higher than the study results and it will reduce further only when other proposed measures are taken up for implementation subsequently. After detailed deliberations, it was agreed to implement measures to control short circuit level in two pockets namely Kanpur and Bhiwani. However, if all the proposed measures in remaining areas shall be implemented, the issue of high short circuit level may be addressed.

(d) Regarding high loading in Bhinmal-Zerda line, CTU informed that from studies, it emerged that loading of 400 kV Bhinmal-Zerda line is critically high due to injection from intra-state RE complex in western Rajasthan. It is observed that loading of Barmer-Bhinmal is mainly due to incremental intra-state RE generation in Jaisalmer, Barmer and Ramgarh area. According to information provided by RVPN, cumulative capacity of 5,600 MW of Wind and 4,700 MW of Solar generation will be connected to intra-state system mainly in Jaisalmer and Barmer district by 2024-25. The same is incorporated in study files as per RVPN data. The main evacuation path available for above intra- state RE generation is through Kankani/Jodhpur & Barmer. From the studies, it was observed that more power is rushing towards Bhinmal and causing overloading beyond Barmer/Bhinmal.

An additional case has been carried out in alterntiave-2 to observe impact of injection of power from Fatehgarh-3 to Jaisalmer-2, results of which are as under:

Case	Fathergarh3-Jaisalmer2 400 kV Line Loading (MW)	Barmer Bhinmal 400 kV Line Loading (MW)
With Fatehgarh3-Jaisalmer-2 400 kV line	2x830	2x773; N-1 (1123)
Without Fatehgarh3-Jaisalmer-2 400 kV Line	NA	2x677; N-1 (987)

It was observed that even without injection from Fatehgarh-3 to Jaisalmer-2, 400 kV Barmer-Bhinmal (twin moose) line (144 km) & corridors beyond Bhinmal are critically loaded due to intra-state RE generation. For this, RVPN may need to evolve suitable strengthening in intra-state system. Additionally, 400/220 kV transformer augmentation at Chittorgarh (RVPN) is also required.

(vi) PSTCL indicated that another scenario for minimum demand hours in Northern Region may also be carried out for above study period. Based on NRLDC/POSOCO inputs on demand patterns of NR, it was decided that morning lean hours having minimum demand with no solar generation shall be simulated to see the impact on thermal dispatches as well as voltage management issues.

2.4 Accordingly, based on above discussions, following redistribution of potential were carried out for further studies.

S.No	Complex	Potential (Ph-III) - 20GW (2nd NRPC-TP) (As per SECI)	Modified potential based in VC study meeting on 22.01.21 & CEA meeting on 29.01.21 (GW)	RE Pooling point	Modified Ph-III (20GW) Generation considered in studies (GW)
1	Bhadla	8	8	Bhadla	0
				Bhadla-2	1.5
				Bhadla-3	6.5
					8
2	Fatehgarh	11	9.1	Fatehgarh	0
				Fatehgarh-2	1
				Fatehgarh-3 (Section-2+ part sec-1)	6
				Fatehgarh-4	2.1
				Sub total	**9.1**
3	Bikaner	0	0	Bikaner	0
				Bikaner-2	0
4	Ramgarh	1	2.9	Ramgarh ISTS	**2.9**
		20	**20**		**20**

The studies were carried out for Rajasthan ISTS SEZ (37 GW) [Ph-1: 8.9 GW; Ph-II-8.1 GW; Ph-III: 20 GW] in Western Rajasthan. Additionally, Rajasthan Intra-State Solar addition of about 7.3 GW (total Solar capacity of about 10.4 GW) as well as 3.3 GW Inter - state Solar parks capacity was also considered in the studies.
Further redistribution of Ph-I&II (17 GW) generation considered based on St-II/LTA granted at Bhadla (PG), Bhadla-2, Fatehgarh-2, Bikaner & Bikaner-II pooling stations and any spill over generation granted on above pooling stations was adjusted from Ph-III potential.

2.5 In the meeting held on 22.01.2021, constituents had requested to carry out the load flow studies for lean period also along with afternoon and evening scenarios. Based on the above, studies were carried out again incorporating the observations of the constituents with the two alternatives in 3 scenarios i.e. afternoon, evening and morning lean hours having minimum demand. Also, as suggested by POSOCO, one more case was simulated with alternative-2 (Hybrid system EHVAC+HVDC) in the afternoon scenario with 100% solar dispatches from WR/Gujarat. Load flow studies for these seven cases were circulated by CEA vide email dated 16.02.2021 along with a note which contained proposed

transmission system along with all the assumptions that were considered while carrying out the load flow studies.

2.6 Further, in view of higher SCR ratio at various buses, VSC v/s LCC HVDC technology was reviewed for further optimisation of techno-economics (VSC Converter is 30% costlier than LCC converter). It is seen that in view of the SCR of Bhadla-3 & Fatehgarh bus of 2.8 & 3.8 respectively, LCC HVDC technology may be considered. Further, to take care of voltage stability requirements, STATCOM at various buses may be planned along with LCC HVDC.

Based on the above, revised scheme proposed under both the alternatives are as under:

Alternative-1: EHVAC Proposal

i) Establishment of 5x500 MVA 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor
ii) Establishment of 5x1500 MVA 765/400kV & 10x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Reactor
iii) Establishment of 3x1500 MVA 765/400kV & 2x500 MVA 400/220 kV pooling station at Ramgarh-1 along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor
iv) Fatehgarh-2 – Bhadla-3 400kV D/c line (Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 2- Bhadla-3 400kV D/c line (200 km)
v) Fatehgarh-4 - Fatehgarh-3 400 kV 2xD/c(Quad) line (50 km)
vi) Fatehgarh 3 - Bhadla-3 400 kV D/c line(Quad) (200 km) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 3 - Bhadla-3 400kV D/c line
vii) Ramgarh - Bhadla-3 765kV D/c line(180 km) along with 240 MVAr line reactor at each circuit at Ramgarh end of Ramgarh – Bhadla-3 765kV D/c line
viii) Establishment of 2x1500MVA station at suitable location near Phulera along with 2x330 MVAr Bus Reactor & 2x125 MVAr bus Reactor
ix) Bhadla-3 – Phulera 765 kV 2xD/c line (340 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Phulera 765 kV 2xD/c line
x) Phulera- Sikar-II 765 kV D/c (90 Km)
xi) Phulera – Ajmer (PG) 400kV D/c line (Quad) (110km)
xii) Sikar-II – Khetri 765 kV D/c line (90 Km)
xiii) Sikar-II – Narela 765 kV D/c line (260 Km) along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line
xiv) Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)
xv) Augmentation with 400/220kV, 1x500MVA Transformer (10th) at Fatehgarh-2 PS
xvi) Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS
xvii) Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG)
xviii) Jhatikara – Dwarka 400kV D/c line (Quad) (20km)
xix) Establishment of 7x1500 MVA 765/400kV & 5x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section*) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr,765kV & 2x125 MVAr, 400kV Bus Reactors

xx) Augmentation of 1x500 MVA ICT (5th), 400/220kV ICT at Fatehgarh-3 Substation (section-1)

xxi) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Mathura along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor

xxii) Phulera – Mathura 765 kV D/c line (280 km) along with 1x240 MVAr Switchable line reactor for each circuit at each end of Phulera – Mathura 765 kV D/c line

xxiii) Mathura – Mathura (UPPTCL) 400 kV D/c (quad) interconnection (10 km)

xxiv) Mathura – Bareilly 765 kV D/c line (220 km) along with 1x240 MVAr Switchable line reactor for each circuit at each end of Mathura – Bareilly 765 kV D/c line

xxv) Establishment of 2x1500MVA 765/400kV Substation at suitable location near Beawar along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor

xxvi) Fatehgarh-3– Beawar 765 kV 2xD/c (350 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line

xxvii) LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar (45 km)

xxviii) LILO of 400kV Kota –Merta line at Beawar (20 km)

xxix) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor

xxx) Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end

xxxi) LILO of both circuits of Jaipur(Phagi)-Gwalior 765 kV D/c at Dausa along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line

xxxii) LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa along with 50 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line

xxxiii) Augmentation with 1x1500 MVA ICT (7th) at Fatehgarh-2 PS

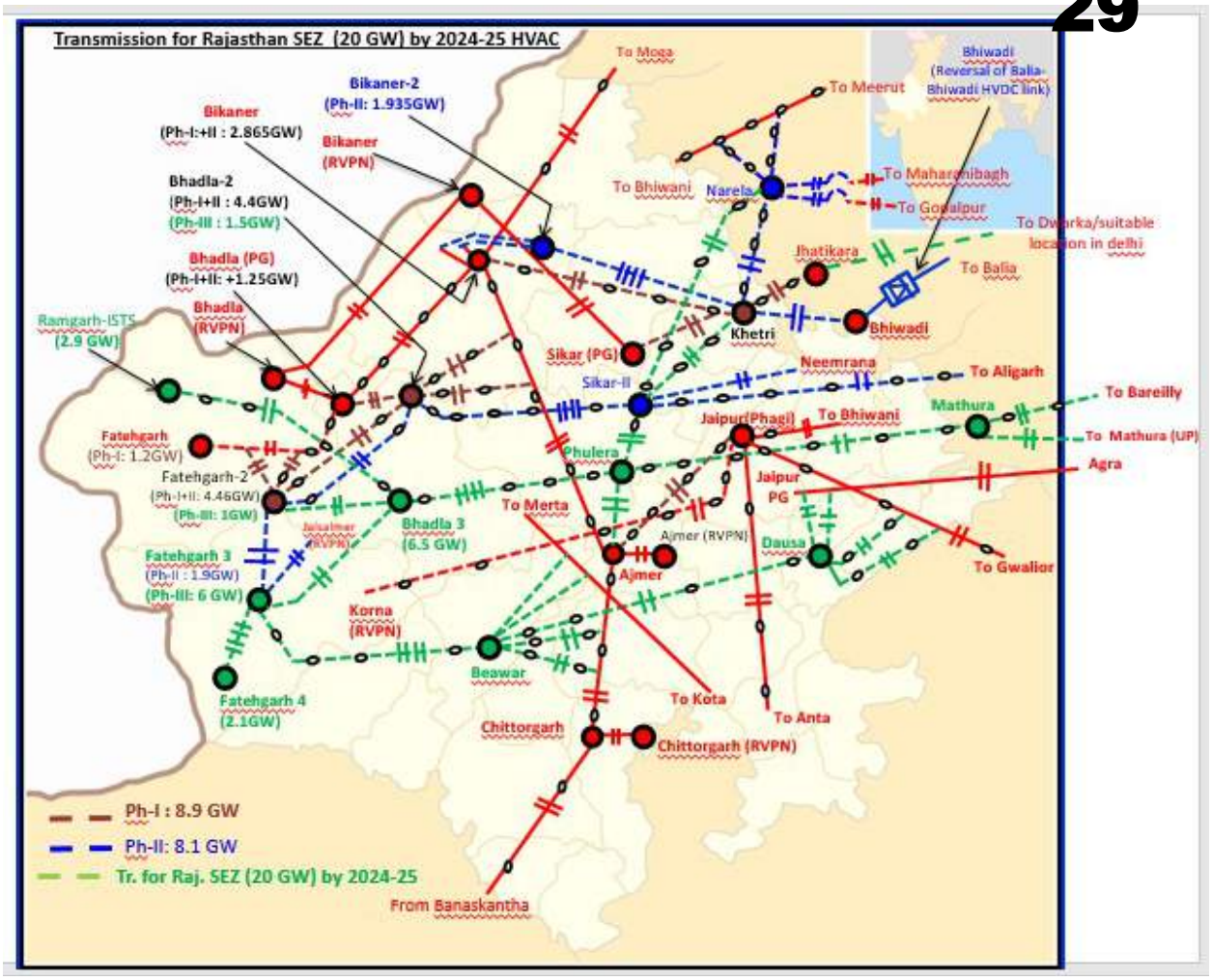
xxxiv)STATCOM:

- Fatehgarh – 3 S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC , 2x125 MVAr MSR
- Bhadla–3 S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC , 2x125 MVAr MSR

Note :

1. *Provision of suitable sectionalization shall be kept at Fatehgarh-3, Fatehgarh-4, Bhadla-3, Ramgarh pooling stations at 400kV & 220kV level to limit short circuit level*
2. *Reactive power support (both leading & lagging) from Solar Generation has been considered for 0.98 pf*
3. *Line loading limit of 765kV lines under N-1 contingency is considered as 3500MW.*
4. *UPPTCL to confirm space provision for 2 nos. of 400kV bays and 400/220kV ICT (3rd) at Mathura or Replacement of one 315MVA ICT with 500MVA*
5. *RVPN to confirm space provision for 2 nos. of 400kV bays and 400/220kV ICT (3rd) at Chittorgarh (RVPN)*
6. *Fatehgarh-3 PS to be sectionalised*

Estimated Cost: Rs 20,850 Cr



Alternative-2 : EHVAC + HVDC (LCC)

i) Establishment of 5x500 MVA 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor

ii) Establishment of 2x1500 MVA 765/400kV & 10x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus Reactor

iii) Establishment of 3x1500 MVA 765/400kV & 2x500 MVA 400/220 kV pooling station at Ramgarh along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor

iv) Fatehgarh-2 – Bhadla-3 400kV D/c line (Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 2- Bhadla-3 400kV D/c line (200 km)

v) Fatehgarh-4- Fatehgarh-3 400 kV 2xD/c(Quad) line (50 km)

vi) Fatehgarh 3- Bhadla-3 400kV D/c line(Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 3- Bhadla-3 400kV D/c line (200 km)

vii) Ramgarh – Bhadla-3 765kV D/c line(180 km) along with 240 MVAr line reactor at each circuit at Ramgarh end of Ramgarh – Bhadla-3 765kV D/c line

viii) Establishment of 2x1500MVA station at suitable location near Phulera along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420 kV) bus Reactor

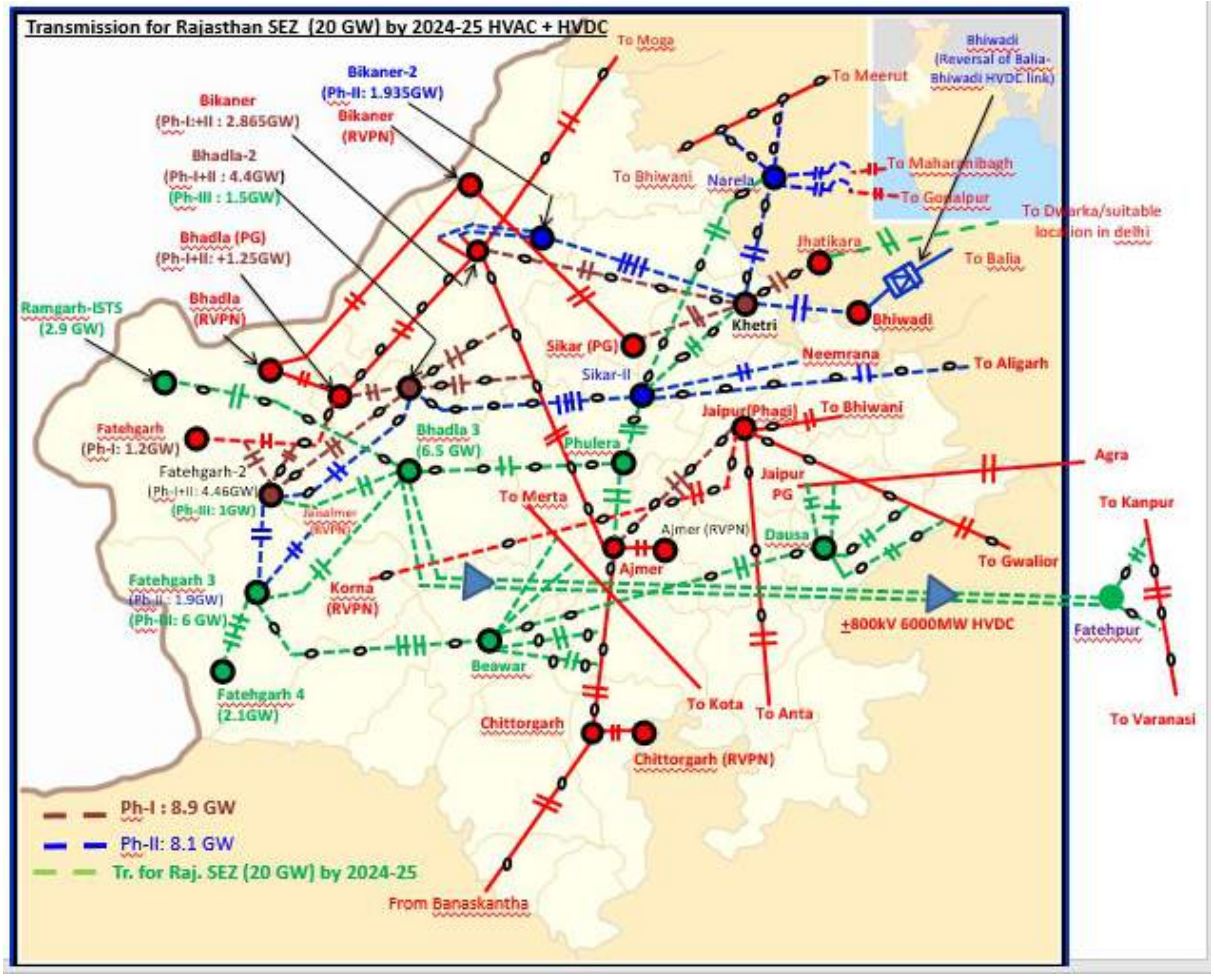
ix) Bhadla-3 – Phulera 765 kV D/c line (340 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Phulera 765 kV D/c line
x) Phulera- Sikar-II 765 kV D/c(90 Km)
xi) Phulera – Ajmer (PG) 400kV D/c line (Quad) (110km)
xii) Sikar-II – Khetri 765 kV D/c line (90 Km)
xiii) Sikar-II – Narela 765 kV D/c line (260 Km) along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line
xiv) Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)
xv) Augmentation with 400/220kV, 1x500MVA Transformer (10th) at Fatehgarh-2 PS
xvi) Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS
xvii) Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG)
xviii) Jhatikara – Dwarka 400kV D/c line (Quad) (20km)
xix) Establishment of 6x1500 MVA 765/400kV & 5x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section*) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr,765 kV & 2x125 MVAr, 420kV Bus Reactors
xx) Augmentation of 1x500 MVA ICT (5th), 400/220kV ICT at Fatehgarh-3 Substation (section-1*)
xxi) Establishment of 2x1500MVA 765/400kV Substation at suitable location near Beawar along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor
xxii) Fatehgarh-3– Beawar 765 kV 2xD/c (350 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line
xxiii) LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar (45 km)
xxiv) LILO of 400kV Kota –Merta line at Beawar (20 km)
xxv) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr Bus Reactor & 2x125 MVAr Reactor
xxvi) Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end
xxvii) LILO of both circuits of Jaipur(Phagi)-Gwalior 765 kV D/c at Dausa (40km) along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line
xxviii) LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa (30km) along with 50 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line
xxix) 6000MW, ±800KV HVDC terminal at Bhadla-3 substation
xxx) 6000MW, ±800KV HVDC terminal station at suitable location near Fatehpur (UP)
xxxi) Establishment of 5x1500MVA, 765/400KV ICT at pooling station at suitable location near Fatehpur along with 2x330MVAr (765kV) bus reactor
xxxii) ±800KV HVDC line (Hexa lapwing) between Bhadla-3 & Fatehpur (950km)
xxxiii) LILO of both ckts of 765kV Varanasi – Kanpur (GIS) D/c at Fatehpur(30km)
xxxiv) Augmentation of 1x1500MVA ICT at 765/400kV Kanpur(GIS) substation
xxxv) STATCOM :

- Fatehgarh – III S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC, 2x125 MVAr
  MSR
- Ramgarh/Bhadla–3 S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR

Note :

1. *Provision of suitable sectionalization shall be kept at Fatehgarh-3, Fatehgarh-4, Bhadla-3, Ramgarh pooling stations at 400kV & 220kV level to limit short circuit level*
2. *Reactive power support (both leading & lagging) from Solar Generation has been considered for 0.98 pf*
3. *Line loading limit of 765kV lines under N-1 contingency is considered as 3500MW.*
4. *RVPN to confirm space provision for 2 nos. of 400kV bays and 400/220kV ICT (3rd) at Chittorgarh (RVPN)*
5. *Fatehgarh-3 PS to be sectionalised*

Estimated Cost: Rs 26,300 Cr



2.7 PSTCL stated that in the meeting held on 22.01.2021, they had requested for the load flow study of lean period of all India and lean period of Northern region considering the lean period of Punjab. Loading in Punjab in lean period is around 3,000 MW, which occurs in the night time. In the day time also, load in Punjab is around 6,000 MW which increases to approx. 8000 MW in the evening. However, in the load flow studies of lean period, load in Punjab has been considered around 14,000 GW.

2.8 CTU stated that load of Punjab during lean period was not intimated in the joint study meeting held on 22.01.2021as well as in the earlier comments given by PSTCL. However, as it has been intimated by PSTCL now, one more study could be carried out with the demand figures furnished by PSTCL.

2.9 Rajasthan highlighted the issue of increase in fault level in intra-state network of RVPN with the proposed system for evacuation of 20 GW RE power.

CTU stated that with the implementation of the transmission network for injection of such a big quantum of RE power in Rajasthan, fault level in RVPN will surely increase. However, fault level in RVPN network is in limit at present which is expected to go beyond limit in 2024-25 scenario for which suitable measures will have to be taken.

2.10 POSOCO gave the following observations:

(i) In order to assess the adequacy and reliability of the proposed transmission system, it is necessary that at least sixteen (16) scenarios (4 points on load curve for each season) on all- India case be simulated and studied. This point was also highlighted during planning of Ph-I & II REZ schemes in Rajasthan but same is yet to be studied while planning the regional transmission schemes. Along with this, the suggestion for carrying out stability studies and exploring the possibility of installing synchronous condensers was also given previously. These points may now be considered in Ph-III REZ transmission planning.

(ii) The option of installing Battery Energy Storage System (BESS) as an alternative to transmission system may also be explored. A detailed communication in this regard has already been sent to CEA/CTU on 18th Feb 2021. Considering the numerous advantages of BESS over transmission system as highlighted in the communication, Battery Energy Storage System (BESS) may act as a better alternative to the conventional transmission system in the face of uncertainties, lower gestation period and falling prices.

(iii) Regarding the hybrid HVDC-AC option for Ph-III, POSOCO stated that when the Phase-II proposals were being deliberated in May 2019, the HVDC terminal was considered at Modipuram in Uttar Pradesh. With the HVDC terminal at Fatehpur (UP) in the current proposal, the HVDC location has been shifted further 400-500 kilometers eastwards which might have possibly increased the cost of HVDC option. In case the storage alternative is evaluated, the STATCOMs too could be dispensed with. It was suggested that Rajasthan too could explore the feasibility of a similar arrangement for their intra- state RE transmission system.

(iv) POSOCO also stated that planning of transmission schemes for Ph-I & II REZ across the country was carried out keeping in view the commissioning time-frame of 2021-22. However, at present, even regulatory approval for the Ph-I & II REZ schemes in Southern region has not been received. Further, stage-II connectivity for only 0.3 GW against potential of 18.5 GW in SR has been granted till date. Any delay in the commissioning of the envisaged generation may result in change in all-India LGB as well as inter-regional flows. Further, from the discussions, it is emerging that there could be high certainty of 40 GW generation coming up in Bhadla region of Rajasthan compared to other RE projects in rest of the country. This might require further system strengthening in parts of the network so that congestion and RE curtailment is minimized. Therefore, in view of high uncertainty in the spatial and temporal distribution of RE generation, it is of utmost importance that the transmission system for the same is reviewed periodically. The inputs of SECI from time to time regarding status of RE projects will also be required for this exercise so that a reliable transmission system can be planned which would ensure minimal congestion and minimal RE curtailment.

(v) POSOCO further stated that as per the transmission planning criteria, *"A stuck breaker condition shall not cause disruption of more than four feeders for the 220kV system and two feeders for the 400kV system and 765kV system"*. As large quantum

of RE generation is getting pooled at a single station in the proposed transmission schemes, it is necessary that the need for bus sectionalising arrangement be studied thoroughly and indicated in the RPC(TP) minutes. This will help in minimizing loss of generation/elements in case of any stuck breaker condition at one end and will also avoid any gap in implementation of schemes when bids are floated for TBCB.

2.11 Regarding POSOCO's observation to carry out load flow studies for at least sixteen (16) scenarios (4 points on load curve for each season), CTU clarified that during the previous all- India studies carried out by CEA, CTU and POSOCO, it was agreed that instead of sixteen, nine scenarios may be carried as scenario of October and February is almost similar and the same was recorded in the minutes 1st SPRC(TP) meeting. Regarding synchronous condensers, CTU stated that synchronous condenser would be very useful in providing system inertia as well as reactive compensation/voltage stability in high solar penetration scenario, however, some western Rajasthan pooling stations already have high short circuit (near to designed capacity) level, which will further increase with placement of synchronous condenser. Therefore, it is suggested to place the synchronous condenser far from the western Rajasthan solar pockets.

2.12 Regarding POSOCO's observation of increase in the cost of the scheme due to consideration of HVDC terminal at Fatehpur rather than Modipuram which was deliberated in May 2019 for Phase-II scheme, CTU clarified that HVAC corridors are already planned/under implementation in Rajasthan SEZ (Ph-I/II/III) towards Narela, Jhatikara and Aligarh to feed the demand of Delhi/UP, however, in solar peak/low thermal scenario, feed towards southern Uttar Pradesh will optimally utilize the 765 kV transmission system as well as meet the demand of south UP/ eastern region. Regarding the bus sectionalisation, CEA mentioned that during the preparation of detailed scope of works for National Committee on Transmission, proper bus sectionalisation has been considered for Ph-I and Ph-II scheme. The same would also be considered in Phase-III scheme.

2.13 RVPN suggested that in the alternative 2 i.e. hybrid HVAC and HVDC system, only one HVDC line has been considered. One more alternative may be explored with two or more HVDC lines.

2.14 Chief Engineer (PSPA-I), CEA, opined that in the proposed alternative 2, one HVDC line has been planned for 6 GW, which has caused an increase of around Rs 6000 crore compared to HVAC system. If more number of HVDC lines would be planned, it would increase the cost even more and would not be commercially viable.

2.15 RVPN further suggested that power from Bhadla-3 to Phulera is going towards Sikar-II only. Also, distance from Bhadla-3 to Phulera and Sikar-II is almost similar, therefore Phulera substation can be avoided and Sikar-II can be directly connected to Bhadla-3 and in case need arises in future, Phulera substation can be created with LILO of Bhadla-3- Sikar-II line.

2.16 CTU stated line length of Bhadla-3 – Sikar -II line is expected to be approx. 380 km. However, as the location of Bhadla-3 is not fixed yet, therefore, the line length may increase or decrease. Therefore, it would be better to defer the implementation of Phulera substation at present and we can proceed with the proposal of Bhadla-3- Sikar II line. With the firming up of location of Bhadla-3 substation, Phulera substation can be planned, if needed.

2.17 RVPN and PSTCL also suggested that the option of installing Battery Energy Storage System (BESS) should be explored.

2.18 SECI stated that the presently the cost of battery is high, therefore, the same has not been proposed in the present 20GW generation projects, however, the same may be considered in future projects when the cost of battery would come down.

2.19 CEA suggested that a number of studies have been carried out for the proposed transmission system. As discussed earlier, the HVDC+HVAC transmission alternative proposed may be agreed broadly. The additional studies as requested by PSTCL, RVPN and POSOCO may be carried out and shared with the constituents. Based on the studies any augmentation required may be incorporated and accordingly, incorporated in the minutes of the meeting.

2.20 Accordingly, the additional system studies were carried out considering Alternative-II i.e. HVDC+HVAC, no major constraints were observed in the studies. These additional system studies were circulated to the members of NRPC(TP) vide CEA email dated 09.04.2021 and members were requested to furnish their input within one week's time. No observations were received from the members in the stipulated time.

2.21 Regarding the suggestion by constituents on installation of Battery Energy Storage System (BESS) for deferment of transmission system, CTU carried out an analysis on capacity of Storage requirement (MW &MWh) and the cost of transmission system deferred due to installation of BESS for Rajasthan Phase-III system for both HVAC and HVDC alternatives. The same was shared with POSOCO and CEA vide e-mail dated 10.04.2021. Similar analysis was also carried out by CEA which was shared with constituents vide email dated 09.04.2021. From the analysis, it emerged that at the present cost level of BESS, its application for transmission deferral is not economical as establishment cost of BESS is much higher than the cost savings due to deferment of transmission system.

2.22 Based on the above, following transmission system was agreed for evacuation of power from additional 20 GW REZ in Rajasthan (Phase-III):

i) Establishment of 5x500 MVA 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor
ii) Establishment of 2x1500 MVA 765/400kV & 10x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus Reactor
iii) Establishment of 3x1500 MVA 765/400 kV & 2x500 MVA 400/220 kV pooling station at Ramgarh along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor
iv) Fatehgarh-2 – Bhadla-3 400 kV D/c line (Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 2- Bhadla-3 400 kV D/c line (200 km)
v) Fatehgarh-4- Fatehgarh-3 400 kV 2xD/c twin HLTS line (50 km)
vi) Fatehgarh 3- Bhadla-3 400kV D/c line (Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 3- Bhadla-3 400kV D/c line (200 km)
vii) Ramgarh – Bhadla-3 765kV D/c line (180 km) along with 240 MVAr switchable line reactor at each circuit at Ramgarh end of Ramgarh – Bhadla-3 765kV D/c line
viii) Bhadla-3 – Sikar-II 765 kV D/c line (380 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Sikar-II 765 kV D/c line
ix) Sikar-II – Khetri 765 kV D/c line (90 Km)
x) Sikar-II – Narela 765 kV D/c line (260 Km) along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line
xi) Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)
xii) Augmentation with 400/220kV, 1x500MVA Transformer (10th) at Fatehgarh-2 PS
xiii) Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS
xiv) Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG)

xv) Jhatikara – Dwarka 400kV D/c line (Quad) (20km)
xvi) Establishment of 6x1500 MVA 765/400kV & 5x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section*) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr,765kV & 2x125 MVAr, 420kV Bus Reactors
xvii) Augmentation of 1x500 MVA ICT (5^{th}), 400/220kV ICT at Fatehgarh-3 Substation (section-1*)
xviii) Establishment of 2x1500MVA 765/400kV Substation at suitable location near Beawar along with 2x330 MVAr, 765 kV Bus Reactor & 2x125 MVAr, 420 kV Bus Reactor
xix) Fatehgarh-3– Beawar 765 kV 2xD/c (350 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line
xx) LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar (45 km)
xxi) LILO of 400kV Kota –Merta line at Beawar (20 km)
xxii) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr 765 kV Bus Reactor & 2x125 MVAr, 420 kV Bus Reactor
xxiii) Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end
xxiv) LILO of both circuits of Jaipur (Phagi)-Gwalior 765 kV D/c at Dausa (40km) along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line
xxv) LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa (30km) along with 50 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line
xxvi) 6000MW, ±800KV HVDC terminal at Bhadla-3 substation
xxvii) 6000MW, ±800KV HVDC terminal station at suitable location near Fatehpur (UP)
xxviii) Establishment of 5x1500MVA, 765/400KV ICT at pooling station at suitable location near Fatehpur along with 2x330MVAr (765kV) bus reactor
xxix) ±800KV HVDC line (Hexa lapwing) between Bhadla-3 & Fatehpur (950km)
xxx) LILO of both ckts of 765kV Varanasi – Kanpur (GIS) D/c at Fatehpur(30km)
xxxi) Augmentation of 1x1500MVA ICT at 765/400kV Kanpur(GIS) substation
xxxii) STATCOM:
- Fatehgarh – 3 S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR
- Ramgarh S/s : STATCOM : ± 600 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR

xxxiii) Provision for suitable space for future scope at various substations
xxxiv) Provision of spare single phase 765/400kV, 500 MVA transformers and spare 765 kV single phase 80 MVAR/110 MVAR reactor at Bhadla-3, Ramgarh, Dausa, Fatehgarh-3 (new section*), Fatehpur and Beawer substation.

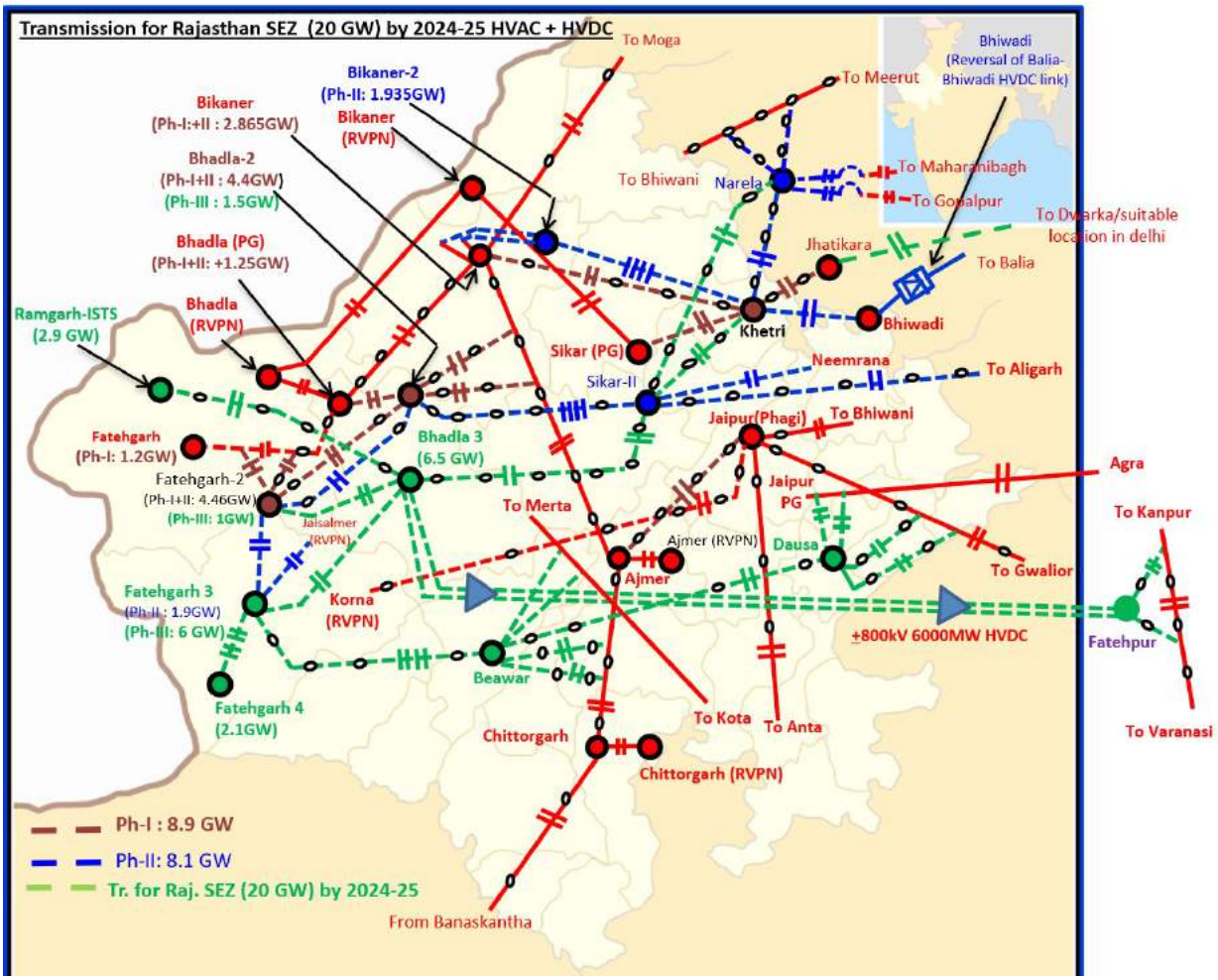
The above transmission system would be implemented in phases based on grant of LTA by CTU.

Note :

1. *Provision of suitable sectionalization shall be kept at Fatehgarh-3, Fatehgarh-4, Bhadla-3, Ramgarh pooling stations at 400kV & 220kV level to limit short circuit level*

2. *Reactive power support (both leading & lagging) from Solar Generation has been considered for 0.98 pf*
3. *Line loading limit of 765kV lines under N-1 contingency has been considered as 3500 MW.*
4. *RVPN to confirm space provision for 2 nos. of 400 kV bays and 400/220 kV ICT (3rd) at Chittorgarh (RVPN)*
5. **Fatehgarh-3 PS to be sectionalised. STATCOM to be placed at new section of Fatehgarh-3 PS from where phase-III scheme emanating.*

Estimated Cost: Rs 25,400 Cr



3.0 Creation of 400/220 kV, 2x315 MVA S/S at Siot (earlierAkhnoor/Rajouri) as ISTS:

3.1 Director (PSPA-I), CEA stated that proposal for creation of Akhnoor substation was deliberated in 36th meeting of Standing Committee on Power System Planning in Northern Region held on 13th July, 2015, wherein it had been decided that JKPDD/JKPTCL should plan downstream system so that 400 kV substation may be utilized properly. Subsequently, JKPDD/JKPTCL had submitted a comprehensive transmission plan for Jammu Region which inter-alia included establishment of 400/220 kV, 2x315 MVA S/s at Akhnoor/ Rajouri as ISTS works with the following downstream transmission system:

Works proposed under ISTS:

i) Establishment of 2x315MVA, 400/220kV Akhnoor/Rajouri S/s with 4nos. of 400kV line bays and 6nos. of 220kV line bays

ii) LILO of 400 kV D/c Amargarh (Kunzer)- Samba line at 400/220 kV Akhnoor/ Rajouri S/s

Works proposed under Intra-State Transmission works:

iii) 220 kV D/c line from 400/220 kV Akhnoor/ Rajouri to 220/132 kV Akhnoor-II

iv) 220 kV D/c line from 400/220 kV Akhnoor/ Rajouri to 220/132 kV Rajouri

v) 220 kV D/c line from 400/220 kV Akhnoor/ Rajouri to 220/132 kV Katra-II

The above mentioned 3 substations i.e. Akhnoor-II, Rajouri and Katra-II had been agreed in 1st meeting of NRPC (TP) held on 24th January 2020.

Director (PSPA-I), CEA, further stated that proposal for creation of 400/220 kV, 2x315 MVA S/S at Akhnoor/Rajouri was further discussed in the 2nd NRPC(TP) meeting held on 01.09.2020, wherein it had been decided that revised studies would be carried out by CEA and CTU for J&K,along with the confirmation of 220 kV outlets from this substation and accordingly the proposal would be deliberated in the next NRPC(TP) meeting.

Accordingly, revised system studies were carried out by CEA in consultation with JKPDD for the time frame of 2025-26. Mainly two cases were studied considering peak load of Jammu in summer and peak load of Kashmir in winter and discussed at length with JKPDD and CTU in a meeting held on 12.01.2021, wherein, the proposal was agreed in-principle.

3.2 JKPTCL stated that they are in urgent requirement of this substation as they are facing shortfall of transmission capacity in the areas of Jammu, Rajouri and Punchh district. Presently, due to very long length of 220 kV transmission lines in these areas, there are issues of low voltage. This 400 kV substation will strengthen the transmission system. JKPDD further stated that 220kV interconnection to Rajouri S/s would feed the areas of Rajouri & Poonch districts presently having restricted load of around 300MVA. The Siot substation would feed the areas near Akhnoor and Jammu region and the interconnection with Katra-II would also improve reliability of supply, considering the importance of Katra being a holy town with lots of visiting pilgrims. The substation would also provide relief from the low voltage issues at Draba/Chandak. JKPDD also mentioned that the proposed substation would be located between Rajouri and Akhnoor at Siot, therefore, the substation may be named as Siot.

3.3 CTU opined that it would be better to have 500 MVA transformers instead of 315 MVA to which JKPTCL clarified that transportation is an issue in the hilly areas, therefore, provision of 2x315 MVA transformers has been kept. CTU suggested that provision of bus reactor of 125 MVAR may be kept.

3.4 Regarding timelines, JKPDD stated that timeline of the downstream system is March 2024 and implementation of 400 kV Siot substation and 6 nos of 220 kV bays for downstream system of JKPDD should be considered in the same time frame.

3.5 CTU enquired whether the 400 kV Siot substation would be AIS or GIS to which JKPDD suggested that adequate land is available, therefore AIS substation can be planned.

3.6 POSOCO stated that JKPDD needs to plan for reactive power resources in J&K area along with the transmission system. J&K grid faces low voltage issues in most of the areas and also has large payables in the reactive power account charges.

3.7 POSOCO further stated that in the study results, voltages in J&K have been observed to be on the lower side. Therefore, adequate reactive power compensation may also be planned along with proposed transmission system. Also, loading of 220 kV Kishenpur - Baran D/C line (410 MW) and 220 kV Salal - Jammu D/C line (350 MW) is observed to be on the

higher side and may be rechecked.

3.8 After deliberations, following was agreed:

(a) Creation of 400/220 kV, 2x315 MVA S/S at Siot (AIS) under ISTS as a system strengthening scheme with following scope of works:

(i) Establishment of 2x315 MVA (or 2x500 MVA if possible), 400/220kV Siot S/s with 1x125 MVAR, 420 kV bus reactor, 4 nos. of 400kV line bays and 6 nos. of 220kV line bays

(ii) LILO of both circuits of 400 kV D/c Amargarh (Kunzer)- Samba line at 400/220 kV Siot S/s

Timeline for the implementation of the above transmission works to be considered as March 2024.

(b) Steps to mitigate the issue of low voltages in J&K would be taken up by power department of J & K.

(c) JKPDD to complete their downstream network for drawl as per the timeline of establishment of Siot S/s i.e. Mar'24

4.0 Handing over of 400 kV D/c Khandukhal-Rampura line and 220 kV D/c Mori-Dehradun line of PTCUL under UITP scheme (deemed ISTS) to Central Sector

4.1 Director (PSPA-I), CEA, stated that UITP (Uttarakhand Integrated Transmission Project) scheme is under implementation by PTCUL. CERC vide its order dated 31.01.2013 had declared the scheme as a deemed ISTS scheme. The scheme comprises of transmission system for evacuation of the power from proposed HEP's in various basins of Uttarakhand. There are certain deemed Inter-State Transmission System (deemed ISTS) elements of UITP, where PTCUL had not been able to achieve the targeted timeline (deadlines). Amongst these are the 400 kV D/C Srinagar (Khandukhal) – Kashipur (Rampura)Transmission line which was required to evacuate power from upcoming projectsin the Alaknanda basin, and the 220 kV D/C Mori-Dehradun line which was proposed to evacuate power from proposed generators in Yamuna basin. Construction of these lines had not been taken up by M/s PTCUL so far and recently M/s PTCUL vide letter dated12.1.2021 has conveyed that Board of Directors of PTCUL had accorded approval for handing over of construction of 400 kV Khandukhal-Rampura Transmission Line to CentralSector.

4.2 CE (PSPA-I) stated that immediate requirement of 400 kV Khandukhal-Rampura D/C Transmission Line was for evacuation of power from NTPC Tapovan Vishnugad HEP in Alaknanda basin which was scheduled to be commissioned in December 2022. However, due to an unfortunate event, this project is delayed. However, the transmission line wouldbe required in the tine frame of Vishnugad Pipalkoti HEP generation of THDC.

4.3 THDC intimated that the commissioning schedule of Vishnugad Pipalkoti HEP is June 2023.

4.4 Regarding implementation of 220 kV D/c Mori-Dehradun line, CE (PSPA-I) stated that immediate requirement of this line was for evacuation of power from Naitwar Mori hydro project (60 MW) of SJVN in Yamuna basin, expected commissioning schedule of which is March 2022. However, as the length of the line is approx. 116 km, implementation of the line in a hilly terrain in such a short time would be difficult. Therefore, SJVN has proposed

an alternative arrangement. (Alternative arrangement was deliberated and agreed in Agenda no. 5). Except Natwar Mori, no other hydro project in Yamuna basin is expected within next 2-3 years, therefore implementation of 220 kV D/c Mori-Dehradun line may be considered in future under central sector with materialization of other projects in Yamuna basin.

4.5 POSOCO stated that PMU should be compulsorily implemented for all generating stations. It would help in understanding the dynamics of the system and further support in tuning the generating station with change in network conditions. Further, as telemetry from PTCUL substations is very poor, along with the transmission system, the communication system requirement may also be planned by the transmission utility to avoid any issues during first time charging and subsequent grid operation.

4.6 After deliberations, following was agreed:

(i) Implementation of 400 kV D/c Khandukhal(Srinagar)-Rampura (Kashipur) line to be taken up under central sector as an ISTS scheme with the matching time frame of commissioning of Vishnugad Pipalkoti HEP of THDC i.e June 2023 or Tapovan Vishnugad HEP of NTPC whichever is earlier.

(ii) Implementation of 220 kV D/c Mori-Dehradun line may be considered in future under central sector with materialisation of projects other than Naitwar Mori in Yamuna basin.

5.0 Transmission Scheme for evacuation of power from hydro projects in Yamuna Basin:

5.1 Director (PSPA-I), CEA, stated that for evacuation of power from hydro projects viz Naitwar Mori(60MW), ArokotTuni (72 MW), HanolTuni (45 MW), Mori Hanol (63 MW) and JakholSakari(44 MW) in Yamuna Basin of Uttarakhand, a 220kV D/C Twin Zebra Mori - Dehradun (Vyasi) Transmission Line (116 km approx) along with Mori substation was planned under UITP scheme and the line was to be implemented by PTCUL under UITP scheme approved by CERC as deemed ISTS scheme.

Out of the above mentioned hydro projects, Naitwar Mori hydro project is in advance stage of implementation by SJVN and a tripartite LTA agreement was signed on 31.01.2020 between PTCUL, CTU & SJVN Ltd. The expected commissioning schedule of Natwar Mori HEP is in March 2022. However, the work for the construction of associated transmission system has not been started by PTCUL and PTCUL has written to CEA to take up the implementation of the 220kV Mori –Dehradun D/c line under central sector.

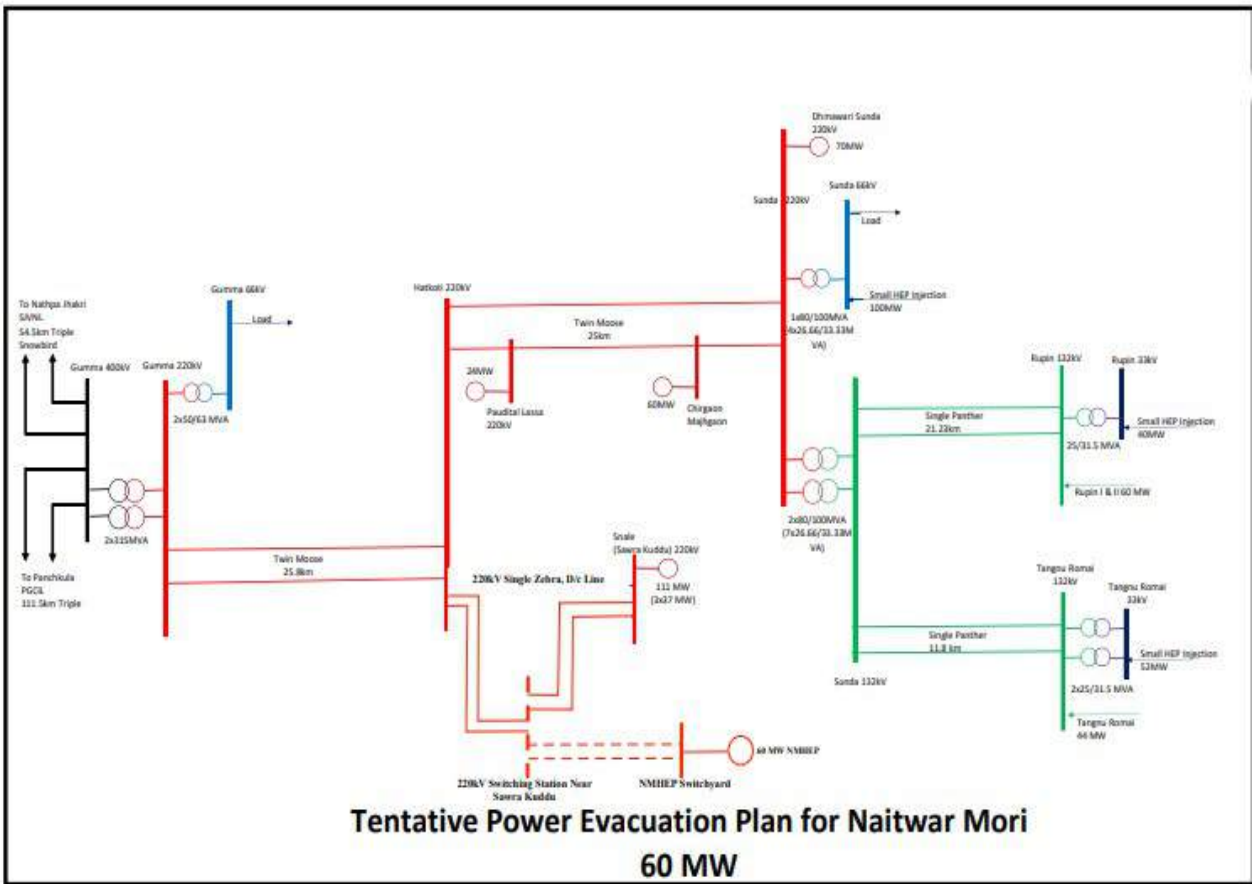
In order to discuss the evacuation system for Naitwar Mori HEP, a meeting was held on 14.01.2021 with representatives from CEA, CTU, PTCUL, SJVN and HPPTCL. In the meeting, SJVN indicated that the completion of Mori – Dehradun 220 kV D/c line would not be possible in matching time frame of Natwar Mori HEP, therefore, they came out with an alternative arrangement for evacuation of power from Natwar Mori in consultation with HPPTCL. The proposal involves construction of following transmission line under ISTS:

- LILO of one circuit of the existing 220 kV Snail – Hatkoti line of HPPTCL at Naitwar Mori switchyard (about 25 kms.).

In the meeting it was observed that with the above proposal, the switchyard of Naitwar Mori HEP must be capable of handling the additional power from Swara Kuddu HEP under n-1 condition. SJVN intimated that their switchyard has already been designed. Therefore, it was

proposed to explore the possibility to pool the power directly to Hatkoti S/s, which is connected to Gumma S/s through Twin Moose 220 kV D/c line.

5.2 Director (PSPA-I), CEA, further stated that a site visit was carried out by HPPTCL and SJVN on 18.01.2021 and 19.01.2021, in order to ascertain the availability of space at Hatkoti S/s and Snail S/s. As per the visit, it emerged that there is space constraint at Swara Kuddu HEP Switchyard/Snail and Hatkoti S/s. Therefore, it was proposed to create a new switching station near Snail by LILO of 220 kV Snail-Hatkoti line and terminate both circuits from Naitwar Mori at this Pooling (Switching) Station. A schematic of the proposal is given below:



Tentative Power Evacuation Plan for Naitwar Mori

60 MW

5.3 Regarding length of 220kV D/c line from Naitwar Mori HEP Switchyard to pooling station near Snail, SJVN intimated that they have carried out survey for 2 routes, one is by crossing the hill which is approx. 28-30 km and other is by going along with the river which is approx. 35-40 km.

5.4 CTU stated that earlier proposed evacuation system with Mori – Dehradun 220 kV D/C line was an ISTS system, however, new proposal involves intra- state transmission system of HPPTCL. Therefore, it was suggested that the implementation of the system may be carried out by HPPTCL.

5.5 HPPTCL stated that they can implement portion of the system which falls in HP. However, some portion of the system also lies in Uttarakhand.

5.6 CEA and CTU suggested SJVN to construct the 220kV transmission line from Naitwar Mori Switchyard to pooling station near Snail as a dedicated line which would help in reducing the implementation time rather than implementation of this line as ISTS through RTM/TBCB route, which may take more time.

5.7 POSOCO stated that presently, SPS is implemented in Rampur-Jhakri-Karcham-Gumma complex and same would need revision in case of any additional injection from Gumma HEP.

5.8 SJVNL stated that considering the short time frame left for construction of the 220kV D/c Twin Zebra Mori -Dehradun (Vyasi) transmission line (116 km approx), they requested the committee for considering the construction of the alternative system with 220 kV Naitwar Mori to Hatkoti/Snail PS line and the 220 kV Pooling Station near Snail S/S as a dedicated system of the generation project instead of considering the work through TBCB.

5.9 After deliberations, following was agreed for evacuation of power from Naitwar Mori hydro project (60 MW) of SJVN:

(i) Creation of 220kV Pooling station near Snail with LILO of both circuits of Snail –Hatkoti 220kV D/c line, 6 nos. of 220kV line bays, 50 MVAR bus reactor along with reactor bay.

(ii) SJVN to construct 220 kV Naitwar Mori to Hatkoti/Snail PS D/c line and the 220 kV Pooling Station near Snail S/S as a dedicated system.

(iii) CTU to revoke connectivity granted for Naitwar Mori hydro project (60 MW) and SJVN to apply for connectivity to HPPTCL.

(iv) CTU to revise the LTA granted for Naitwar Mori hydro project (60 MW)

6.0 Transmission system for evacuation of power from Neemuch Solar Park (1000MW)

6.1 Director (PSPA-I), CEA, stated that RUMS Ltd (Rewa Ultra Mega Solar Ltd.) is developing 1000 MW Neemuch Solar Park in Madhya Pradesh and the transmission system for evacuation of power from this solar park was deliberated in the 2nd meeting of WRPC(TP) held on 4.09.2020 wherein following alternatives were proposed:

Alternative-I

1) Establishment of 2x500MVA, 400/220kV Pooling Station at Neemuch
2) Neemuch PS – Kota 400kV D/c line~ 70 km
3) 1x125 MVAR, 420 kV bus reactor at Neemuch PS

Alternative-II

1) Establishment of 2x500MVA, 400/220kV Pooling Station at Neemuch
2) Neemuch PS - Chittorgarh (PG) 400kV D/c line ~130 km
3) Augmentation of Chittorgarh (Rajasthan) by 1x500MVA, 400/220kV ICTs
4) 1x125 MVAR, 420 kV bus reactor at Neemuch PS

Alternative-III

1) Establishment of 2x500MVA, 400/220kV Pooling Station at Neemuch
2) Neemuch PS – Mandsaur (MP) 400kV D/c line~ 120 km
3) 1x125 MVAR, 420 kV bus reactor at Neemuch PS

Based on the discussions, following was agreed:

I. Transmission system for evacuation of power from Neemuch Solar Park (1000 MW):

a. Establishment of 2x500MVA, 400/220kV Pooling Station at Neemuch

b. Neemuch PS – Kota 400kV D/c line~ 70 km

c. 1x125 MVAR, 420 kV bus reactor at Neemuch PS

d. 4 nos. 220 kV line bays for solar park interconnection

II. With the agreed scheme, the issue of 400/220 kV ICTs at Kota becoming N-1 non-compliant in scenario of low generation at KTPS would be studied further in coordination with NR group. The scheme would also be discussed in the meeting of NRPC(TP). Any additional requirement arising out of Kota 400/220 ICT overloading, would be included in the scheme. The same would be intimated to the WRPC(TP) in the next meeting.

III. RUMS Ltd (Rewa Ultra Mega Solar Ltd.) would apply for LTA application for its 500 MW Neemuch Solar Park (to be commissioned in July, 2022 timeframe) for which Stage-II Connectivity has already been applied. Further, RUMS would also apply for Stage-II Connectivity application for additional 250 MW (out of remaining 500 MW) for which land has already been identified nearby Singoli village.

For further deliberation on the matter, a meeting was held on 11.02.2021 with CEA, CTU, MPPTCL and RUMS wherein load flow studies were done and it was observed that Alternative –I is not feasible as with strengthening of ICT at Kota, more power will flow towards 220 kV level which will require further strengthening. Therefore, it was decided to explore possibility of connecting Neemuch PS with LILO of RAPS- Kankroli 400 kV S/c line at Neemuch PS. With this option, line loadings have been found to be under limit.

6.2 Regarding evacuation of 1000 MW power at Neemuch with LILO of RAPS- Kankroli 400 kV S/c line at Neemuch PS, CTU highlighted that with this option, power flows towards Shujalpur through RAPS-Shujalpur 400 kV D/c line. In case of outage of one circuit of RAPS-Shujalpur 400 kV D/c line, the other circuit becomes critically loaded.

6.3 On enquiry by RVPN regarding the beneficiaries of Neemuch solar park, CEA clarified that Madhya Pradesh is having the major share. RVPN suggested that since MP is major beneficiary of Neemuch solar park, the power should be taken towards Western Region instead of pushing it to Rajasthan system. They suggested alternative -III i.e evacuation through Mandasaur (MP) could be explored. CTU clarified that Mandasaur is a substation under Intra- state transmission system of MPPTCL whereas Neemuch solar park is an Inter-State Generation.

6.4 After deliberation, it was decided that the possibility of integration of the Neemuch Solar generation with the Western Region transmission system may be explored.

7.0 LILO of Auriya (UP) – Mehgaon 220kV line at Bhind (TBCB) 220kV substation

7.1 Director (PSPA-I), CEA, stated that MPPTCL is implementing 2x160 MVA,220/132kV Bhind (TBCB) substation with LILO of Auriya(UP) – Mehgaon 220kV line as an Intra state scheme. These works are being implemented by Transmission Service Provider (TSP) i.e. M/s Powergrid-Bhind Guna Transmission Ltd. (PG-BGTL) which has been selected by MPPTCL through TBCB process.

7.2 Director (PSPA-I), CEA, further stated that the agenda was discussed and agreed in the 2nd meeting of WRPC(TP) held on 04.09.2020 wherein following had been agreed:

i. LILO of Auriya (UP) – Mehgaon 220kV line at Bhind (TBCB) 220kV substation to be implemented by MPPTCL.

ii. MPPTCL agenda would also be put up for the concurrence of NRPC (TP) as Auriya (UP) Mehgaon 220kV line is between WR and NR.

7.3 POSOCO stated that with LILO of Auraiya (UP) – Mehgaon 220 kV line at Bhind (TBCB) 220kV substation, there is possibility that 400/220 kV ICTs at Auraiya may get overloaded (400 kV to 220 kV side power flow) during high load at Bhind and low generation at Auraiya. Similarly, ICTs may get overloaded in opposite direction (220 kV to 400 kV side) in case of high generation at Auraiya and high solar injection expected in near future at Morena. This aspect may be studied and any augmentation in transformation capacity at Auraiya, if required, may be planned suitably.

7.4 As Auriya (UP) – Mehgaon 220 kV line is an ISTS line between UP and MP, UPPTCL enquired regarding the change of metering point after the LILO. CTU clarified that even after LILO of Auriya (UP) – Mehgaon 220kV line at Bhind (TBCB) 220kV substation, line will still remain as ISTS line. Therefore, normal protocol regarding metering of ISTS line will be followed.

7.5 After deliberations, members agreed to the proposal of LILO of Auriya (UP) – Mehgaon 220kV line at Bhind (TBCB) 220kV substation.

8.0 Reconductoring of portion of Dulhasti-Kishtwar- Kishenpur 400 kV (Quad) S/c:

8.1 Director (PSPA-I), CEA, stated that CTU vide email dated 08.01.2021 has proposed reconductoring of portion of Dulhasti-Kishtwar- Kishenpur 400 kV (Quad) S/c line. CTU has mentioned that in the 1st NRPC (TP) meeting held on 24.01.2020, comprehensive system for connectivity was agreed for evacuation of power from Pakaldul (1000MW), Kiru (624 MW) and Kwar (540 MW) HEPs of CVPPL. It was also agreed that the above projects would be connected to a common pooling station through 400kV dedicated transmission line to be implemented by developer of these projects. Further, establishment of common pooling station at Kishtwar by LILO of one circuit of Kishenpur – Dulhasti 400kV D/c (Quad) line (Single Circuit Strung) was also agreed to be implemented under ISTS to provide connectivity to above projects.

8.2 Director (PSPA-I), CEA, further stated that presently, power from Dulhasti HEP (390 MW) is being evacuated through 400 kV Dulhasti-Kishenpur S/c line & D/c (quad) line (one circuit strung). Ratle HEP (690 MW) was planned to be developed in the downstream of Dulhasti HEP and it was agreed that Dulhasti-Kishenpur D/c Quad (S/c strung) would be LILOed at Ratle HEP and 2ndquad circuit shall be strung from Kishenpur and terminated at Ratle matching with the commissioning of Ratle HEP. Further, it was also agreed during 35th NR Standing Committee Meeting held on 03.11.2014 that as outlet beyond Dulhasti is Dulhasti-Kishenpur 400kV line is a single circuit line, the amount of power that can be exported/imported is limited. Hence, Dulhasti-Ratle section would be optimized to the extent possible. Further, bay rating at Dulhasti is 2000 A which is further reduced to 700/800A due to reduced capacity of XLPE/OIL cable for connection of line to GIS bus at Dulhasti end.

Based on above considerations, POWERGRID implemented Dulhasti-Kishenpur 400kV S/c line (Quad) with Twin Moose conductor till Ratle LILO point. Beyond Ratle LILO point, line was implemented with Quad Moose conductor. However, LTA & Connectivity application for Ratle HEP was revoked at later stage due to non-signing of requisite agreements.

8.3 For connectivity of Pakaldul HEP (1000 MW), LILO of one circuit of Dulhasti - Kishenpur 400 kV line (quad) has been agreed at Kishtwar Pooling station. However, as location of

proposed Kishtwar S/s is above Ratle location and towards Dulhasti, portion of Dulhasti-Ratle LILO tap Point of Dulhasti (TW loc 10 indicated at Fig-1) - Kishenpur 400 kV line (TW loc 49-indicated at Fig-1) (approx. 13 kms) implemented through twin moose conductor, needs to be reconductored with Quad moose conductor. This reconductoring of approx. 13 km section (LILO tap Point of Dulhasti - Kishenpur 400 kV line) would be needed to cater to power transfer requirement from hydro projects (Pakaldul, Kiru & Kwar) including LTA of Pakaldul (1000 MW) HEP. An exhibit depicting above arrangement is at Fig-1.

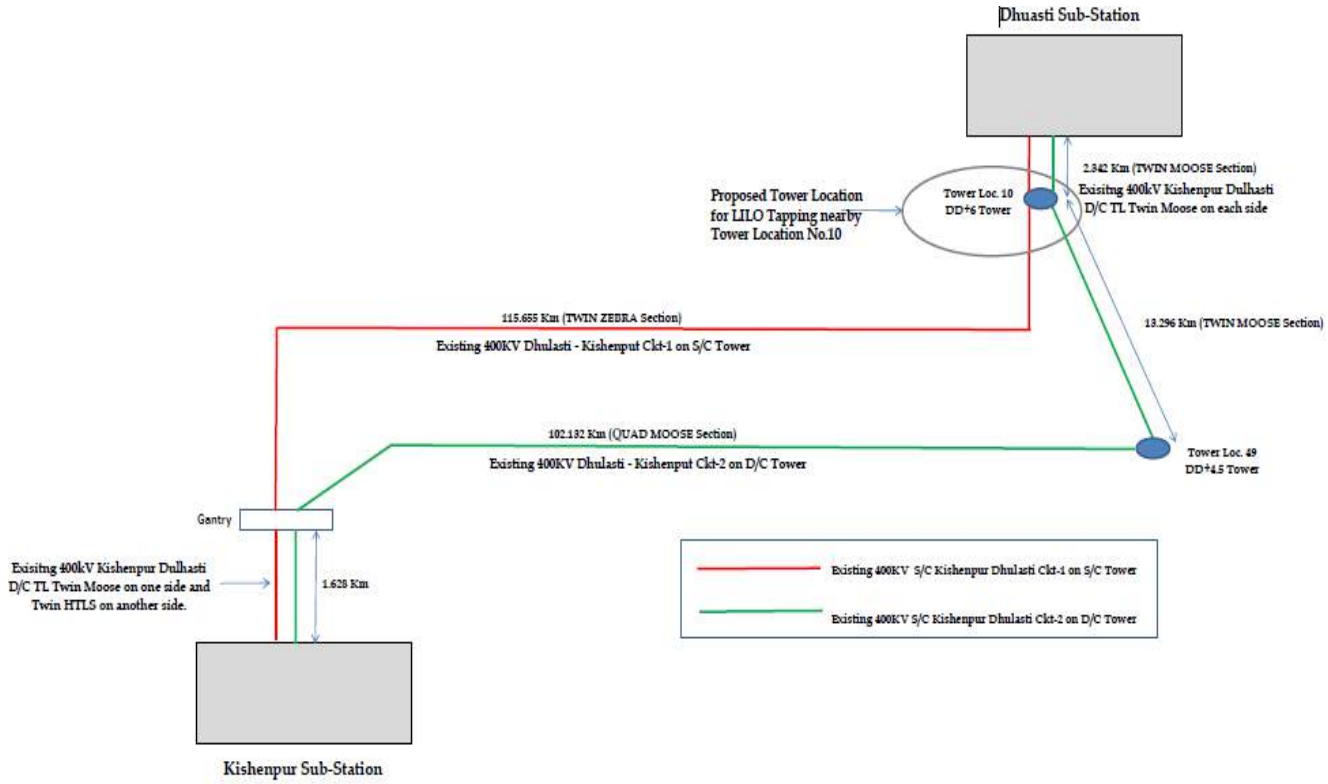


Fig-1

8.4 Director (PSPA-I), CEA, further stated that during 2nd meeting of NRPC (TP) held on 01.09.2020, transmission System was agreed for transfer of 1000 MW power from Pakaldul HEP to NR on target region on Long-term Access (LTA) basis. However, due to unavailability of spare bay as well as space for new diameter in 400 kV switchyard for Kishenpur substation, POWERGRID has proposed to terminate 400kV Kishtwar-Kishenpur 400kV S/c (Quad) line (second ckt) [LTA system of Pakaldul HEP] in bus reactor bay (125 MAVAR), for which bus reactor will be converted to switchable line reactor, at Kishenpur S/s.

8.5 After deliberations, following was agreed as system strengthening scheme:

(i) Reconductoring of Dulhasti-Ratle LILO tap Point of Dulhasti - Kishenpur 400 kV line (approx. 13 kms) implemented through twin moose conductor with Quad moose conductor in matching time frame of Pakaldul HEP generation.

(ii) Termination of 400kV Kishtwar- Kishenpur 400kV S/c (Quad) line (second ckt) [LTA system of Pakaldul HEP] in bus reactor bay (125 MAVAR) in view of unavailability of spare bay as well as space for new diameter in 400 kV switchyard for Kishenpur substation and conversion of bus reactor to switchable line reactor at Kishenpur S/s.

9.0 Transmission system strengthening scheme for evacuation of power from Solar Energy Zones (SEZs) in Rajasthan (8.1 GW) under Phase-II-Part G1-Modification

9.1 Director (PSPA-I), CEA, stated that transmission system strengthening scheme for evacuation of power from Solar Energy Zones (SEZs) in Rajasthan (8.1 GW) under Phase-II was agreed in 5th NRSCT meeting held on 13.09.19 at New Delhi. As part of above transmission scheme, 765/400kV Narela substation along with 400kV transmission system for onwards dispersal was agreed as below

- Removal of LILO of Bawana – Mandola 400kV D/c(Quad) line at Maharani Bagh/ Gopalpur S/s. Extension of above LILO section from Maharani Bagh/Gopalpur upto Narela S/s so as to form Maharani Bagh – Narela 400kV D/c(Quad) and Maharani Bagh -Gopalpur-Narela 400kV D/c(Quad) lines.

The above 400kV transmission scheme is under implementation by POWERGRID under RTM route.

9.2 Director (PSPA-I), CEA, further stated that POWERGRID has intimated that they carried out survey for the extension of LILO of Bawana- Mandola 400kV D/C line at Maharanibagh S/S to Narela S/S (so as to form 400kV M/c Maharanibagh – Narela transmission line). Based on the survey, it was observed that due to severe space constraints especially near NH-1 crossing, even narrow base Multi circuit towers cannot be spotted. Further, due to large deviation angles at the NH-1 crossing, design and manufacturing Multi circuit monopoles for these locations is also not feasible, as emerged from the meeting held with the manufacturers. LILO of one circuit of 400kV D/C line on D/C monopole structures can be spotted through this area. For LILO of another circuit, severe space constraints exist at NH-1 crossings and the line has to be routed from far beyond of Ganaur in Haryana, thereby resulting in to line length of approx. 95-100 km. Therefore, following arrangement with rerouting shall be made with above:

- Extension of LILO of one ckt of 400kV Bawana-Mandola at Maharanibagh to Narela (Route length: 25 kms approx.)
- Extension of LILO of another ckt of 400kV Bawana-Mandola at Maharanibagh to Narela (Route length: 95-100 kms approx.)

It is also explored that in case of extension of LILO of only one ckt at Narela, short circuit level of Bawana increases to 54kA (base case: 46kA). The issue of high short circuit level in Delhi ring especially at Bawana & Narela was also discussed in 5thNRSCT meeting. In view of this LILO of Bawana – Mandola 400kV D/c (Quad) at Narela 765/400kV S/s, agreed earlier in 4th NRSCT meeting, was dropped. Therefore, in case LILO of one circuit of Bawana- Mandola line at Maharanibagh (via Gopalpur) is maintained, the issue of high short circuit level still remains. Therefore, non-removal of LILO is not a feasible solution.

9.3 POSOCO suggested that since LILO extension length is short, whether it is possible to carry out the implementation with GIL. However, possibility of this was negated by PGCIL as the area is very congested.

9.4 After deliberations, it was decided that a site visit may be carried out by representatives from CEA, CTU, Powergrid and DTL and accordingly the proposal may be deliberated in the next meeting of NRPC(TP).

10.0 Grant of 400kV & 220kV bays to RE generators at Fatehgarh-3 (erstwhile Ramgarh-

2) PS under ISTS

10.1 Director (PSPA-I), CEA, stated that establishment of 4x500MVA, 400/220kV Ramgarh-II Pooling Station was agreed in the 5th meeting of NRSCT held on 13.09.2019 under "Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase II –Part A". The Transmission scheme is currently under bidding through TBCB. Further, change in location of Ramgarh-II PS to Fatehgarh-3 PS was agreed in 2nd NRPC(TP) meeting held on 01.09.2020 in order to avoid GIB zone. It was also agreed that since the substation has now been now shifted to Fatehgarh area, there should be futuristic land provision for evacuation of around 8-9 GW RE power instead of 1.9 GW as planned in Ramgarh-II PS.

Subsequently, several Stage-II Connectivity applications have been received at Fatehgarh-3 (erstwhile Ramgarh-II) PS at various voltage levels i.e. 400kV & 220kV level. RE generators who have won bids under SECI Manufacturing linked tender, have also applied for RE generation capacities for up to 1000 MW at a single ISTS pooling station and sought connectivity at 400 kV level.

10.2 Applications were discussed in various NR LTA & Connectivity meetings in line with Detailed Procedure for grant of connectivity to RE Generators. Para 5.3.1 of Detailed Procedure for grant of connectivity to RE Generators stipulates:

Quote

"For the connectivity system, the dedicated transmission line including line bays at generation pooling station shall be under the scope of the applicant and the terminal bays at the ISTS sub-station shall be under the scope of transmission licensee owning the ISTS sub-station subject to compliance of relevant provision of tariff policy"

Unquote

Accordingly, after deliberations in NR LTA & Connectivity meetings, it was agreed that these RE generators may be granted Stage-II Connectivity at 220kV & 400 kV level and bay at ISTS PS may be implemented under ISTS. The details are as below:

S. No.	Applicant	Applications No.	Stage-II Connectivity Sought (MW)/Date	Connectivity Point	Agreed for grant*/Granted bays for providing Connectivity
1	Adani Green Energy Four Limited	1200002683	1500/ 30-06-2022	Fatehgarh-3	400kV-1 no. 220kV-2*nos. (*1 no. of 220kV bay is part of 7 nos. of 220kV bays, currently under bidding at Fatehgarh-3 PS)
2	IB VOGT SOLAR SEVEN PRIVATE LIMITED	1200002700	300/ 05-04-2022	Fatehgarh-3	220kV-1 no.
3	ABC Renewable Energy Private Limited	1200002699	400/ 31-01-2022	Fatehgarh-3	220kV-1 no.

S. No.	Applicant	Applications No.	Stage-II Connectivity Sought (MW)/Date	Connectivity Point	Agreed for grant*/Granted bays for providing Connectivity
4	ReNew Surya Jyoti Private Limited	1200002746	210/ 31-03-2022	Fatehgarh-3	220kV-1 no. (This bay shall also be utilized for providing connectivity to ReNew Surya Pratap Private Limited Application No. 1200002778 - 210MW))
5	Azure Power India Pvt. Ltd.	1200002812	500/ 19-01-2024	Fatehgarh-3	400kV-1 no. (This bay shall also be utilized for providing connectivity to another Azure Power India Pvt. Ltd. (Application No. - 1200002813- 500MW))
6	Azure Power India Pvt. Ltd.	1200002814	500/ 19-01-2025	Fatehgarh-3	400kV-1 no. (This bay shall also be utilized for providing connectivity to another Azure Power India Pvt. Ltd. (Application No. - 1200002815- 500MW))
7	XL Xergi Power Pvt. Ltd.	1200002847	400/ 31-05-2022	Fatehgarh-3	220kV-1 no.
8	Energizent Power Pvt Ltd	1200002907	125/31-08-22	Fatehgarh-3	220kV-1 no*.

10.3 Director (PSPA-I) further stated that at Fatehgarh –III PS implementation 7 nos. of 220kV bays are currently under bidding (Phase-II-Part A scheme) and all the above bays have already been allocated to RE generators. Space provision for future 15 nos. of 220kV bays and 10 nos. of 400kV bays has also been kept at Fatehgarh-3 (erstwhile Ramgarh-II). Accordingly, in view of the above and also as given in detailed procedure for grant of connectivity to RE generators, it is proposed that above 6 nos. of 220kV bays and 3 nos. of 400kV bays at Fatehgarh-3 PS may be implemented under ISTS matching with RE generators.

10.4 CTU stated that based on the applications, Stage-II connectivity for 7705 MW has been granted at Fatehgarh-3 substation. As desired by the applicants (Sl no. 1 to 8) and as per regulations, the above proposed bays are needed to be constructed under ISTS. This section will be new section, therefore there would be requirement of bus extension of existing 220 kV bus as well as bus sectionaliser arrangement between both the levels i.e 400 kV new section and 220 kV new section.

10.5 After deliberations, above proposal of 6 nos. of 220kV bays and 3 nos. of 400kV bays along with bus extension of 220 kV & 400kV bus as well as bus sectionaliser arrangement between both the levels i.e 400 kV new section and 220 kV new section with under implementation section at Fatehgarh-3 PS to be implemented under ISTS was agreed by members.

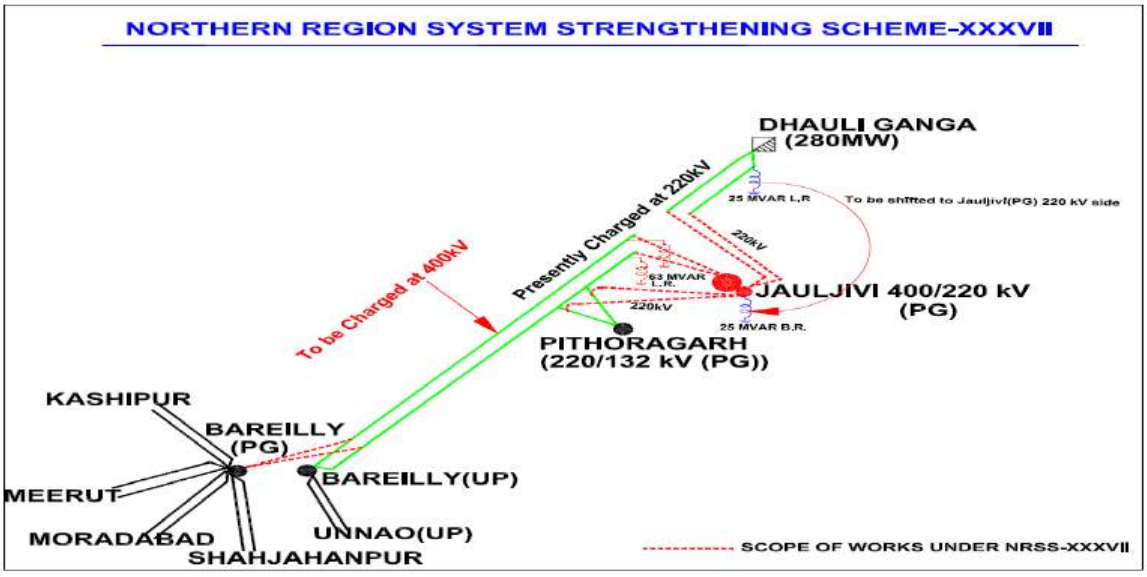
11.0 Underground Cabling works (220kV) in 220 kV Pithoragarh-Jauljivi D/c line

11.1 Director (PSPA-1), CEA stated that in the 35th& 36th Standing Committee meeting of Northern region constituents held on 03/11/14 & 13/07/15, transmission system with scope for establishment of 400/220kV, 2x315MVA GIS Substation in Jauljiviby LILO of both circuit of 400 kV Dhauliganga - Bareilly (PGCIL) line charged at 220 kV at Jauljivi (ISTS) was agreed under Ph-II scheme.

The broad scope of work (Ph-II) included following elements:

1. Establishment of 400/220kV,2x315 MVA GIS Substation at Jauljivi
2. 765/400kV Bareilly (PGCIL) Substation Extension
3. Diversion of 400kV D/c Dhauliganga-Bareilly line (operated at 220kV) at Bareilly end from Bareilly (UP) to Bareilly (PGCIL)
4. Disconnection of 220kV LILO arrangement of Dhauliganga-Bareilly at Pithoragarh and connecting Pithoragarh to Jauljivi 400/220kV Substation at 220kV level
5. LILO of both ckt. of 400kV Dhauliganga-Bareilly (PG) at Jauljivi S/s
6. Charging of Jauljivi–Bareilly D/c line at 400kV level

11.2 Director (PSPA-I), CEA, further stated that project is being implemented by POWERGRID which is likely to be completed by March, 2021. However, reg. element (4) above (Disconnection of 220kV LILO arrangement of Dhauliganga-Bareilly at Pithoragarh and connecting it to Jauljivi 400/220kV Substation at 220kV level i.e. 220 kV D/C Pithoragarh-Jauljivi line), major portion of the line is complete except at 5 locations which are held up due to non-availability of civil aviation clearance wherein a section of line (between AP05 & AP06) is to be connected by 220kV UG Cable. AAI agreed to issue NOC for restricted locations (5) only with the condition that the conductor in span between AP 5/0 and AP6/0 is to be replaced with underground cable (MOM of meeting dated 17/12/2020/ NOC is awaited). Accordingly, as per revised detailed survey, the route having span length of 1200 mtr. approx. between Loc. No. AP-5 (Tower Type: 220kV D/C DD+9) & AP-6 (Tower Type: 400kV D/C DD+9) is envisaged for underground cabling.



In view of above, laying of underground cable is proposed between Loc. No. AP 5/0 to AP 6/0. The estimated cost for supply and installation work of 220kV cable would be about Rs. 20 Cr. including GST.

11.3 CE (PSPA-I), CEA, enquired whether there may be any protection issue due to laying of cable to which PGCIL clarified that since the cable length is very short i.e. 1.2 km, any protection issue arising due to cable would be taken care at substation end.

11.4 PGCIL submitted that Jauljivi substation and LILO portion of 400 kV D/c Dhauliganga-Bareilly line (operated at 220kV) are ready for commissioning whereas above proposed cable laying work of 220 kV D/c Pithoragarh-Jauljivi line may take approx. 6 months. Therefore, to keep the equipment at Jauljivi substation in healthy condition, PGCIL requested for charging of Jauljivi substation with LILO of one circuit of 400 kV D/c Dhauliganga-Bareilly line (operated at 220kV) at Jauljivi substation and charging of Jauljivi- Bareilly S/c line formed after LILO at 400 kV.

11.5 CEA stated that the system may be charged as suggested by PGCIL, however, the utilization of Jauljivi S/s will be there only after the proposed cabling works get completed. Therefore, the CoD of the Jauljivi S/s along with associated works may be considered after completion of the complete scope of works.

11.6 After deliberations, following was agreed:

(i) Approx. 1.2 km span length of 220 kV Pithoragarh-Jauljivi D/c line between Loc. No. AP-5 (Tower Type: 220kV D/C DD+9) & AP-6 (Tower Type: 400kV D/C DD+9) to be implemented with laying of underground cable.

(ii) LILO of one circuit of 400 kV D/c Dhauliganga-Bareilly line (operated at 220kV) at Jauljivi substation and charging of Jauljivi- Bareilly S/c line formed after LILO at 400 kV would be an interim measure till establishment of direct connection between Pithoragarh and Jauljivi Substation at 220kV level.

12.0 Proposal for line reactive compensation on 400kV transmission lines (ISTS)-Agenda Point by CTU:

12.1 Director (PSPA-I), CEA, stated that CTU vide mail dated 02.02.2021 has informed that due to prevailing high voltage in NR grid, it is observed that some of the 400kV ISTS lines having more than 200km line length are without any line compensation and therefore experiencing difficulty in line charging. 400kV D/c (Twin moose) line of 200-240km line length typically have a line rise (Ferranti rise) of 10-14 kV (without reactors) at open end during line charging. In addition, source rise will be additional in total rise. In above scenario, during line charging of transmission lines of 200-240 km length, voltage may breach permissible steady stage voltage limit of 420kV due to consistently higher voltage (>410kV). Further, due to such high voltage during charging event, issues are also observed on line equipment.

12.2 Director (PSPA-I) further stated that POWERGRID has analysed ISTS lines of more than 200 km line length and without any line reactive compensation in Northern region. As informed by POWERGRID, space was not available for placement of line reactive compensation in substations for some of the lines. Based on information on availability of space in substation for placement of line reactive compensation, analysis has been carried out for following lines:

- 400kV Mainpuri- Ballabgarh D/c line (236 km)
- 400kV Kanpur- Allahabad S/c line (225 km)
- 400kV Agra- Bhiwadi ckt -2 (209 km)

Powergrid had analysed the past one year data of voltage profiles of terminal substations of above ISTS lines and based on their detailed analysis and keeping in the view the availability of space at the substation, Powergrid proposed the following:

(i) Installation of 50 MVAR switchable line reactor at Mainpuri end and fixed 50 MVAR line reactor at Ballabgarh end on 400kV Mainpuri- Ballabgarh D/c line.
(ii) Installation of 50 MVAR switchable line reactor at Allahabad end on400kV Kanpur- Allahabad line.
(iii) Installation of 50 MVAR line reactor at Bhiwadi end for uncompensated circuit of 400kV Agra- Bhiwadi D/c line.

12.3 POSOCO stated that although providing line reactive compensation is grid requirement, it is also necessary that adequate reactive compensation is also provided at the sub-station level. This would help to manage the voltages within IEGC limits and will minimize high voltages at the open end during switching of lines.

12.4 POSOCO further stated that it is being seen that transmission utilities are ready to charge the lines without line reactor, if the reactor is under planned or forced outage. Such operation leads to the impression that the requirement of line reactor has not been studied properly. Therefore, it is essential that whenever line reactor is planned, it may also be clearly specified by CTU whether the line can be safely charged without line reactor or not.

12.5 After deliberations, it was agreed that POSOCO would conduct a comprehensive study on the issue of high voltage at the various sub-stations and assess requirement of reactive compensation to address the same. POSOCO agreed for the same.

13.0 Downstream system of ISTS s/S reg. Planning, Implementation and Charges thereof:

13.1 Director (Planning & Commercial), UPPTCL, stated that as agreed in 23rd meeting of SCPSPNR, held on 16-02-2008, numbers of 220 kV line bays associated with 400/220 kV transformers were being finalised on normative basis (3 nos. line bays for each 315 MVA T/F and 4 no. line bays for each 500 MVA T/F) and the same would be considered as a part of Regional Pooled system, for transmission tariff purposes. Accordingly, a number of substations under NRSS schemes have been planned in U.P., Punjab, Himanchal Pradesh, Haryana and Rajasthan in which 220 kV line bays were planned on normative basis and were to be considered as part of regional pooled system.

13.2 Director (Planning & Commercial), UPPTCL, cited example of NRSS XIX scheme wherein Bagpat 400 kV PGCIL substation was planned with anticipated commissioning by Feb, 2012. UPPTCL had planned its downstream system considering above anticipated commissioning date, which were required to relieve its system loading/ constraints in Intra-State Transmission system around Bagpat, Muradnagar, Shamli areas, etc. However, subsequently POWERGRID Bagpat system got delayed due to various RoW issues and could not be completed till 2015. In view, UPPTCL had to plan alternative transmission scheme to relieve its Intra-State system loading by way of establishment of a new substation, Muradnagar-II in 2014.

13.3 He further stated that from 35th standing committee meeting (held in Nov, 2014) onwards, the matter regarding identification of specific downstream lines for various ISTS substation were discussed (36thSCM held on 13.07.15, 37thSCM held on 20.01.2016 & 38thSCM held on 30.05.2016).

In view of the above, UPPTCL had to plan additional transmission system to be connected with bays at PGCIL substation & intimated the same in 38thSCM on dated 30.05.2016. Further, keeping in view 2 years execution time for 220 kV downstream system, as agreed by members in 30thSCM on dated 19.12.2011, UPPTCL transmission system was supposed to be commissioned by May, 2018.

However, based on POWERGRID's tariff application, CERC approved deemed commissioning of the unconnected Bays under Regulation 4(3)(ii) of Tariff Regulations, 2014 and directed that charges, for unutilized bays shall be paid by UPPTCL on bilateral basis till actual commissioning of associated downstream line.

Similar tariff orders were released by CERC in respect of other Powergrid substations, namely Saharanpur, Sohawal and Shahjahanpur, wherein 220 kV line bays were initially planned, on normative basis.

13.4 UPPTCL submitted that while CERC had taken note of the delays which happened due to RoW issues in the area at the time of finalizing tariff of POWERGRID transmission scheme, no consideration was given to the fact that UPPTCL's planned additional transmission system is also being laid in the same area & had to face similar RoW issues and hence could not be completed as indicated at the time of planning, in 2016.

13.5 Under the above circumstances and as the similar issues are being faced by the others Northern Region constituents, UPPTCL proposed that NRPC(TP) may recommend to CTU as well as CERC that charges for the line bays which were originally planned "under normative system" should be considered as part of POC mechanism, along with charges of ICTs and should not be loaded separately to the state transmission utility on bilateral basis.

13.6 Director (Planning & Commercial), UPPTCL further stated that this is also in line with the MoP, GoI's recent order No. 23/12/2016-R&R dated 15.01.2021 wherein it is stated that ISTS charges should be included for determination of transmission charges of DIC in accordance with Regulation 5 to 8 of Sharing Regulations, independent of readiness of associated generation or upstream or downstream transmission elements.

13.7 The members of NRPC(TP) took note of deliberations and advised UPPTCL to approach CERC.

14.0 Transmission works to be implemented in Jammu and Kashmir Region under Intra – State transmission system:

14.1 CEA stated that JKPDD had submitted DPR for Jammu transmission works in Jammu region, which were agreed in the 1st meeting of NRPC(TP) held on 24.01.2020. Subsequently, some additional transmission works were also submitted by JKPDD. Also, JKPDD has submitted DPR for transmission works in Kashmir region in January, 2020, for the transmission works with 2639 MVA of new substations and 739 ckms of new transmission lines.System studies were carried out for both regions for the time frame of 2025-26. Two cases were studied considering peak load of Jammu in summer and peak load of Kashmir in winter. Based on the system studies and discussions carried out with JKPDD, the transmission system requirement for both Jammu and Kashmir region were worked out and the same are listed at **Annexure-B**.

14.2 Further, following intra-state works proposed by JKPDD requires interconnection with the ISTS elements:

1	LILO of 220kV Wagoora - Kishenganga line at Khansahib (Beerwah)	Kishanganga - Wagoora 220kV D/C line is an ISTS line

2	LILO of one ckt of Alusteng- Leh 220kV S/c line on D/c towers at Gangangeer (Sonamarg) (5km)	Alusteng- Leh 220kV S/c line is an ISTS line
3	220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri (40km)	Amargarh (Kunzer) is an ISTS S/s. Out of 6 nos. of 220kV bays, 4 bays have been utilized for LILO of Delina –Zainkote line at Amargarh (Kunzer), 2 nos. of bays are proposed to be utilized through Kunzar –Sheeri 220kV D/c line.
4	220kV New Wanpoh - Mattan D/C line (15km)	Out of 6 nos. of existing bays,4 nos. of 220kV bays are utilized at New Wanpoh with New Wanpoh –Alusteng220kV D/c line and New Wanpoh- Mirbazar 220kV D/c line, which are presently under construction. 2 nos. of 220kV bays can be utilized for proposed connectivity
5	LILO of 220kV D/C Delina - Kishanganga Line (PGCIL) at Wahipora (35km)	220kV D/C Delina - Kishanganga Line (PGCIL) is ISTS line

14.3 The above proposal was discussed with CTU and JKPDD in a meeting held on 12.01.2021 with CTU and JKPDD. In the meeting it was highlighted that the system studies were carried out by CEA for the Winter Peak (2025-26) scenario considering anticipated load for UT of J&K as 4802 MW (Jammu Region – 2008 MW & Kashmir Region – 2794 MW). Some major observations from the system studies results are:

- 2x315MVA, 400/220kV ICTs at New Wanpoh gets critically loaded
- 2x315MVA, 400/220kV ICTs at Amargarh (Kunzar)n-1 non complaint

14.4 For New Wanpoh S/s, CTU informed that there is space constraint for 3rd ICT and the augmentation of existing ICTs may be possible; however, there may be issues of utilization and capitalization of existing ICTs.

14.5 CEA stated that at present, the transformation capacities are not properly utilized at both New Wanpoh and Amargarh S/s, therefore, the decisions regarding replacement of 400/200kV ICTs at New Wanpoh and addition of new 400/220kV ICT at Amargarh may be taken up in future with increased loading of existing transformers.

14.6 POSOCO stated that as per the studies, the additional 3rd transformer at Amargarh may be considered with the increased load in J &K. JKPTCL however indicated they won't need any additional 220kV line bays for drawl along with above transformer.

14.7 The issue of creation of 220kV S/s at Gagangeer/Nilgrar for about 40-50 MW of load was also raised in the meeting and JKPTCL informed that there is load requirement of around 35MVA at Gagangeer by NHAI as operational requirements of two numbers of tunnels in that area and around 10-15 MVA requirement for some sparsely populated area in the region. JKPDD added that there is no 132kV S/s for around 30kms from Gagangeer and the 220kV Leh – Srinagar line is the nearest. On suggestion of CTU to explore possibility of inter-connection through 66kV from Drass substation, JKPDD informed that implementation of 66kV line from Drass is not feasible considering that the line has to pass through Zojila pass and also it would not be possible to get forest clearance for the transmission line in that area. JKPDD emphasized that this substation is also important considering the Amarnath yatra route through this area.

14.8 After further deliberations, the following was agreed:

(a) Transmission elements to be implemented by JKPDD as Intra-State transmission works attached as **Annexure-B** along with following transmission elements as Intra-State transmission works which require interconnection with the ISTS elements were agreed:

(i) LILO of 220kV Wagoora - Kishenganga line at Khansahib (Beerwah)

(ii) LILO of one ckt of Alusteng- Leh 220kV S/c line on D/c towers at Gangangeer (Sonamarg)

(iii) 220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri

(iv) 220kV New Wanpoh - Mattan D/C line

(v) LILO of 220kV D/c Delina - Kishanganga Line (PGCIL) at Wahipora

(b) Addition of new 1x315 MVA(or 1x500 MVA if possible), 400/220kV ICT at Amargarh to be taken up under ISTS with the time frame of March 2026.

(c) Replacement of 400/200kV ICTs at New Wanpoh would be considered in future with increased loading of existing transformers.

(d) JKPTCL to study and suggest the requirement for creation of new 400kV S/s in Kashmir so as to reduce the loadings on New Wanpoh S/s.

15.0 Power evacuation scheme of 66 MW Dhaulasidh HEP of SJVN Limited in Himachal Pradesh

15.1 Director (PSPA-I), CEA, stated that CTU had granted Connectivity & LTA for evacuation of power from 66 MW Dhaulasidh HEP of SJVN through 220 kV D/c line from Dhaulasidh HEP to Hamirpur (PG). Two no. of 220 kV bays at Hamirpur S/s were also in the scope of SJVN. Earlier, SJVN vide their letter dated 09.07.2020has proposed to LILO 220kV Dehan-Hamirpur (under-construction) line of HPPTCL at Dhaulasidh instead of availing direct connectivity to Hamirpur. The same proposal was discussed in a meeting held on 28.07.2020 through VC, wherein, it was agreed that SJVN would analyze the overall cost of the line for both the arrangements considering the enhancement of the capacity of switchyard equipment, change in the line length with the conductor configuration and the transmission charges and would share the details with CEA and CTU for final deliberations.

15.2 Director (PSPA-I), CEA, stated that SJVN vide their mail dated 27.11.2020 and 02.12.2020 has proposed another alternative in consultation with HPPTCL, which involves construction of a 220 kV switching station at Sujanpur with the LILO of Dehan-Hamirpur line by HPPTCL and SJVN would construct 220 kV D/c line with single zebra conductor from Dhaulasidh HEP to planned switching station at Sujanpur for evacuation of power from Dhaulasidh HEP. The 2 no. of bays at Sujanpur S/s for terminating this line would also be under the scope of SJVN. The same was discussed in the meeting held on 09.12.2020, wherein, SJVN stated that constructing a direct 30 km line from Dhaulasidh to Hamirpur (PG) with single zebra conductor would involve more RoW constraints in the area. Therefore, SJVN approached HPPTCL, wherein it was emerged that a Pooling station could be constructed which would be helpful in power evacuation of Dhaulasidh HEP as well as for upcoming HEPs like Thana Plaun and Triveni Mahadev. SJVN further stated that with the construction of Sujanpur S/s, the transmission charges per unit would be more or less same or even lesser in the new proposal and further, looking into RoW constraints, the proposal of Sujanpur S/s would be more economical.

SJVN intimated that the commissioning schedule of Dhaulasidh HEP is March 2025 and requested HPPTCL to keep the time schedule of Sujanpur S/s matching with Dhaulasidh HEP.

After deliberations, following was agreed:

(i) HPPTCL to construct a 220 kV switching station at Sujanpur with LILO of Dehan-Hamirpur 220 kV D/c line of HPPTCL.

(ii) For evacuation of power from Dhaulasidh HEP, SJVN to construct a 220 kV D/c line from Dhaulasidh to Sujanpur with single zebra configuration along with two number of 220kV bays at Sujanpur.

(iii) SJVN to approach HPPTCL for grant of connectivity and accordingly CTU to revoke the connectivity granted to Dhaulasidh HEP at Hamirpur.

(iv) CTU to revise the LTA granted to SJVN for Dhaulasidh HEP.

16.0 220/400 kV, 2x315 MVA PS at Gumma (HPPTCL) along with 400 kV D/C LILO of Nathpa Jhakri-Abdullapur at Gumma (HPPTCL):

16.1 HPPTCL stated that in the Connectivity/Long Term Access Meeting held on 29.12.2010 along with 29th meeting of SCPSPNR, connectivity and LTA for 111 MW generation from Sawara Kuddu HEP was agreed through establishment of 220/400kV, 2x315 MVA pooling station along with LILO of one circuit of Nathpa Jhakri- Abdullapur 400 kV D/c line to be implemented by HPPTCL. Since the Standing Committee on Transmission System Planning of Northern Region meeting and meeting for the Connectivity/Long Term Access were held together on 29.12.2010, therefore the above arrangement was not included in the minutes of the 29thSCPSPNR meeting. However, the same was covered in the MoM of the Connectivity/Long Term Access meeting. Further, PGCIL vide their letter dated 03.05.2011 intimated to HPPTCL for LILO of both circuits of Nathpa Jhakri-Abdullapur (Now Nathpa-Jhakri-Panchkula) D/c line at Gumma (Pragatinagar) to ensure balanced loading and accordingly HPPTCL had amended scope.

16.2 HPPTCL further stated that they have constructed the 220/400kV, 2x315 MVA Gumma (Pragatinagar) pooling station along with 400 kV D/C LILO of Nathpa Jhakri-Abdullapur (Now Nathpa-Jhakri-Panchkula) and has submitted initial charging documents for approval to NRLDC, for which NRLDC has asked for approval of Standing Committee. In this context, a meeting was held through VC on 05.10.2020, wherein POSOCO had raised certain queries regarding action plan of HPPTCL, total generation to be evacuated through Gumma S/s, SPS, metering arrangement and agreement for sale of power of Sawra Kuddu HEP. Subsequently, HPPTCL vide letter dated 06.10.2020 submitted compliances on the queries raised by POSOCO. The same was discussed in a meeting held on 09.10.2020, wherein, following was agreed:

(i) CTU to perform the system study for evacuation of power as per LTA. Further, to study the power flow considering LILO of one ckt. of 400kV Jhakri – Panchkula transmission line and intimate restrictions, if any, in power evacuation without the LILO of 2nd ckt.

(ii) HPPTCL to intimate/submit details regarding the Protection settings at NJPS, Panchkula and Gumma substations and to update the same in the Protection Committee meeting in NRLDC.

(iii) HPPTCL to approach NRPC for review/modification in the SPS arrangement in Jhakri Complex.

(iv) POSOCO to give charging permission for LILO of one circuit of 400kV Jhakri - Panchkula transmission line at Gumma S/s after implementation of revised SPS by HPPTCL.

16.3 HPPTCL informed that after attending to the above points, NRLDC accorded the permission for charging the LILO of one circuit and the 400/220 kV Transformer ICT-I on 31.10.2020 & 01.11.2020 respectively and vide their email dated 05.11.2020 requested CEA to get the system ratified in the forthcoming Standing Committee.

16.4 Members agreed and noted the same.

16.5 CTU and POSOCO suggested HPPTCL to examine space for installation of a 125 MVAR bus reactor at Gumma substation as issue of high voltage has been observed at Gumma specially during winter night when generations at Nathpa-Jhakri and Rampur is down. HPPTCL agreed for the same and to revert with the details.

17.0 Construction of 220/400kV, 2x315 MVA PS at Lahal & 400 kV D/C (Twin Moose) line from 400/220 kV, 2 x 315 MVA, Lahal Sub-Station to 400/220 kV Chamera P.S. of PGCIL

17.1 HPPTCL stated that in the 27th meeting of SCPSPNR held on 30th May 2009, following was approved for evacuation of power from Hydro Electric Projects in Ravi Basin:

"HP would establish a 400/220 kV Sub-Station at Lahal in the time frame of Kutehar HEP which would be connected to Chamera Pooling Station by a 400 kV D/C line. Initially this line would be charged at 220 kV level and subsequently with the coming up of more generation, this line can be charged at 400 kV level ensuring that the ICTs (2x315MVA) at Chamera-II Pooling station are not overloaded"

It was further mentioned that instead of 2 no. of 220 kV D/C Lines, a 400 kV D/C Line considering the overall power flow requirement of about 1000-1100 MW shall be constructed in order to conserve R.O.W.

HPPTCL had accordingly taken up the execution of the following Transmission Elements:

1. 400/220 kV, 2 x315 MVA & 220/33 kV, 63 MVA Sub-Station at Lahal.
2. 400 kV D/C (Twin Moose) line from 400/220 kV, 2 x315 MVA, Lahal Sub-Station to 400/220 kV Chamera P.S. of PGCIL.

The work of construction of 400/220kV Sub-Station has been completed. The 220/33kV portion of the Sub-Station has already been commissioned to provide interim power evacuation path to SHEPs via construction of 220 kV S/C line on D/C towers from Lahal to Budhil HEP till completion of 400 kV D/C (Twin Moose) line from 400/220 kV, 2x315 MVA, Lahal Sub-Station to 400/220 kV Chamera P.S. of PGCIL.

17.2 HPPTCL further stated that in order to charge the 400/220 kV S/s, HPPTCL had approached NRLDC for no load charging of 400/220kV Sub-Station through 220/400kV ICT from 220 kV side. However, NRLDC had observed that the transformation capacity of 400/220 kV Substation has not been mentioned in the Standing Committee approval accorded in the 27th meeting which is required before according approval for charging.

17.3 The matter was accordingly taken up with CEA vide letter dated 05.11.2020 to clarify on the capacity of S/Stn. Accordingly, CEA convened a meeting of all concerned stakeholders through VC on 11.11.2020, wherein following was decided:

(i) POSOCO to provide permission to HPPTCL for charging of 400/220 kV, 2x315 MVA Lahal substation.

(ii) Transformation capacity of 2x315 MVA at 400/220 kV Lahal substation would be ratified in the next standing committee meeting.

(iii) HPPTCL to explore the possibility of installation of Bus Reactor at Lahal S/Stn.

17.4 In view of above, HPPTCL requested members to consider & approve the following -

(i) The capacity of Lahal S/S as 400/220 kV, 2x315MVA.

(ii) Construction of 400 kV D/C (Twin Moose) line from 400/220 kV, 2x315 MVA Lahal Sub-Station to 400/220 kV Chamera P.S. of PGCIL

17.5 Members agreed to the proposal of HPPTCL. HPPTCL was again requested to explore the possibility of installation of Bus Reactor at Lahal S/Stn. HPPTCL agreed for the same and to revert with the details.

18.0 Establishment of 400/220kV Nange Pooling Station for proposed SJVN Hydro Power Plant Luhri Stage-I, II & Sunni Dam:

18.1 Director (PSPA-I) stated that in the 2nd NRSCT meeting held on 13.11.18, transmission system for connectivity to Luhri-I (210 MW), Luhri-II (172 MW) & Sunni Dam (382 MW) HEP were agreed. It was decided during the meeting that power from all the three stages of Luhri HEP would be evacuated at 220 kV level and would be pooled at 400/220 kV proposed ISTS Nange pooling station located near Luhri-II HEP and further evacuated to Koldam through 400 kV D/c line (along with associated bays at both ends). In the 3rd NRSCT meeting also, information of connectivity granted for above projects was recorded.

However, transformation capacity of 400/220 kV Nange Pooling Station (315 MVA) has been missed inadvertently in the minutes of 2nd NRSCT meeting. Accordingly, it is proposed that transformation capacity at 400/220 kV Nange Pooling Station (2x315 MVA) may be included. Further, CTU is in receipt of Connectivity & LTA application from SJVN for Luhri-I and Connectivity applications for Luhri-II & Sunni Dam. Accordingly, 2nd 315 MVA ICT at Nange PS shall be considered with grant of LTA to Luhri Stage-I in order to meet n-1 contingency criteria.

18.2 Accordingly, connectivity system for Luhri-I, Luhri-II & Sunni Dam HEP is as under:

(i) Establishment of 2x315MVA, 400/220 kV Nange GIS Pooling Station (tentatively Identified near Luhri Stage-II HEP).

(ii) Nange GIS Pooling Station – Koldam 400kV D/c line along with associated bays at both ends (GIS bays at Koldam).

(iii) 125 MVAR Bus Reactor at Nange GIS PS.

Identified transmission system each from Luhri-I/Luhri-II/Sunni Dam upto Nange Pooling station shall be under the scope of SJVN/generation developer. Further LTA system for Luhri-I shall include 2nd 315 MVA ICT at Nange GIS Pooling Station.

18.3 SJVN intimated that commissioning schedules for Luhri Unit-I (210 MW), Sunni Dam (382 MW) and Luhri Unit -II (172 MW) are April 2025, January 2027 and October 2027 respectively. Accordingly, 2x315 MVA ICT capacity at Nange Pooling station shall be required in the time frame of Luhri Unit-I (210 MW).

18.4 SJVN further stated that as the transmission system each from Luhri-I/Luhri-II/Sunni Dam upto Nange Pooling station shall be under the scope of SJVN, location of Nange Pooling Station should be finalized and communicated to SJVN at the earliest so that SJVN could undertake the survey work for laying transmission line from the HEPs to Nange PS.

18.5 It was also opined that considering the transportation constraints, single phase units for transformers may be considered.

18.6 After deliberations, it was agreed that following transmission system may be taken up for implementation with the time frame of Luhri-I HEP (April 2025):

(i) Establishment of 7x105MVA (single phase units, 400/220kV Nange GIS Pooling Station (tentatively Identified near Luhri Stage-II HEP).

(ii) Nange GIS Pooling Station – Koldam 400kV D/c line along with associated bays at both ends (GIS bays at Koldam).

(iii) 125 MVAR Bus Reactor at Nange GIS PS.

The above transmission system would also be utilized for connectivity of Sunni Dam and Luhri-II HEPs of M/s SJVN.

19.0 Construction of 220/33 kV, 31.5 MVA Substation in AD Hydro Switchyard at Prini by HPPTCL

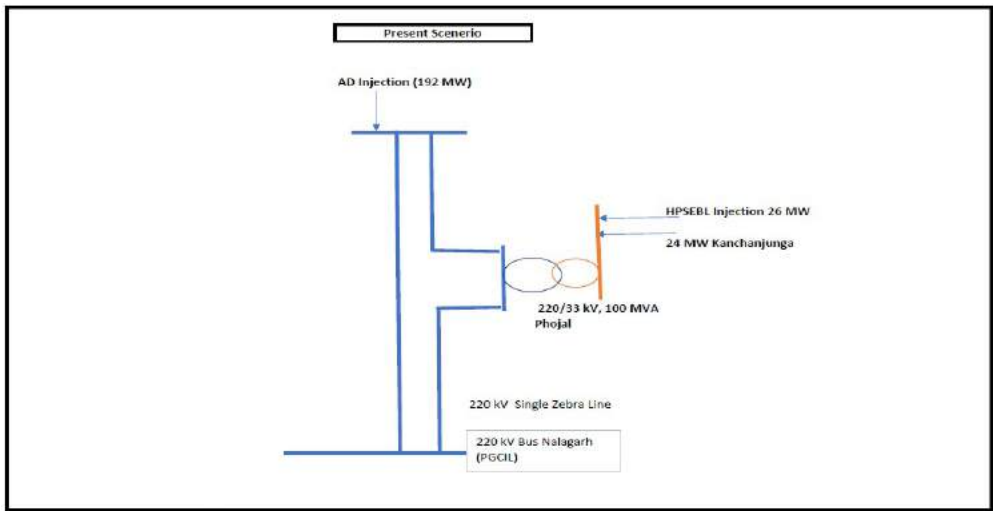
19.1 Director (PSPA-I), CEA, stated that HPPTCL vide letter dated 01.01.2021 has informed that AD Hydro Power Corporation Ltd. has developed 192 MW project at Prini in Himachal Pradesh. In order to evacuate power from the project, CTU had granted connectivity to ADHPL at 400/220 kV Nalagarh Substation through 220 kV D/C Prini to Nalagarh Line of ADHPL. During the grant of consent for forest clearance case of 220 kV D/C Prini-Nalagarh line to ADHPL, it was agreed that AD Hydro will provide space for one additional 220 kV Bay in its Switchyard at Prini for injection & drawl of power at Prini by HP.

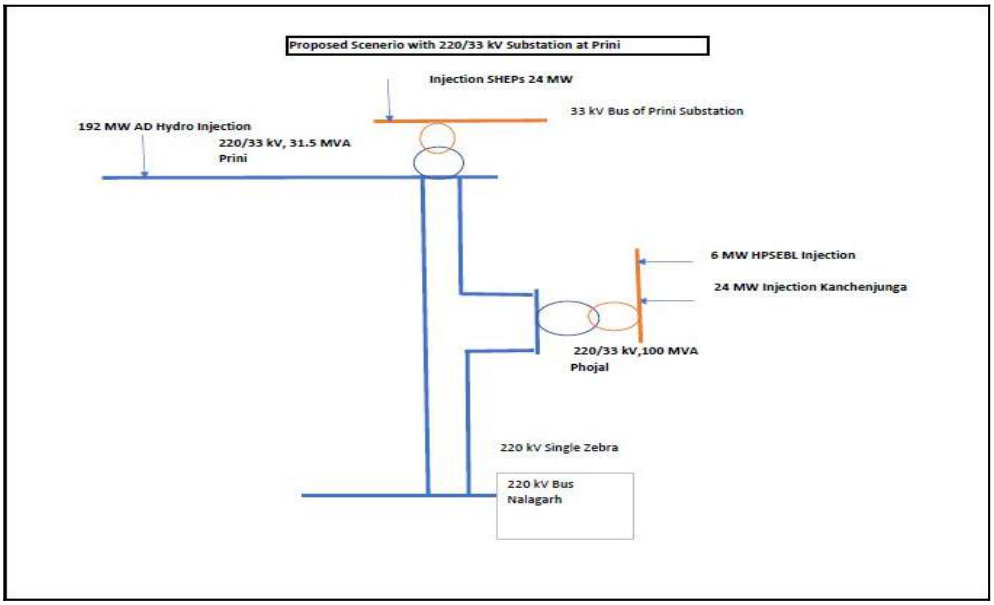
AD Hydro had also agreed for LILO of line between Prini & Panarsa/Banala by HPPTCL which was done by HPPTCL by establishing 220/33 kV, 100 MVA Phojal Substation by S/C LILO of 220 kV D/C AD Hydro - Nalagarh line. Subsequently, it was agreed that 220/33 kV, 31.5 MVA substation shall be constructed in the yard of AD Hydro Switchyard at Prini. The substation has been planned to facilitate injection of power from Small Hydro Electric Projects in summers and to provide drawl of power to Manali area in winter. Currently power from the small hydro projects is being evacuated through 220/33 kV,100 MVA Phojal Substation of HPPTCL.

Due to constraints in 33 kV system of HPSEBL, the SHEPs have to back down during peak generation period i.e. Summer. With the construction of 220/33 kV, 31.5 MVA Prini Substation, SHEPs will be able to inject power directly at Prini Substation. This will result in shifting of peak summer injection from Phojal S/Stn to Prini Substation & similarly winter drawl of Manali area will shift from Phojal S/Stn to Prini S/Stn.

Sl. No.	Name of Substation	Peak Injection (MW) (Summer)	Peak Drawl (MW)(Winter)

1.	220/33 kV, 31.5 MVA Prini S/Stn.	24	24
2.	220/33 kV, 100 MVA Phojal S/Stn.	30	8
	Total	**54**	**32**





Accordingly, HPPTCL has proposed the construction of Prini 220/33 kV, 31.5 MVA substation by HPPTCL in AD Hydro Switchyard at Prini alongwith one number of 220kV bay at Prini.

19.2 POSOCO stated that under N-1 contingency of 220 kV Phojal-Nalagarh line, there would be only one 220 kV line from AD Hydro-Nallagarh to evacuate more than 250 MW power. Therefore, thermal rating of the line may be checked and need for any SPS may be explored by HPPTCL and AD Hydro. Moreover, since the line is a dedicated line constructed by AD hydro, the sharing of charges and other commercial agreement may be done between the parties beforehand to avoid any issue at a later stage.

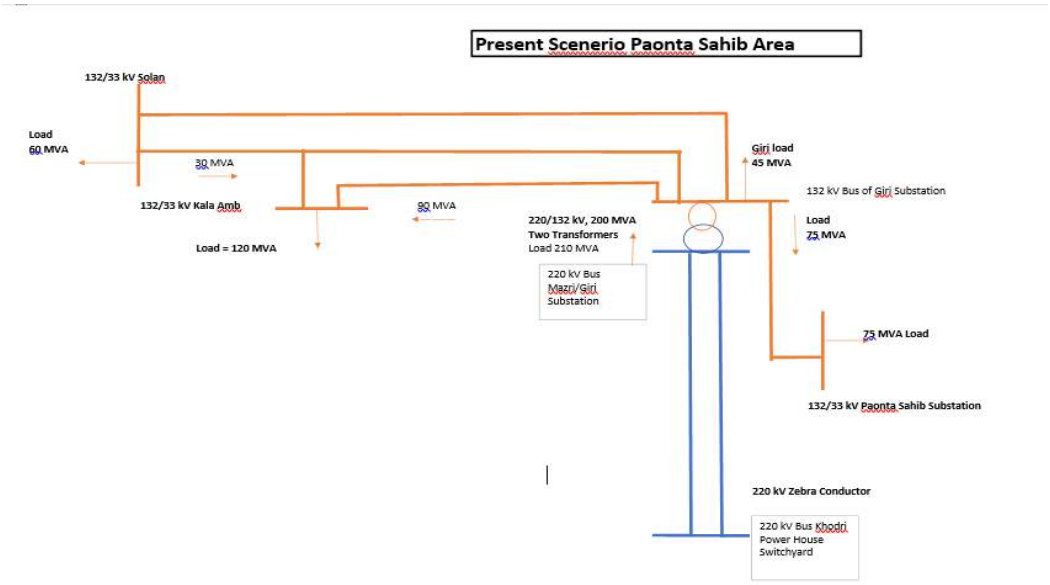
19.3 HPPTCL stated that AD Hydro Power Corporation Ltd has also agreed to HPPTCL's proposal. There are some technical issues regarding control signal which would be mutually sorted out between HPPTCL and AD Hydro Power Corporation Ltd.

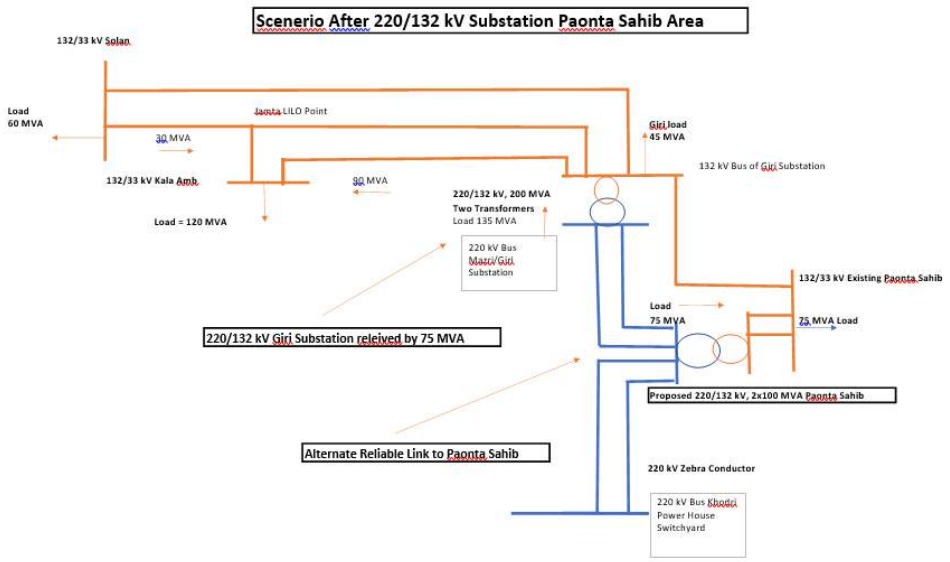
19.4 After deliberations, members agreed to the above proposal of HPPTCL. The commercial

arrangements for usage of the line may be settled mutually between HPPTCL and M/s AD Hydro Power Corporation Ltd.

20.0 Construction of 220/132 kV, 2x100 MVA Substation at Paonta Sahib by D/C LILO of 220 kV Khodri-Mazri Line:

20.1 HPPTCL stated that presently, 132kV Paonta Sahib substation is being fed from 132kV Giri substation. LILO of 132kV Giri-Kulhal transmission line at 132/33kV Paonta (Gondpur) Sub-Station was approved in 4th NRSCT meeting held on 25.07.2019. HPPTCL vide their letter dated 17.12.2020 had informed that after the preliminary survey of the area, it was observed that there is a ROW constraint for termination of LILO at Paonta Sahib. Therefore, alternate proposal to establish 220/132 kV, 100 MVA Substation at Paonta Sahib by D/C LILO of existing 220 kV Khodri (HPPTCL) – Mazri(PTCUL)line, which is passing from nearby 132/33 kV Paonta Substation was studied and found feasible by HPPTCL.





20.2 CEA stated that as 220 kV Khodri (HPPTCL)–Mazri (PTCUL) line is an ISTS line between Himachal Pradesh and Uttarakhand, consent of PTCUL is also required. CEA requested HPPTCL to bilaterally discuss the issue with PTCUL and accordingly the issue may be taken up in the next NRPC (TP).

21.0 Transmission works proposed by RVPN:

Director, (PSPA-I), CEA, stated that RVPN vide mail dated 11.01.2021 had submitted the following proposals for approval from NRPC(TP):

- Creation of 220 kV GSS at Karoli (Upgradation), District-Alwar and additional interconnections at PGCIL's 400/220 kV GSS Neemrana.
- Creation of a 220 kV GSS at Pathreda, District-Jaipur, alongwith 220 kV D/C line from PGCIL's 400 kV GSS Kotputli (Khelna).
- Creation of 220 kV GSS Reodar, District-Sirohi, by LILO of 220 kV S/C Sirohi-Bhinmal (PG) line

The details are as under:

21.1 Creation of 220 kV GSS at Karoli (Upgradation), District-Alwar, and additional interconnections at PGCIL's 400/220 kV Neemrana sub-station

21.1.1 PGCIL has constructed 6 nos. of 220 kV feeder bays at their 400/220 kV Neemrana sub-station and RVPN has utilized 4 nos. of 220 kV bays with following interconnections: -

- 220 kV D/C Neemrana-Behror line
- 220 kV S/C Neemrana (400 kV GSS)-Neemrana (220 kV GSS) line
- 220 kV S/C Neemrana (400 kV GSS)-Khushkhera line

The load is continuously increasing in the Kushkhera, Bhiwadi and Karoli areas due to industrial development. RVPN presented the details of transformation capacity and peak load at various GSS as well as transmission lines in the region. RVPN also presented the load flow studies for total system load of 15,169 MW corresponding to FY 2022-23.

RVPN stated that following were the outcomes of the studies:

- Total system losses have been reduced from 1383.366MW to 1379.910 MW in proposed case, thus saving of approximate 3.456MW (130.7861LUs/Annum) is achieved in the proposed case.
- The loading on the existing 220 kV line from PGCIL's 400 kV GSS Neemrana to RVPN's 220 kV GSS Neemrana has reduced from 212 MW is base case to 93MW in the proposed case.
- The loading on the existing 220 kV line from PGCIL's 400 kV GSS Bhiwadi to RVPN's 220 kV GSS Bhiwadi has reduced from 335 MW is base case to 298 MW in proposed case.
- Creation of 220 kV GSS at Karoli will help to meet the load growth in the Kushkhera and Bhiwadi region and simultaneously 2 nos. 220 kV Bays lying unutilized at PGCIL's 400/220 kV Neemrana sub-station would be utilized.

21.1.2 Accordingly, following transmission system was proposed for creation of 220 kV GSS at Karoli (Upgradation) and additional interconnections at PGCIL's 400/220 kV GSS Neemrana:

- 1x160MVA, 220/132kV Power Transformer and 40/50 MVA, 132/33 kV Power Transformer at proposed 220kV GSS Karoli (Distt. Alwar).
- 6 km LILO of 220 kV S/C Bhiwadi (400 kV GSS)-Neemrana (220 kV GSS) line at PGCIL's 400 kV GSS Neemrana.

- 6 km LILO of 220 kV S/C Bhiwadi (400 kV GSS)-Neemrana (220 kV GSS) line at proposed 220 kV GSS Karoli.
- 0.2 km LILO of 220 kV S/C Kushkhera-Alwar line at proposed 220 kV GSS Karoli

RVPN informed the timelines of the above proposal as one year.

POSOCO expressed concern on low voltages encountered in Hindaun and Alwar areas during real-time operation. It was suggested that connectivity of these stations may once again be relooked into and any additional system/ reactive power requirement may be planned suitably.

21.2 Creation of a 220 kV GSS at Pathreda, District-Jaipur, alongwith 220 kV D/C line from PGCIL's 400 kV GSS Kotputli (Khelna)

21.2.1 At PGCIL's 400/220 kV GSS Kotputli (Khelna), following 220 kV transmission lines are connected:

- 220 kV D/C Kotputli (PGCIL)-Bansur line
- 220 kV S/C Kotputli (PGCIL)- Kotputli (RVPN) line
- 220 kV S/C Kotputli (PGCIL)- Manoharpur line

Presently PGCIL has constructed 6 nos. of 220 kV feeder bays at their 400/220 kV GSS Kotputli (Khelna) and RVPN has utilized 4 nos. of 220 kV bays. Furthermore, the agriculture load is continuously increasing in the Kotputli, Paota and Pathredi region. In this region industrial load is also increasing due to development of an industrial area. There is severe RoW problem around 220 kV GSS Kotputli and the DISCOM cannot construct additional 33 kV feeders from 220 kV GSS Kotputli, hence, a new 220 kV GSS is considered at Patheredi for meeting additional load growth in the area. RVPN presented the details of transformation capacity and peak loads at various GSS and transmission lines in the region. RVPN also presented the load flow studies for total system load of 15,169 MW corresponding to FY 2022-23.

RVPN stated that following were the outcomes of the studies:

- In the proposed case, utilization of 630 MVA, 400/220 kV transformers at 400 kV GSS Kotputli (Khelna) would increase.
- Creation of 220 kV GSS will help to meet the additional anticipated load in region.

21.2.2 Accordingly, RVPN proposed following transmission system for creation of 220 kV GSS at Pathredi (new location) and additional interconnections at PGCIL's 400/220 kV GSS Kotputli:

- 1x160MVA, 220/132kV Power Transformer and 40/50 MVA, 132/33 kV Power Transformer at proposed 220kV GSS Pathredi (Distt. Jaipur).
- 20 km LILO of 220 kV D/C PGCIL's 400 kV GSS Kotputli (Khelna)-Pathredi line.
- 5 km LILO of 132 kV S/C Kotputli-Paota line at proposed 220 kV GSS Pathredi.
- 34 km 132 kV S/C Pathredi-Tmhanagazi line.

RVPN informed the timeline of the above proposal as one year.

21.2.3 POSOCO stated that loading of 400/220 kV ICTs at Kotputli may be monitored and based on the expected load growth in this area, requirement of new ICT may be studied.

21.3 Creation of 220 kV GSS Reodar, District-Sirohi, by making LILO of 220 kV S/C Sirohi-Bhinmal (PG) line

21.3.1 Following 132 kV GSS connected in ring are fed from 220 kV GSS Sirohi and 220 kV GSS Pindwara:-

- 132 kV GSS Reodar
- 132 kV GSS Abu Road RIICCO
- 132 kV GSS Abu Road
- 132 kV GSS Swaropganj

Further, 132 kV GSS Sorda and 132 kV GSS Badgaon are also fed from 132 kV GSS Reodar through a 132 kV S/C line. Hence, total 6 nos. of 132 kV GSS are fed from above mentioned ring system. A peak load of 89 MW (approx.) has been recorded on 132 kV S/C Sirohi-Reodar line.

During outage of the 132 kV S/C Sirohi-Reodar line or 132 kV S/C Pindwara-Swaroopganj line, the load demand of above 6 nos. 132 kV GSS cannot be met from either 220 kV GSS due to overloading of existing 132 kV S/C line and is resorted to load shedding over large area. Hence, a new 220 kV GSS is essential in and around Reodar. RVPN presented the Load flow studies for total system load of 14,430 MW for condition corresponding to FY 2021-22.

RVPN stated that following were the outcomes of the studies:

- By creation of 220 kV GSS at Reodar, loading on 132 kV S/C Sirohi-Reodar line will be reduced in proposed case.
- Creation of 220 kV GSS at Reodar will also help to meet the load demand of proposed 132 kV GSS at Jaswantpura.
- 132 kV GSS Sorda and 132 kV GSS Badgaon will be connected in ring system and two supply sources will be available on these GSS in proposed case.
- Four supply sources will be available at 132 kV GSS Reodar which is the main load centre. Hence, reliability of power supply would be improved in the proposed case.

21.3.2 Based on the results of load flow study and technical feasibility received from the field, following transmission system was proposed for creation of 220 kV GSS at Reodar:

- 1x160 MVA, 220/132 kV Power Transformer and 1x20/25 MVA, 132/33 kV Power Transformer at 220 kV GSS Rodar (Proposed).
- 28 km LILO of existing 220 kV S/C Bhinmal (PG)-Sirohi line at 220 kV GSS Reodar (Proposed).
- 32 km 132 kV S/C Reodar (220 kV GSS)-Badgaon line or LILO of Reodar-RIICO AbuRoad.
- 15 km 132 kV S/C Reodar (220 kV GSS)-Reodar (132 kV GSS) line.

21.3.3 After deliberation the proposed Intra –State transmission schemes of RVPN mentioned at Para no. 21.1.2, 21.2.2 and 21.3.2 were agreed by the members.

22.0 Intra-State transmission schemes proposed by HVPN

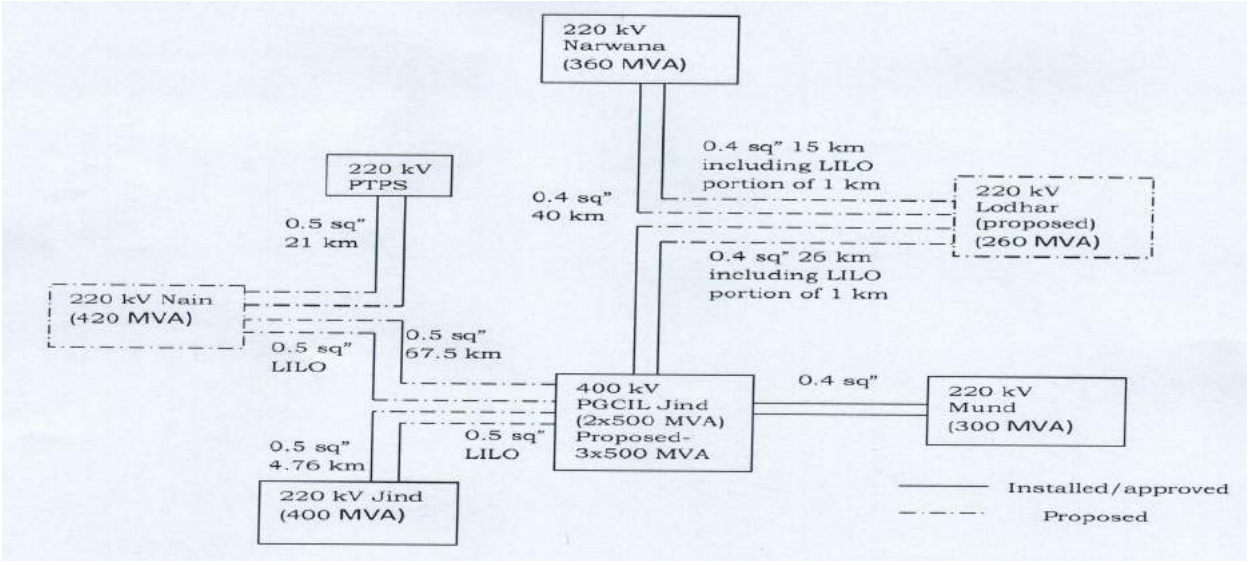
CEA stated that HVPNL vide letter no. Ch-108/HSS-391 dated 08.12.2020 has envisaged five transmission schemes at 220 kV level which involve inter-connection with 400 kV ISTS elements, the details of which are as under: -

22.1 Creation of 220 kV AIS substation Nain, District Panipat.

(i) Creation of proposed 220 kV AIS substation Nain with capacity of 2x160 MVA, 220/132 kV + 2x100 MVA, 220/33 kV transformers with 1x100 MVA, 220/33 kV transformer as standby HOT transformer.

(ii) Creation of LILO of both circuits of 220 kV Jind HVPNL to PTPS D/C line at 400 kV substation PGCIL Khatkar (Jind) with 0.5 sq inch ACSR conductor and thereby LILO of both circuits of 220 kV PGCIL Khatkar (Jind) to PTPS D/C line at proposed 220 kV substation Nain with 0.5 sq inch ACSR conductor.

The above proposed system would require four nos. 220 kV line bays or bay space at 400 kV PGCIL Khatkar (Jind) for interconnection of LILO of both circuits of 220 kV Jind HVPNL -PTPS D/C line at 400 kV substation PGCIL Khatkar (Jind).



22.1.1 CTU confirmed the availability of space for 220 kV line bays at Jind (PG) substation.

22.1.2 HVPNL intimated the time frame of Nain substation as July, 2023, and also informed that 2 nos. of bays are already available at Jind PG. Therefore, only 2 nos. of 220 kV bays are required to be constructed by PGCIL.

22.2 Creation of 220 kV substation Lodhar

(i) Creation of proposed 220 kV substation Lodhar with capacity of (1x160+ 1x100) MVA, 220/132 kV + 1x40/50 MVA, 132/33 kV transformers.

(ii) LILO of both circuits of 220 kV PGCIL Khatkar (Jind) to Narwana D/C line at proposed 220 kV substation Lodhar (approx. 1 km) with 0.4 sq. inch ACSR zebra conductor.

22.2.1 HVPNL stated that time frame of Lodhar substation is March, 2024.

22.2.2 CEA stated that the Nain and Lodhar 220 kV substations are proposed to be connected at Jind (PG) 400/220 kV substation with the time frame of 2023 and 2024 respectively. System studies have been carried out by HVPN and CEA. From the load flow studies, it has been observed that the transformation capacity of 2x500 MVA at 400/220 kV Jind (PG) substation would be sufficient to cater the loads in the time frame of 2022-23 with creation of Nain substation. However, with the creation of Lodhar substation in time frame of 2023-24, transformation capacity at Jind (PG) may not be adequate for system to be N-1 compliant. Therefore, a future provision of augmentation of 400/220 kV transformation capacity at 400 kV Jind (PG) from 2x500 MVA to 3x500 MVA may be kept.

22.2.3 POSOCO stated that in the studies, 360 MW generation has been considered at Panipat TPS. However, ICTs may be N-1 non-compliant whenever there is less or no generation at

Panipat TPS (the plant has a high variable cost). Also, after eight 220 kV feeders from Jind, 3rd 500 MVA ICT at Jind may be required earlier and may be studied accordingly.

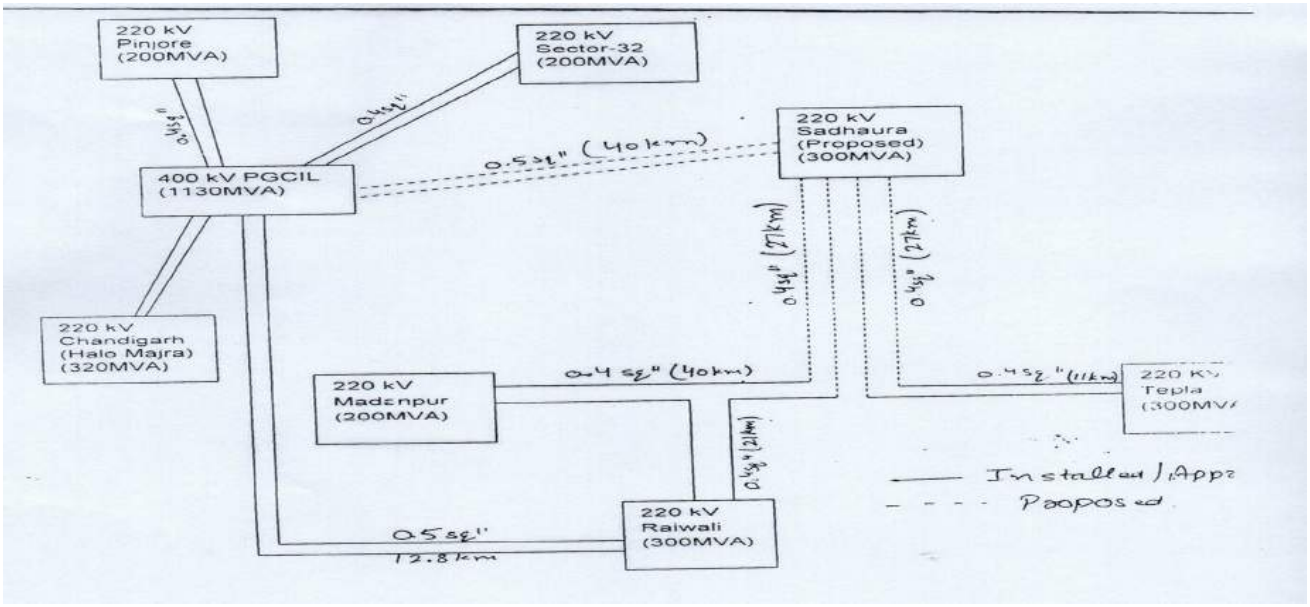
22.2.4 CTU stated that space for ICT augmentation is available at Jind (PG) substation and implementation can be taken up in future depending upon the ICT loading.

22.3 Creation of 220 kV substation Sadhaura by up-gradation of 66 kV substation Sadhaura to 220 kV level

(i) Creation of 220 kV substation Sadhaura by up-gradation of existing 66 kV substation Sadhaura with installed capacity of 2x25/31.5 MVA, 66/11 kV transformers to 2x100 MVA, 220/66 kV + 1x100 MVA, 220/33 kV + 2x25/31.5 MVA, 66/11 kV + 1x12.5/16 MVA, 66/11 kV transformers.

(ii) 220 kV D/C line with moose conductor from 400 kV PGCIL Naggal (Panchkula) to proposed 220 kV substation Sadhaura. (Line length- 40 km approx)

(iii) LILO of 220 kV S/C line from 220 kV Tepla to 220 kV substation Madanpur at proposed 220 kV substation Sadhaura with zebra conductor (Approx. 27km) and LILO of 220 kV S/C line from 220 kV Tepla to 220 kV substation Raiwali at proposed 220 kV substation Sadhaura with zebra conductor (Approx. 27km).



As per the study results, no constraints were observed with the proposed transmission elements.

22.3.1 HVPNL intimated the time frame of Sadhaura substation as September, 2023.

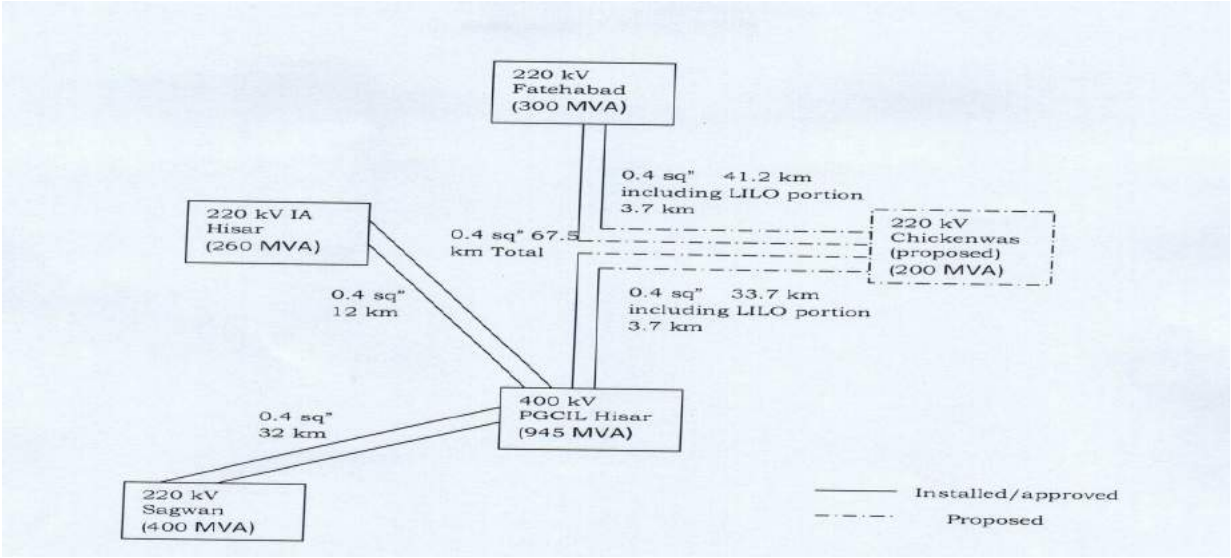
22.3.2 The above proposed system would require two nos. of 220 kV bays at 400 kV PGCIL substation Naggal (Panchkula) to accommodate 220 kV D/C line from 400 kV PGCIL Naggal (Panchkula) to proposed 220 kV substation Sadhaura. HVPNL subsequently intimated that the 2 nos. of 220 kV bays are required to be constructed by PGCIL.

22.4 Creation of 220 kV substation Chickenwas

(i) Creation of proposed 220 kV substation Chickenwas with capacity of 2x100 MVA,220/33 kV transformers.

(ii) Creation of LILO of both circuits of 220 kV PGCIL Hisar to Fatehabad HVPNL D/C line at proposed 220 kV substation Chickenwas (approx. 3.7 km) with 0.4 sq. inch ACSR zebra conductor.

(iii) Time frame of Chickenwas substation is 2023-24.



22.4.1 HVPNL stated that time frame of Chickenwas substation is March, 2024. CEA stated that as per the system studies, no constraints were observed with the proposed transmission elements.

22.4.2 POSOCO expressed concern on the high loading of 220 kV Hisar (PG)- Hisar (IA) D/C line and asked HVPNL to explore measures to relieve loadings of these lines. HVPNL agreed for the same.

22.5 Creation of 220 kV substation Sector 75-A, Gurugram in lieu of 220 kV substation Sector-77 Gurugram (already approved by NRPC(TP) as downstream network of 400 kV substation Sohna Road)

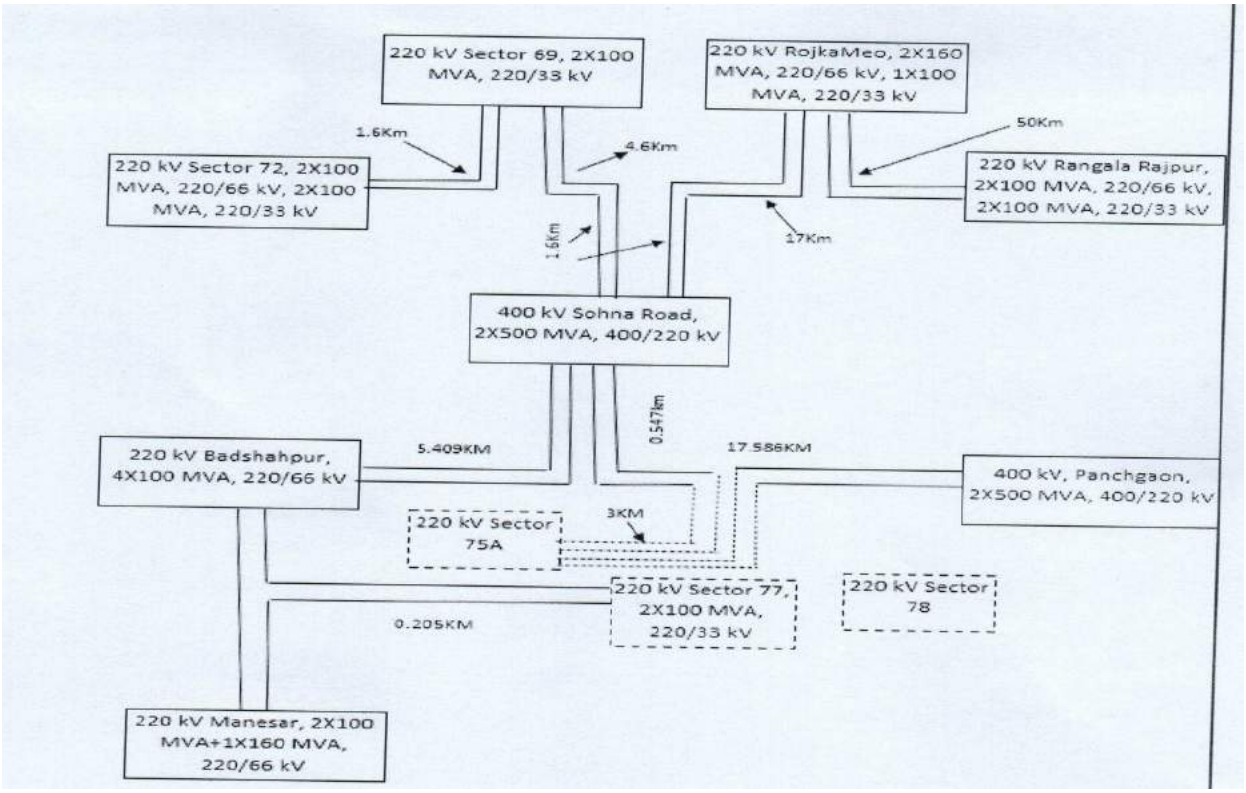
(i) Cancellation of creation of 220 kV substation in Sector 77, Gurugram, with capacity of 2x100 MVA, 220/33 kV transformers due to de-notification of land by Government of Haryana in Sikohpur village. The sub-station had been approved by NRPC(TP) as downstream network of 400 kV Sohna Road substation.

(ii) Creation of 220 kV substation Sector 75-A, Gurugram, with capacity of 2x100MVA, 220/33 kV transformers (in lieu of 220 kV substation in Sector 77 Gurugram)

(iii) Creation of LILO of both circuits of 220 kV Badshahpur to Panchgaon (PGCIL) D/c line (Now 220 kV Sohna Road to Panchgaon D/C line created after LILO of both circuits of 220 kV Badshahpur to Panchgaon (PGCIL) D/c line at Sohna Road) at 220 kV sub-station in Sector 75-A by extending already erected LILO of 220 kV Badshahpur to Panchgaon (PGCIL) D/C line at Sector 77 Gurugram to 220 kV substation Sector 75-A on M/C towers (extended line length approx. 2.5 km) along with dismantlement of part of already erected LILO towers. Earlier proposal was LILO of both circuits of 220 kV Badshahpur to Panchgaon (PGCIL) D/C at 220 kV Sector 77 Gurugram substation and thereby LILO of both circuits of thus created 220 kV Badshahpur -220 kV Sector 77 Gurugram D/c line at Sohna Road.

POSOCO stated that only 2x500 MVA ICTs are planned at Sohna Road and Manesar (PG). The need for additional ICTs at these stations may be studied in view of the expected load growth in this area due to its proximity to Gurugram.

CTU stated that loading on transformers at Sohna Road is under limit in present scenarios. However, as per the studies carried out for 2023-24 scenarios, it may become N-1 non-compliant in future scenarios. Therefore, there is a need to observe the loading on the transformers and take adequate measures for ICT augmentation as and when need arises.



22.6 After deliberations, members agreed to the HVPN proposals mentioned at para 22.1, 22.2, 22.3, 22.4 and 22.5 as intra -state transmission scheme.

22.7 Further, following was agreed as ISTS works:

(i) construction of two nos. 220 kV bays at 400 kV PGCIL substation Naggal (Panchkula) in the matching timeframe of Sadhaura S/s (September, 2023)

(ii) construction of two nos. 220 kV bays at 400 kV PGCIL substation Jind in the matching timeframe of Nain S/s (July, 2023)

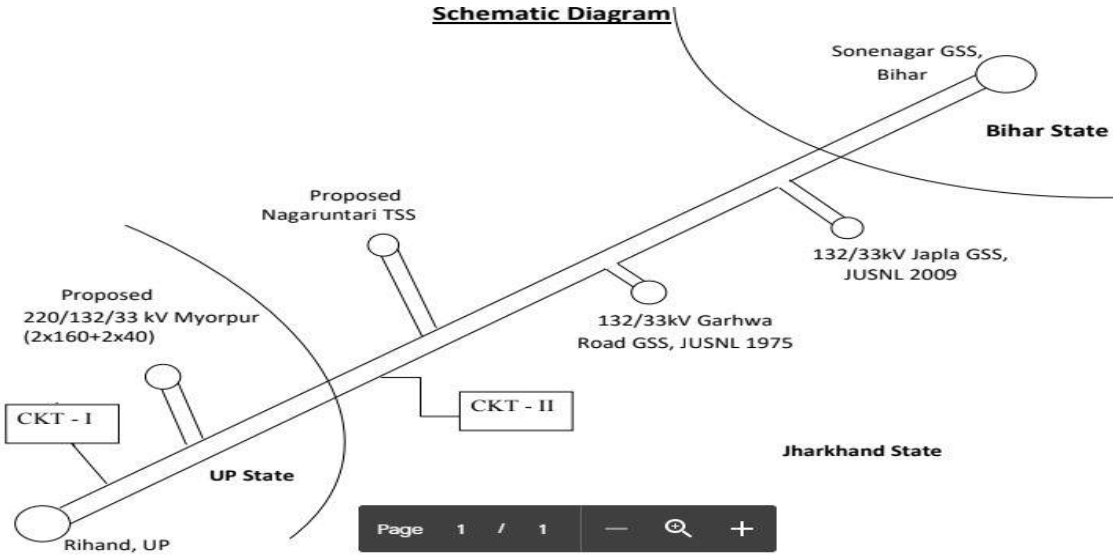
23.0 LILO of one ckt 132kV D/C line Rihand Hydro(Pipari-UP)-Sonenager (Bihar) at 220/132/33kV S/S Myorpur (UPPTCL)

23.1 Director (PSPA-I), CEA, stated that UPPTCL vide their letter dated 01.10.2020 and 13.01.2021 has proposed for LILO of one ckt 132kV D/C Rihand Hydro (Pipari-UP)-Sonenager (Bihar) line at 220/132/33kV S/S Myorpur (UPPTCL) as intra-state works. UPPTCL informed that in the 2nd NRPC(TP) meeting held on 01.09.2020, UPPTCL had proposed to take up the agenda for LILO of 132 kV ckt of Rihand Hydro (Pipri-UP)-Sonenagar (Bihar) line at 220/132/33 kV S/s Myorpur (UPPTCL), wherein, UPPTCL had been advised to discuss the matter in ERPC(TP) meeting and to seek NOC from BSPTCL.

Accordingly, UPPTCL have received the NOC from BSPTCL, vide letter no. 716/BSPTCL/

CE(P&E)/65/2020 dated 29.09.2020 and subsequently deliberated the issue in 2nd ERPC(TP) meeting held on 30.09.2020 and the same was agreed by the ER constituents.

23.2 UPPTCL informed that the 1st ckt. of 132kV D/C Rihand Hydro (Pipari-UP) Sonenagar (Bihar) line is normally charged on no load and 2nd ckt (with normal loading of 25-35 MW) of the same has been LILOed at Gharwa Road S/s in Jharkhand. Hence, for charging of 220kV Myorpur S/S, UPPTCL has proposed for approval of LILO (22 km.length) of 1st ckt. of 132kV Rihand Hydro (Pipari-UP)-Sonenagar (Bihar) DC line which is normally running on no load. As discussed in ERPC(TP) meeting, post proposed LILO, this 132 kV Rihand(Pipri)- Sonenagar ISTS line shall become 132 kV Myorpur- Nagaruntari TSS-Sonenagar ISTS line & same shall be operated as per the instruction of JSLDC and UPSLDC.



23.3 After deliberations, members agreed to the above proposal.

24.0 LILO of 220kV Phulpur- Jhusi line at 400kV S/S Machhalishahr (Jaunpur):

24.1 Director (PSPA-I), CEA, stated that UPPTCL vide its letter dated 13.01.2021 has proposed LILO of 220kV Phulpur- Jhusi line at 400kV S/S Machhalishahr (Jaunpur). UPPTCL has informed that 220 kV Allahabad (PG)- Phulpur (UPPTCL) line had been constructed by PGCIL. Later on, 220 kV Allahabad (PG)- Phulpur (UPPTCL) line was LILOed at 220kV S/S Jhusi(UPPTCL). 220 kV substation at Phulpur and Jhusi in Prayagraj district are fed mainly by 400 kV Allahabad (PG) S/S. In case of outage of any one of base line, the other line gets overloaded.

24.2 UPPTCL stated that to avoid the overloading of 220kV Allahabad PG(400 kV) – Phulpur line or 220kV Allahabad PG(400 kV)- Jhusi line, a LILO of 220kV Phulpur – Jhusi interconnection(PGCIL) lineat 400kV S/S Machhalishahr, Jaunpur (under construction) is proposed. This will ensure alternate source for 220kV Jhusi and Phulpur UPPTCL Substations.

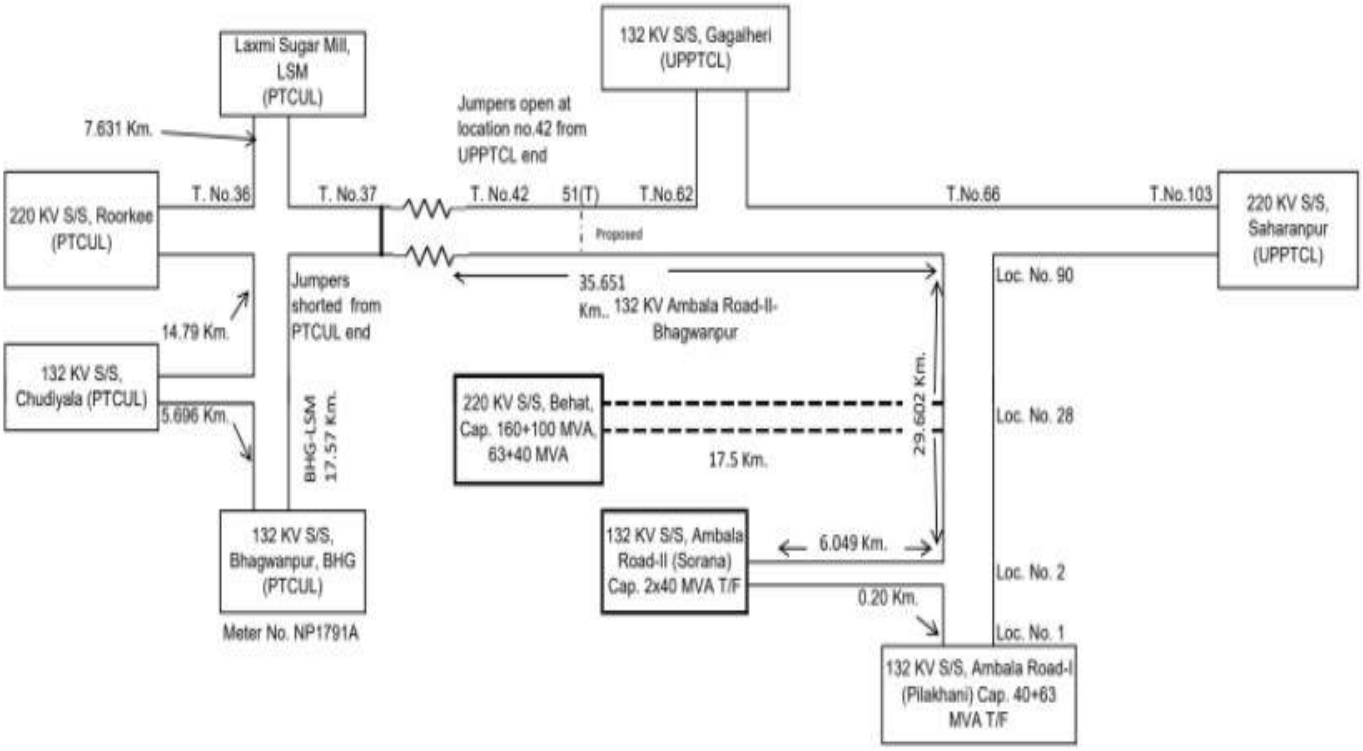
24.3 After deliberations, members agreed to the above proposal.

25.0 Utilization of 132kV Ambala Road/Saharanpur-Bhagwanpur/Roorkee line by UPPTCL

25.1 UPPTCL stated that Saharanpur (UPPTCL)- Roorkee (PTCUL) 132kV D/c line (ISTS) has been LILOed at various substation of PTCUL & UPPTCL such as Ambala Road (UPPTCL), Bhagwanpur(PTCUL), Gagalheri(UPPTCL) Laxmi Sugar Mill(PTCUL) of UP & Uttarakhand.

25.2 UPPTCL further stated that tower no. 01 to 37 of Saharanpur (UPPTCL) – Roorkee(PTCUL)132kV D/c line are located in Uttrakhand region and presently jumpers are shorted at Tower no. 37 by PTCUL to utilize the same as Bhagwanpur(PTCUL)-Laxmi Sugar Mill(PTCUL) 132kV S/c line.

SINGLE LINE DIAGRAM OF THE LILO OF 132 KV SAHARANPUR-BHAGWANPUR/ROORKEE LINE



25.3 UPPTCL further stated that presently, at tower no. 42 of above line, jumpers are opened and there is no flow of power from PTCUL to UPPTCL. Hence, for better utilization of the line, UPPTCL has proposed that jumper may be shorted at tower no. 51 so that the same may be utilized as Gagelheri (UPPTCL)-Ambala Road (UPPTCL) 132kV S/c line. Subsequently, LILO of this circuit may be done to supply reliable source to 220kV Behat(UPPTCL) S/S.

25.4 CEA enquired the fate of the remaining line between Tower no. 37 and 51 to which UPPTCL clarified that the portion of the line between Tower no. 37 and 51 is presently being maintained by UPPTCL which would be dismantled after approval of this proposal of shorting the jumpers at tower no. 51. This in turn would change the status of the line from ISTS to two independent Intra- state lines.

25.5 After deliberations, the proposal was agreed by the members.

26.0 Evacuation of 2x660 MW Obra 'C' TPS & Startup Power

26.1 UPPTCL stated that Obra "C" evacuation was deliberated in 38th SCM dated 30.05.2016 and modification for start-up power in 3rd NRSCT held on 24.05.2019. Now at 765/400kV Obra "C" due to availability of 2x1000 MVA transformers in place of 2x1500 MVA transformers and non-availability of planned reactors, following modification is proposed as given below:

S.No	Approved in 3rd NRSCT meeting dated 24.05.2019	Now Proposed
01	GT 21/765kV at Obra "C"	**-No Change-**

02	2x1500 MVA 765/400kV ICT at Obra "C"	2x1000 MVA 765/400kV ICT at Obra "C"
03	LILO of Anpara "D"-Unnao 765kV SC line at Obra "C"- 15km and shifting of 330 MVAR line reactor from Anpara "D" to Obra "C" TPS	**-No Change-**
04	LILO of one ckt of 400kV DC line Obra "B"-Obra "C" at Jaunpur(400)-190 km	LILO of one ckt of 400kV DC Obra "B"-Obra "C" line at Jaunpur(400 kV)-190 km with Line Reactor of 63 MVAR for each ckt at Obra "C" end.
05	400kV DC line Obra "B"-Obra "C" – 1.5km (for Startup Power)	**-No Change-**
06	Bus Reactor 330 MVAR , 765kV at Obra "C"	Bus Reactor 189 MVAR, 765kV at Obra "C"
07	--	Bus Reactor 125 MVA, 400kV at Obra "C"
08	--	Station Transformer 400/11.5 kV, 2x100 MVA

26.2 Members note the same.

27.0 Augmentation at 400kV S/S Muradnagar-I (1x500+2x315 MVA to 2x500+1x315 MVA)

27.1 UPPTCL stated that presently at Muradnagar-I substation,1x500+1x315 MVA transformers are in working condition against the installed capacity 1x500+2x315 MVA. Other 1x315 MVA transformer had got damaged on 13.03.2020 and is likely to take time in repair & restoration. Further, maximum loading observed in the sub-station in September, 2020 was 522 MVA. As such, to meet out the N-1 criteria and anticipated load growth in Ghaziabad area, augmentation at 400kV Muradnagar-I S/S from 1x500+2x315 MVA to 2x500+1x315 MVA has been proposed by UPPTCL.

27.2 Members agreed to the above proposal of augmentation of 400kV Muradnagar-I S/s from 1x500+2x315 MVA to 2x500+1x315 MVA as intra-State transmission works of UPPTCL.

28.0 Increasing capacity of 400kV Agra PG, Allahabad PG, Kanpur PG, Lucknow PG and Meerut PG Substations

28.1 Director (PSPA-I), CEA, stated that UPPTCL has informed that at following PGCIL substations, ICT's have been observed to be 'N-1' non-compliant under peak load conditions:

S. No	Name of S/s	Voltage level (in kV)	ICT's	Capacity of ICT's (in MVA)	*Peak Load of ICT's (in MVA)	% Loading of individual ICT's	Average Loading of S/s ICT's (%)
01	Agra (PG)	765kV	ICT-I	315	250	79	84
			ICT-II	315	277	88	
02	Sohawal (PG)	400kV	ICT-I	315	276	88	87
			ICT-II	315	274	87	
03	Allahabad (PG)	400kV	ICT-I	315	213	68	66
			ICT-II	315	213	68	
			ICT-III	315	201	64	
04	Kanpur (PG)	400kV	ICT-I	315	213	68	67
			ICT-II	315	211	67	
05	Lucknow (PG)	400kV	ICT-I	500	329	66	67
			ICT-II	500	341	68	
06	Meerut (PG)	400kV	ICT-I	500	317	63	67
			ICT-II	315	217	69	
			ICT-III	315	218	69	
			ICT-IV	315	218	69	

** As observed in September' 2020*

Therefore, UPPTCL has proposed for increasing transformation capacity at 400 kV Agra (PG) & Sohawal (PG) immediately and for other substations, namely Allahabad (PG), Kanpur (PG), Lucknow (PG), Meerut (PG) substations, the same shall be proposed subsequently, commensurate with load growth under Intra-State system.

28.2 Director (PSPA-I), CEA, further stated that UPPTCL vide letter dated 04.01.21 has requested Powergrid to explore space availability for augmentation of 400/220kV transformation capacity at Agra, Allahabad, Kanpur, Lucknow and Meerut POWERGRID substations due to high loading on existing transformers. Powergrid vide email dated 15.01.2021 has informed following in regard of space availability at above substations:

S. No.	Substation	Space Availability
1	Agra PG	Not Available
2	Sohawal PG	Available
3	Allahabad PG	Space for 400 & 220kV Bays Available. However, for interconnection, 220kV Cables required.
4	Kanpur PG	Space for 400 & 220kV Bays Available. However, for interconnection, 220kV Cables required.
5	Lucknow PG	Not Available
6	Meerut PG	Available

28.3 UPPTCL stated that immediate requirement is at Agra (PG) and Sohawal (PG) substations where average loading of transformers is around 85%. For rest of the substations mentioned in the table, loading is around 70%. Therefore, requirement and timeline for augmentation of ICTs at these substations can be deliberated.

28.4 CTU informed that there is no space available in Agra (PG) substation, therefore some alternative arrangement has to be explored to relieve the loading of the ICTs at Agra (PG).

28.5 Regarding new ICT at Agra (PG), POSOCO informed that a new substation at Ferozabad near Agra (PG) has recently been commissioned and UPPTCL may explore option of feeding some loads from Ferozabad S/s. UPPTCL agreed for the same.

28.6 Regarding new ICT at Sohawal (PG), POSOCO stated that the loading of 2x315 MVA, 400/220 kV ICTs at Sohawal (PG) were observed to be 'N-1' non-compliant for most of the time during last year. In this regard, a new station in vicinity (at Gonda) is under construction and commissioning of the same may be expedited. To this, UPPTCL stated that due to certain issues, there is uncertainty in completion of the transmission lines of Gonda in next 2 years. Therefore, augmentation of ICTs at Sohawal (PG) is needed.

28.7 For new ICTs at other sub-stations, POSOCO representative stated that there is currently slight margin in ICTs at these sub-stations and need for new ICTs may be studied depending on projected load growth in respective areas.

28.8 After deliberations, members agreed for 1x500 MVA, 400/220 kV ICT augmentation (3rd) at Sohawal (PG) under system strengthening.

29.0 Upcoming 765kV, 400kV & 220 kV substations and lines of UPPTCL:

29.1 CEA stated that UPPTCL has forwarded the list of upcoming 765kV, 400kV and 220kV substations and their associated lines which are under construction/planned as Intra-state network and deliberated in different SCM meeting of CEA are enclosed as **Annexure-C.**

29.2 Members noted the same.

30.0 Interim arrangement for charging of 220 kV Shahjahanpur PG(400)- Shahjahanpur (UPPTCL) S/c line

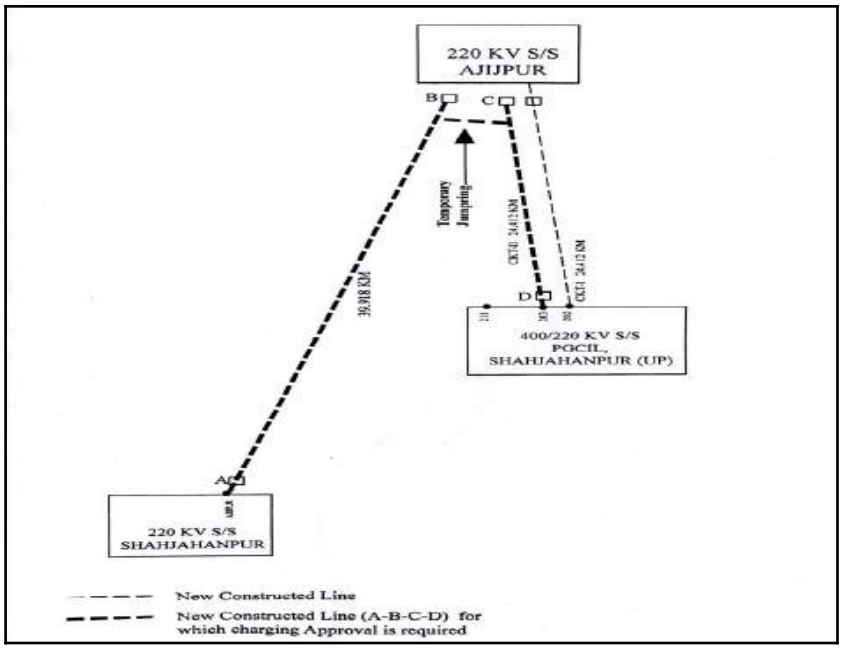
30.1 Director (PSPA-I), CEA, stated that UPPTCL vide their letter dated 01.02.2021 has informed that the creation of 220 kV Azizpur (Shahjahanpur) S/s had been approved in the 40th meeting of SCPSPNR held on 22.06.2018, with the following connectivity:

i. Creation of 220/132/33 kV, 2x160 MVA+2x40 MVA S/s at Azizpur (Shahjahanpur)
ii. Shahjahanpur (PG) (400 kV)- Azizpur (Shahjahanpur) 220 kV D/c line- 20km
iii. Shahjahanpur(220) - Azizpur (Shahjahanpur) 220 kV S/c line- 20km

Further, the connecting lines of Azizpur S/s at 220 kV level have been constructed, but the works of Azizpur Substation will take another 4-5 months for completion.

30.2 Director (PSPA-I), CEA, further stated that for utilization of the completed 220 kV lines and 220 kV bays at Shahjahanpur (PG) S/s, UPPTCL has proposed the following interim arrangement till the completion of 220 kV Azizpur S/s:

i. 220 kV S/c line Shahjahanpur (PG) (400)- Shahjahanpur (UPPTCL)- 64 km



30.3 UPPTCL intimated that 2nd circuit of Shahjahanpur (PG) (400 kV)- Azizpur (Shahjahanpur) 220 kV D/c line will also be kept in charged condition as anti-theft measure.

30.4 Members agreed to the above proposal.

31.0 Non-utilization of 2 Nos. 220 kV line bays at Jalandhar substation

31.1 PSTCL vide their letter dated 06.05.2020 has informed that as per the minutes of 30th SCPSPNR meeting, it had been agreed that concerned STU should inform POWERGRID regarding their requirement of 220 kV line bays at respective substations, at least 24 months in advance so that bays could be constructed in time. It was also agreed that 220 kV bays would be provided as per the requirement of STU. It is also pertinent to mention that there was no requirement of bays submitted by PSTCL for the 400 kV PGCIL Jalandhar substation with the augmentation work of 1x500 MVA transformer. The perusal of minutes of 30th meeting of SCPSPNR reveals that wherever PSTCL has demanded bays (e.g. for Amritsar, Moga, Ludhiana), the same has been categorically mentioned and PSTCL has intimated the requirement, whereas in case of Jalandhar, no requirement has been expressed

by PSTCL.

31.2 Moreover, in the 37th meeting of the Empowered Committee on Transmission held on 20.9.2017, CEA stated that STUs raised the issue of bays in 39th meeting that while planning a substation, upfront fixing of detailed scope of downstream works is not always possible as STU may require outgoing feeder bays at different point of time. To this, Empowered Committee suggested that 220 kV bays to be included in the scope of TBCB as per requirement indicated by the drawing entity.

31.3 CTU stated that 2 Nos. 220 kV line bays at Jalandhar substation were implemented as agreed in the 25th NRPC meeting. However, PSTCL opined that only the system was agreed in the NRPC meeting, not the timeline. Regarding timeline, in the 30th SCPSNR meeting, it was agreed that concerned STU should inform POWERGRID regarding their requirement of 220 kV line bays at respective substation, at least 24 months in advance so that bays could be constructed in time. However, PSTCL never requested for the 2 Nos. 220 kV line bays at Jalandhar, even then the same have been implemented by PGCIL.

31.4 UPPTCL suggested that the same matter has been raised by them (discussed under agenda item no. 13), cost of these bays may be considered under PoC and the matter needs to be taken up with CERC.

31.5 As PSTCL and CTU had their own view regarding implementation of 2 Nos. 220 kV line bays at Jalandhar substation, it was decided that as the matter pertains to charges for the implementation of bays, therefore the issue may be taken to CERC.

32.0 Augmentation of transformation capacity at 400kV Nakodar sub-station of PSTCL

32.1 Director (PSPA-I), CEA, stated that the present transformation capacity at 400kV Nakodar S/s is 2x315 MVA, 400/220 kV ICT. Due to increase in the loading on these ICTs, PSTCL vide its letter no. 818/P-I/315 dated 19.01.2021 has proposed to replace both the 315 MVA ICTs with 500 MVA ICTs. The work of augmentation of 1 no. 315MVA, 400/220kV ICT to500MVA, 400/220kV ICT, along with 1 No.400kV ICT bay and 1 No. 220 kV ICT bay at 400kV Nakodar was planned by PSTCL during 2018-19 and the work was also approved in the Capital Investment Plan for the year 2020-23 by PSERC. Augmentation of 2nd 315 MVA ICT at 400kV Nakodar sub-station to 500MVA ICT shall be executed during FY2022-23. Both the 315 MVA ICT from 400kV Nakodar sub-station would be dismantled and commissioned at 400kV Dhanansu sub-station, as in Dhanansu sub-station, there is proposal of installation of 2nd 315 MVA ICT to be kept as a spare ICT.

32.2 PSTCL intimated that based on latest loading conditions and load flow studies, petitionno.37 of 2020 was filed by PSTCL and PSERC has approved augmentation of both the 400kV,315MVA ICT's to 500MVA with the revised scope & procedure of replacement of transformers. Therefore, augmentation of 2x315 MVA transformers with 2x500 MVA transformers at 400kV Nakodar S/s has been proposed for concurrence of NRPC (TP).

32.3 Members agreed to the above proposal.

33.0 Grant of Connectivity to Kutehr HEP (240 MW) by S/C LILO of 400 kV D/C (Twin Moose) line from 400/220 kV, 2 x 315 MVA, Lahal Sub-Station to 400/220 kV Chamera P.S. of PGCIL at Rajera.

33.1 HPPTCL stated that they are implementing following system for evacuation of power from Hydro Projects in Ravi Basin-

(i) 400/220 kV, 2 x315 MVA Sub-Station at Lahal.

(ii) 400 kV D/C (Twin Moose) line from 400/220 kV, 2 x315 MVA, LahalSub-Station to 400/220 kV Chamera P.S. of PGCIL at Rajera.

(iii) 220 kV D/C (Twin Moose) line from Bajoli Holi to Lahal.

33.2 HPPTCL further stated that Kutehr HEP (240 MW) of M/s JSW was originally granted connectivity at220 kV level at400/220 kV, 2x315 MVA Lahal Substation in the year 2012by HPPTCL. In the meantime, HPPTCL had received Long Term Access Applications from Bajoli Holi HEP (180 MW) and four Small HEPs with aggregate capacity of 51 MW, thus about 230 MW of capacity out of 315 MVA available at Lahal Substation has been committed. Further additional 25 to30 MW of Small Hydro Potential is also planned to be evacuated through Lahal Substation. Thus, total injection on 220 kV Bus at Lahal Substation would be around 260 MW.

In view of the capacity constraints envisaged at Lahal substation, HPPTCL had conveyed to M/s JSW regarding requirement for review of evacuation arrangement for Kutehr HEP (240 MW) by changing connectivity from 220 kVlevel to 400 kV level. Subsequently, it was conveyed to M/s JSW that Kutehr HEP (240 MW) would be provided connectivity through LILO of one circuit of400 kV D/C (Twin Moose) line from 400/220 kV, 2 x315 MVA, Lahal Sub-Station to 400/220 kV Chamera P.S. of PGCIL at Rajera.

In compliance to above, M/s JSW had applied for revised connectivity for Kutehr HEP 240MW by S/C LILO of 400 kV D/C (Twin Moose) Lahal to Chamera line of HPPTCL.

33.3 HPPTCL requested to approve the evacuation system of Kutehr HEP (240 MW) by S/C LILO of 400 kV D/C (Twin Moose) line from 400/220 kV, 2 x315 MVA, Lahal Sub-Station to 400/220 kV Chamera P.S. of PGCIL at Rajera.

33.4 On query by CEA regarding the status of Kutehr HEP, HPPTCL intimated that JSW has started the work of Kutehr HEP. CEA suggested that the issue needs deliberations, therefore a separate meeting may be carried out.

33.5 POSOCO stated that a detailed study is needed before finalization of the evacuation system.

33.6 After deliberations, it was decided that system studies may be done considering the time frame of Kutehr HEP and the matter may be deliberated in the next meeting of NRPC(TP).

34.0 2nd Circuit stringing of 220 kV Karian - Rajera line & construction of 220/132 kV, 100 MVA Substation at Mazra by S/C LILO of 220 kV Karian to 400/220 kV Chamera Pooling station at Rajera.

34.1 HPPTCL stated that construction of 220/33 kV substation at Karian in Ravi Basin had been approved in 29th meeting of SCPSPNR held on 29.12.2010. Accordingly, 2 No. of 220 kV Bays were approved for termination of 220 kV D/C line from Karian at 400/220 kV, 2x315 MVA Chamera Pooling station of PGCIL at Rajera. Subsequently, in the 30thSCPSPNR meeting held on 19.12.2011, HPPTCL had informed that one bay would be required in first instance. Accordingly following elements have been commissioned and charged:

- 220/33 kV, 50/63 MVA Karian Substation.
- 220 kV S/C line on D/C towers from Karian to Chamera.

34.2 HPPTCL further stated that in order to strengthen the intra-state transmission system specially to meet the requirement during winter season when the generation is low and demand peaks in the Chamba district, HPPTCL has planned following system:

(i) 2nd circuit stringing of 220 kV Karian to Chamera transmission line.

HPPTCL vide letter dated 01.01.2019 had intimated to PGCIL that additional circuit stringing will be done by 31.12.2021, along with a request to intimate the schedule of commissioning of 2nd bay at 400/220 kV Chamera Pooling Station at Rajera.

(ii) 220/132 kV, 100 MVA Substation at Mazra by S/C LILO of 220 kV D/C Karian to Chamera transmission line.

(iii) D/C LILO of 132 kV Kurthla Bathri line at proposed 220/132 kV Mazra Substation

The 220/132 kV, 100 MVA Mazra substation has been planned to provide drawl of power to Chamba area in Winters.

34.3 POSOCO stated that transformation capacity at Chamera PS is only 2x315 MVA. Power from Budhil HEP, Chamera III and Karian HEP are getting pooled at 220 kV Chamera PS and being evacuated through 400 kV lines. Injection of more power at Chamera PS may overload the 400/220 kV ICTs at Chamera. Also, many small hydro projects may come in this area in future which will be evacuated through Chamera PS.

34.4 HPPTCL clarified that the proposed system will result in drawl of power from Chamera PS which in turn would also help in relieving the loadings on the ICTs at Chamera.

34.5 HPPTCL clarified that the proposed system would result in drawl of power in winter from Chamera PS. Further, with commissioning of Mazra 220/132kV substation, the drawl of power would increase which in turn would also help in relieving the loadings on the ICTs at Chamera. However, considering the inputs from POSOCO, it was decided that HPPCL/HPPTCL would restrict the injection from the small hydros at Karian, in case of overloading of transformation capacity at Chamera Pool.

34.6 Powergrid stated that the agenda item was not the part of the agenda circulated by CEA, therefore, they have no updates regarding the implementation the 220kV bay at Chamera Pool.

34.7 After deliberations, following was agreed:

A. Transmission elements to be implemented by HPPTCL

(i) 2nd circuit stringing of 220 kV Karian to Chamera Pooling point transmission line.

(ii) 220/132 kV, 100 MVA Substation at Mazra by S/C LILO of 220 kV D/c Karian to Chamera transmission line.

(iii) LILO of 132 kV Kurthla -Bathri D/c line at 220/132 kV Mazra Substation

B. Transmission element under ISTS

(i) One no. of 220kV bay at Chamera Pool for 2nd circuit stringing of 220 kV Karian to Chamera transmission line

35.0 Intra state strengthening system by UPPTCL:

35.1 UPPTCL proposed following intra-state works to strengthen the network for addl. loads and reliability

(i) Augmentation of 400/220kV Panki S/s (UPPTCL), from 2x315 MVA to 2x500MVA to meet anticipated demand and 'n-1' criteria.

(ii) Replacement of old and damaged 50MVAR line reactor for 400kV Unnao – Bareilly D/C line at Bareilly end for both ckts by 2x63 MVAR line reactor.

(iii) LILO of 132kV Sahupuri(220kV) – Karmnasha (Bihar) ckt-II at 132kV Chandauli S/s for reliable supply of power.

35.2 Members agreed to the above proposal of UPPTCL. Regarding proposal at (iii), UPPTCL was requested to get the proposal ratified in the ERPC(TP) meeting as 132kV Sahupuri(220kV) – Karmnasha (Bihar) line is an inter-regional line.

36.0 Down Stream network by State utilities from ISTS Station:

Status of down stream network by State utilities from ISTS Station is enclosed as **Annexure D**.

37.0 Connectivity/LTA grantedfrom September 2020 to January 2021 by CTU:

The list of connectivity/LTA granted by CTU from September 2020 to January 2021 is enclosed at **Annexure-E**.

Annexure-A

List of participants:

S. No.	Name (Smt/Shri/Ms)	Designation
CEA		
1	Goutam Roy	Chief Engineer (PSPA-I)
2	Ishan Sharan	Chief Engineer
3	Manjari Chaturvedi	Director
4	Nitin Deswal	Asst. Director
5	Kanhaiya Singh Kushwaha	Asst. Director
NRPC		
6	Naresh Bhandari	MS
CTU		
7	Subir Sen	COO (CTU)
8	Ashok Pal	CGM (CTU)
9	Kashish Bhambhani	SR DGM (CTU)
SECI		
10	R.K.Aggarwal	Consultant
POSOCO		
11	S.R. Narsimhan	Director System Operation
12	NallarasanNagarathinam	Chief General Manger
13	Rajeev Porwal	GM
UPPTCL		
14	Anil Jain	Director (Planning & Commercial)
JKPTCL, Jammu		
15	Sudhir Gupta	CE(Trans)
PSTCL		
16	Sanjeev Gupta	CE/TS
RVPN		
17	Sudhir Jain	SE(P&P)
18	Sona Shishodia	Xen (P& P)
HPPTCL		
19	Arun Goyal	Director (Projects)
20	Sandeep Kumar	GM
PDD Ladakh		
21	Ghulam Ahmed Meer	Chief Engineer (Distribution)
DTL		
22	Pramod Kumar	Asstt. Manager (Tech)
THDC		
23	L P Joshi	DGM
HVPNL		
24	Pushpendra Singh	SE/Planning
25	B.K. Bhargava	XEN
26	K. K. Sarkar	XEN
27	Deepak Sarit	XEN
28	Sachin Goyal	AE

S. No.	Name (Smt/Shri/Ms)	Designation
NTPC		
29	Subhash Thakur	AGM
HPSLDC		
30	Ravinder Kumar	SEE
31	Sunandan Kumar	SEE
SJVN		
32	Sushil Sharma	Director (Electrical)
33	S. P. Pathak	Chief General Manager
34	Romesh Kumar Kapoor	Chief General Manager
35	AmanKatoch	Deputy General Manager
CVPPPL		
36	Amrik Singh	GM
37	Sandhya Gupta	Manager
PTCUL		
38	Anil Kumar	Director (Projects)
POWERGRID		
39	Anoop Singh	Sr GM

Transmission works to be implemented in Jammu Region under Intra-State transmission system

Sl. No.	Name of the Schemes
I	**Laying of new D/C 220KV Transmission Line with ACSR Zebra**
a	Erection of new 220 KV Chowadi-Nagrota-Katra Line (55 Kms)
II	**Thickening of D/C 220KV Transmission Line with HTLS Conductor**
a	S/C LILO of 220KV Gladni -Udhampur line 5km at 220/33KV Grid station Nagrota
III	**Infrastructure at 132 KV Level in Tribal areas**
a	Creation of New 50 MVA 220/33 KV Grid Station Ramanagar including 24km LILO line from 220 KV Sarna- Udhampur Transmision line
b	Creation of new 1x50 MVA , 132/33KV Grid Station Basohli including132 KV S/c LILO of 132KV D/C Sewa Mahanpur line
c	Creation of new 20 MVA 132/33 KV Grid Station Paddar including 28km, 132 KV line from 132/33KV Grid Station Khellani Doda
IV	**Creation of new 220 KV Line Bays**
a	220 KV Line Bay 4 no (at Nagrota for 220 KV Chowadhi Nagrota katra line)
V	**Creation of new 132KV Line Bays**
a	Creation of new 132 KV line bay at Grid station Draba for 132KV Draba-Mendhar line
b	Creation of 2 no new 132 KV line bays at Grid station Gladni for evacuation of power to Nagrota link from Gladni.
c	Creation of new 1 No 132 KV line bay Jhajjar-Kotli
d	Creation of new 10 66 KV line bay (4 No at 220/66KV Samba and 4 no at 220/66KV Ghatti)
e	Creation of new 21 no 33 KV line bay (04 no for Nagrota Sub station, 4 no at Chowadhi 4 no at Gladni and Barn each)
VI	**Creation of new 66KV or 33KV line bays for evacuation of power**
a	Creation of new 66 KV line bay at recently augmented 150 MVA Grid station Kathua for evacuation of power
b	Creation of new 33 KV line bay at recently augmented 150 MVA Grid station Miransahib for evacuation of power
VII	**Reactive Compensation at 33KV or 66 KV Level**
a	Installation of capacitor Banks at various Grid Stations of System and Operation Wing Jammu
VIII	**Completion of Balance work of 132 KV lines under arbitration**
a	LILO bays of 132 KV D/C RRKTL from the proposed evacuation 440/132 KV Sub Station of CVPPL along with associated 25 km 132 KV D/c transmission line
IX	**Other Miscellaneous Works**

a	Replacement of old/deteriorated control cables of 33KV & 132 KV bays at Grid station Miransahib and BB-I
b	Replacement of old/deteriorated control cables of 33KV & 132 KV bays at Grid station BB-II
c	Renovation of control Room building at Grid station at Miran sahib & BB-I
d	Provision for civil works at Grid station Batote as the area is sinking/slide prone and has caused damaged to protection walls and other civil works.

Transmission works to be implemented in Kashmir Region under Intra-State transmission system

Sl. No.	Name of the Schemes
[A]	**Infrastructure at 220kV level**
(I)	**Construction of 220/132kV Grid Sub-Stations**
a	Wahipora (1x160)MVA, 220/132kV & (2x50) MVA, 220/33kV with 4 nos. 220kV line bays, 4 nos. 132kV line bays & 4 nos. 33kV line bays
b	Badampora GIS (1x160) MVA, 220/132kV with 2 nos. 220kV line bays, 4 nos. 132kV line bays
c	Mattan 160MVA, 220/33kV with 4 nos. 220kV line bays & 6 nos. 33kV line bays along with 160MVA 220/132kV with 2 nos. of 132kV bays
d	Nillow (Kapren)Kulgam,160 MVA (4x53.33)MVA, 220/33kV S/s with 2 no. of 220kV line bays and 6 nos. 33kV line bays along with 160MVA (4x53.33)MVA, 220/132kV with 4 nos. of 132kV line bays
(II)	**Augmentation of 220/132kV Grid Sub-Stations**
1	Budgam 320 to 470 MVA
2	Mirbazar 320 to 475 MVA
3	Zainkote 450 to 615 MVA
(III)	**Construction of 220/33kV Grid Sub-Stations**
1	Sheeri GIS (1x160)MVA, 220/33kV with 2 nos. 220kV line bays & 4 nos. 33kV line bays
2	Batkote (Pahalgam) (1x50)MVA, 220/33kV with 2 nos. 220kV line bays & 4 nos. 33kV line bays
3	Gulmarg (1x50)MVA, 220/33kV (GIS) with 2 nos. 220kV line bays & 4 nos. 33kV line bays
4	Tral (2x50)MVA with 2 nos. 220kV line bays & 4 nos. 33kV line bays
5	Piglena (Pulwama), 160 MVA (4x53.33)MVA, 220/33kV S/s with 2 no. of 220kV line bays and 4 nos. 33kV line bays
6	Bijbehara (2x50)MVA, 220/33kV with 4 nos. 220kV line bays & 6 nos. 33kV line bays
7	Qazigund (1x50)MVA, 220/33kV S/s with 2 nos. 220kV line bays & 4 nos. 33kV line bays
8	Gagangeer (Sonmarg) (1x50)MVA, 220/33kV S/s with 2 nos. 220kV line bays & 4 nos. 33kV line bays
9	Khan Sahib (Beerwah) (1x50)MVA, 220/33kV with 4 nos. 220kV line bays & 4 nos. 33kV line bays
10	Lollipora (Budgam) (2x50)MVA, 220/33kV with 4 nos. of 220kV bays & 4 nos. of 33kV line bays
(IV)	**Construction of new 220kV transmisssion lines**
1	LILO of both ckts of 220kV D/C Delina - Kishanganga Line (PGCIL) at Wahipora (35km)
2	220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri (40km)
3	LILO of one circuit of 220kV Mirbazar –Wagoora D/C line at (Pinglena) Pulwama (12km)

4	220kV New Wanpoh - Mattan D/C line (15km)
5	LILO of one circuit of New Wanpoh - Alusteng Tr. Line at Tral (20km)
6	LILO of Alusteng - Leh 220kV S/c line on D/c towers at Gangangeer (Sonamarg) (5km)
7	LILO of both ckts of 220 kV Wagoora - Kishengaga D/C line at Khansahib (Beerwah) (12km)
8	LILO of 1st ckt. of 220kV Kishenpur – Pampore D/C line at Nillow (New Kulgam) (15km)
9	LILO of 2nd ckt. of 220kV Kishenpur - Pampore D/C line at Qazigund (3km)
10	LILO of 1st ckt. of proposed 220kV Kunzer - Sheeri D/C line at Gulmarg (8km)
11	LILO of 2nd ckt. of proposed 220kV Kunzer - Sheeri D/C line at Loolipora (4km)
12	220kV Mattan – Bijbehara (Sallar) D/C line (15km)
13	220kV Sallar (Bijbehara) - Pahalgam (Batkote) D/C line (5km)
14	LILO of one ckt. of 220kV Zainkote - Alusteng line at Badampora GIS (2.4km)
[B]	**Infrastructure at 132kV level**
(V)	**Construction of 132/33kV Grid Sub-Stations**
1	Rafiabad (1x50)MVA, 132/33kV with 2 nos. 132kV line bays & 4 nos. 33kV line bays
2	Hajan (1x50)MVA, 132/33kV with 2 nos. 132kV line bays & 4 nos. 33kV line bays
3	Lolab (Kupwara) (1x50)MVA, 132/33kV with 2 nos. 132kV line bays & 4 nos. 33kV line bays
4	Karnah (Distt. Kupwara) (2x20)MVA, 132/33kV with 1 nos. 132kV line bay & 3 nos. 33kV line bays
(VI)	**Augmentation of 132/33kV Grid Sub-Stations**
1	Amargarh (132.5 to 170 MVA), 2x50+20+12.5 to 3x50+20
2	Badampora (66 to 100 MVA), 50+16 to 50+50
3	Khunmoh (50 to 100 MVA), 50 to 50+50
4	Kangan (40 to 70 MVA), 2x20 to 20+50
5	Lissar (50 to 100 MVA), 50 to 50+50
6	Magam (50 to 100 MVA), 50 to 50+50
7	Vilgam (50 to 100 MVA), 50 TO 50+50
8	Arampora (90 to 120 MVA), 50+2x20 to 2x50+20
9	Habak (120 to 150 MVA), 2x50+20 to 3x50
10	Bandipora (50 to 100 MVA), 50 to 50+50
11	Shopian (50 to 100 MVA), 50 to 50+50
12	Sheeri (50 to 100 MVA), 50 to 50+50
13	LJHP (20 to 50 MVA), 20 to 50
(VII)	**Construction of additional 132kV line bays at existing Grid Sub-station**
1	Additional 132kV line bays at different Switchyard (11 nos.)

	3 nos. at Vilgam for Vilgam – Sheeri S/c, Vilgam – Karnah S/c and 2nd ckt. of Vilgam – Arampora D/c transmission lines
	3 nos. at Arampora for Arampora - Wahipora D/c line, and 2nd circuit of Arampora - Vilgam line
	1 no. at Sheeri for LILO of Viligam – Sheeri S/c line
	2 nos. at Shopian for Shopian – Kulgam D/c line
	2 nos. at Kulgam for Shopian – Kulgam D/c line
(VIII)	**Construction of new 132kV transmisssion lines**
1	Wahipora - Arampora 132kV D/C line (25km)
2	Wahipora - Lolab 132kV D/C line (50km)
3	LILO of Shopian - Kulgam 132kV D/C line (22km)
4	LILO of one circuit of Badampora - Bandipora 132kV D/c line at Hajan (6km)
5	Sheeri - Vilgam 132kV S/C on D/C line along with LILO at Rafiabad (36km)
6	Vilgam - Karnah S/C on D/C line (50km)
7	Laying of second circuit on Arampora – Vilgam 132kV S/C on D/C line (18.4km)
8	Laying of HTLS conductor on 132kV Delina - Amargarh D/C line (14ckm)
9	Laying of HTLS conductor on 132kV Mirbazar - Wanpoh D/C line (8ckm)
10	Laying of HTLS conductor on 132kV Pampore - Rawalpora D/C line (31ckm)
11	Laying of HTLS conductor on 132kV Zainkote - Waganpora D/C line (22ckm)
12	Laying of HTLS conductor on 132kV Zainkote- Bemina Tr. Line (13ckm)

ANNEXURE-C

List of upcoming UPPTCL 765 kV, 400 kV & 220 kV substations and lines for FY 2020-21 to 2023-24

Sl. No.	Name of Substation/Line	Voltage Ratio	Capacity (in MVA)/Ckt. Legth (in Km.)	Approval of SCM/NRSCT	
				No.	Date
	FY : 2020-21				
1	**400/220/132 KV S/S Firozabad with 125 MVAR Bus Reactor**	400/220 220/132	2x500 2x160	40th	22.06.2018
	LILO of one Ckt of 400kv line Fatehabad, Agra (765) - Agra South (400) at Firozabad	-	20		
	400kV DC (Quad) line Jwaharpur (TPS) - Firozabad (400)	-	80		
	LILO of 220kV SC line Firozabad 220- Agra (PG) at Firozabad (400)	-	20		
	LILO of 220kV Section of Agra PG (765) - Firozabad(400) at 220kV S/s Tundla				
	LILO of 132kV SC line Etmadpur-Barhan at Firozabad (400)	-	35		
	132kV DC line Firozabad- Narkhi	-	30		
2	**400/220/132KV S/S Badaun(GIS) with 125 MVAR Bus Reactor**	400/220 220/132	2x315 2x160	38th	30.05.2016
	400kV DC line Rosa(TPS)-Badaun(400)		100		
	400kV DC line Sambhal(400)-Badaun(400)		67		
	400kV DC line Badaun-Farrukhabad **(GREEN COR.)**		95		
	LILO of 220kV SC line CB Ganj(220)-Badaun(220) at Badaun(400)		5		
	LILO of 220kV SC line Chandausi(220)-Badaun(220) at Badaun(400)		35		
	220kV DC line Badaun(400)-Dataganj(220) on single moose conductor		28		
	132kV SC line Ujhani(132)-Badaun(400), 132kV SC line Bilsi(132)-Badaun(400)(for connecting Ujhani & Bilari 132kV S/S from Badaun(400) 30km DC line on tower and further addition of 132kV 2xSC line of 10 km)		40		
3	**400/220/132 KV S/S Jehta(Hardoi Road), Lucknow GIS with 63 MVAR bus Reactor**	400/220 220/132	2x500 2x200	37th	20.01.2016
	LILO of both ckt. of 400kV DC line Kursi Road Lucknow (PG) - Unnao at Jehta Hardoi Road Lucknow	-	15		
	220kV DC line Jehta Hardoi Road Lucknow(400) - Hardoi Road Lucknow (220)	-	10	-	-
	220kV DC line Jehta Hardoi Road - Mallawan Hardoi		90		
	132kV DC line Rahimabad - Jehta Hardoi Road Lucknow(400)	-	35	-	-
	132kV SC line Jehta Hardoi Road Lucknow(400) - Mehtab bagh (Neebu Park) by U/G cable 1000sqmm. Alluminaum (3+1)	-	12	-	-
	132kV DC U/G cable interconnection between Jehta, Hardoi road(400) - Jehta New (132) S/s		0.5		
4	**400/220/132KV S/S Rasra (GIS), Ballia with 125 MVAR Bus Reactor**	400/220 220/132	2x500 2x160	38th	30.05.2016
	LILO of one ckt of 400kV DC line Ballia PG(765)-Kasara(Mau) at Rasra(400)		38		
	LILO of 220kV SC line Rasra(220)-Ghazipur(220) at Rasra(400)		10		
	220kV DC line Rasra(400)-Bhadaura(220)		47		
	132kV DC line Rasra(400)-Ballia(132)		35		
	132kV SC line Rasra(400)-Chitbaragaon(Ballia)		18		
	132kV DC line Rasra(400)-Kasimabad(132)		26		
	132kV DC line Rasra(400)-Badagaon(Mau)		50		
5	**400/220/132kV S/S Bhaukhari (GIS), Basti with 125 MVAR Bus Reactor**	400/220 220/132	2x500 2x200	40th	22.06.2018
	400 kV DC Tanda Extn. (NTPC) - Bhaukhari (Basti) Quad line	-	48		
	LILO of two ckt. (ckt. 3&4) of 400 kV lines (Twin Moose) Gorakhpur (PG) - Lucknow (PG) at Bhaukhari (Basti) with 50 MVAR line reactors in both circuits. of Lucknow(PG)-Bhaukhari (Basti) 400kV DC line at Basti end.	-	28, 30	1st	11.09.2018
	LILO of 220 kV SC line Gonda (220) - Basti (220) at Bhaukhari (400)	-	15	40th	22.06.2018
	220 kV DC line Bhaukhari(400) - Dulhipar (Khalilabad)	-	60		
	132 kV DC line Bhaukhari(400) - Kalwari (Basti)	-	45		
	LILO of 132 kV SC line Harraiya (Basti) - Darshannagar (Ayoddhya) at Bhaukhari (400)	-	15		
	132 kV DC line Bhaukhari (400) - Rudauli (Basti)	-	35		
	132 kV SC line Bhaukhari (400) - Gharighat		20		
6	**400/132/33KV S/S Sector-123, Noida, GB Nagar with 63 MVAR Bus Reactor**	400/132 132/33	4x200(2x200 MVA Energized) 4x100	3rd	24.05.2019
	400kV DC line on Monopole Sec-148(400)-Sector-123		20		
	LILO of one ckt of Quad Moose DC line Ataur(400)-Indirapuram(400) at Sector-123		10		
	132kV SC line Noida Sec-123(400)-Sec(66)		10		
	132kV DC line Noida Sec-123(400)-Sec(63)		4		
	132kV DC line Noida Sec-123(400)-Sec(67)		4		
	LILO of 132kV SC line Surajpur-Noida(66) at Sec(123)		7		
	132kV DC line Noida Sec-123(400) - Noida Sec-115 Extn.		13		
7	**400/220/132KV S/S Shamli with 125 MVAR Bus Reactor**	400/220 220/132	2x500 2x200	35th	03.11.2014
	400kV DC line Shamli(400)-Aligarh(400) with 50MVAR line reactor on each ckt at Shamli end.		235		
	400kV DC line Shamli(400)-Modirpuram(765)		75		
	LILO of 220kV SC line Shamli(220)-Nanauta(220) at Shamli(400)		8		
	220kV DC line Shamli(400)-Badaikalan(220)		40		
	220kV DC line Shamli(400)-Modipuram-II(220)		60		
	LILO of 132kV SC line Jalalpur(Bannat)-Thanabhawan(132) at Shamli (400)		5		
	LILO of 132kV SC line Budhana-Kharad at Shamli(400)		16		
	132kV SC line Kaniyan(132)-Shamli(400)		26		

Sl. No.	Name of Substation/Line	Voltage Ratio	Capacity (in MVA)/Ckt. Legth (in Km.)	Approval of SCM/NRSCT	
				No.	Date
8	**220/132/33KV S/S Babina, Jhansi**	220/132 132/33	2x160 2X40		
	LILO of one ckt of 220kV DC line Lalitpur(TPS)-Dunara, Jhansi(220) at Babina(220)		10		
	LILO of 132kV 2nd ckt Lalitpur(TPS)-Hasari at Babina(220)		10		
9	**220/132/33KV S/S Faridpur, Bareilly**	220/132 132/33	2x100 2X40	35th	03.11.2014
	LILO of 220 kV SC line Shahjahanpur - Bareilly at Faridpur (220)	-	20		
	LILO of 132 kV SC line Faridpur(132) - Bareilly Town at Faridpur (220)	-	20		
	132 kV SC line Faridpur (220) - Bisalpur on DC tower	-	30		
10	**220/132/33kV S/S Vrindavan, Mathura**	220/132 132/33	2x160 2X40		
	LILO of one ckt of 220kV DC line Chhata(220)-Math(400) at Vrindavan(220)		27		
	LILO of 132kV Sonkh Road - Mathura II at Vrindavan(220)		20		
11	**220/132/33kV Ayodhya (GIS)**	220/132 132/33	2x160 2x63	40th	22.06.2018
	LILO of one ckt of 220kV DC line Sohawal (PG)-New Tanda(220) at Ayodhya (220)		20		
	LILO of 132kV SC line Darshan nagar-Nawabganj(Gonda) at Ayodhya(220)		20		
	132kV DC line Ayodhya(220)-Rudauli(132)		45		
12	**220/132, 220/33kV S/S Nirpura(Hybrid)**	220/132 220/33	2x160 1x60		
	LILO of 220kV SC line Baraut(220)-Shamli(220) at Nirpura(220)		15		
	LILO of 132kV SC line Chhaprauli(132)-Kirthal(132) at Nirpura(220)		20		
13	**220/33KV S/S Integrated Industrial Township Gr. Noida Ltd.(IITGNL), GIS, Gr. Noida**	220/33	4x60	40th	22.06.2018
	220kV DC line Gr.Noida(765)-IITGNL(220)		45		
	220kV DC line Sikandrabad(400)-IITGNL(220)		42		
14	**220/33kV S/S Kidwainagar (GIS), Kanpur Nagar**	220/33	3x60	3rd	24.05.2019
	LILO of 220 kV SC line Panki (220) - Bhauti PG (400) at Kidwai Nagar (220) Kankpur (with U/G 1000 sqmm DC copper cable)		6		
15	**220/132/33KV S/S Azizpur, Shahjahanpur**	220/132 132/33	2x160 2x40	40th	22.06.2018
	220kV DC line Shahjahanpur PG(400)-Azizpur(220)		20		
	220kV SC line Shahjahanpur(220)-Azizpur(220)		20		
	132kV SC line Azizpur(220)-Jalalabad upto tower no. 12 of Shahjanapur-Kribhko line		7		
	132kV DC line Azizpur(220)-Srimau(132)		45		
16	**220/132/33KV S/S Badaikalan, Muzaffarnagar**	220/132 132/33	2x160 2x40 (160+40 MVA enersiged)	35th	03.11.2014
	220 kV DC line Badaikalan (220) - Shamli (400)	-	40		
	LILO of 220 kV SC line Muzaffarnagar (400) - Nanauta at Badaikalan (220)	-	10		
	132 kV SC line Badaikalan (220) - Purkaji (132) on DC Tower	-	40		
	LILO of 132 kV SC line Lalukheri-Baghara at Badaikalan (220)	-	20		
17	**220/132/33KV S/S Balrampur**	220/132 132/33	2x160 2x40		
	LILO of 220kV SC line Gonda(400)-Behraich(220) at Balrampur(220)	-	46		
	132kV DC line Balrampur(220)-Tulsipur(132)	-	48		
	132kV SC line Balrampur(220)-Bhinga(Sravasti) (2.5 km new line & 32 km stringing)	-	34.5		
	LILO of 132kV SC line Balrampur(132)-Bhinga(132) at Balrampur(220)		4		
18	**220/132/33KV S/S Dulhipar(Khalilabad), Sant Kabirnagar**	220/132 132/33	2x160 2x40	40th 1st	22.06.2018 11.09.2018
	220 kV DC line Bhaukhari (Basti) - Dulhipar	-	60		
	LILO of 220 kV SC line Gorakhpur (PG)-Bansi (Sant Kabir nagar) at Dulhipar (220)	-	15	40th	22.06.2018
	LILO of 132 kV SC line Mehdawal - Basti (220) at Dulhipar	-	10		
	132 kV DC line Dulhipar(220) - GIDA (gorakhpur)	-	38		
19	**220/132/33KV S/S Maharajganj**	220/132 132/33	2x160 2x40	2nd	01.09.2020
	220 kV DC line Maharajganj (220) - Gorakhpur (PG)		70		
	LILO of one ckt of 220 kV DC line Gorakhpur (PG) - Maharajganj (220) at Anandnagar (220)	-	30		
	LILO of 132 kV SC line Maharajganj (132) - FCI (Gorakhpur) at Maharajganj (220)	-	15		
	132 kV DC line Maharajganj (220) - Lakshmipur (Kushinagar)		40		
	132 kV DC line Maharajganj (220) - Nichlaul(132) on Zebra conductor		33		
	132 kV DC line Maharajganj (220) - Padrauna(132) on Zebra conductor	-	42		

Sl. No.	Name of Substation/Line	Voltage Ratio	Capacity (in MVA)/Ckt. Legth (in Km.)	Approval of SCM/NRSCT	
				No.	te
	220/132KV S/S Chandpur, Bijnore	220/132	2x160		
20	LILO of one ckt of 220kV DC line (Moose conductor) Meerut(765) UPPTCL S/s - Amroha(220) at Chandpur(220)	-	27		
	132kV DC line Chandpur-Tajpur	-	30		
	220/132 KV S/S Malwan, Fatehpur	220/132 132/33	2x160 2x40	40th	22.06.2018
	LILO of one ckt of 220kV DC lineFatehpur(220)-Unchahar(220) at Malwan(220)	-	30		
21	132kV SC line Malwan(220)-Jahanabad	-	45		
	LILO of 132kV SC line Malwan(132)-Naubasta(220) at Malwan(220)	-	1		
	LILO of 132kV SC line Malwan(132)-Bindaki(132) at Malwan(220)	-	1		
	220/132/33KV S/S Kasganj	220/132 132/33	2x160 2x40		
22	LILO of 220kV SC line Sikandrarao(220)-Jawaharpur TPS(220) at Kasganj(220)	-	30	40th	
	LILO of 132kV SC line Kasganj(132)-Ganj Dundwara(132) at Kasganj(220)	-	12		
	220/132/33KV S/S Sangipur, Pratapgarh	220/132 132/33	2x160 2x40	37th	20.01.2016
23	220KV DC line Sultanpur(400)-Sangipur	-	40		
	220kV DC line Raebareli(400)-Sangipur(220)	-	15.5		
	132kV DC line Sangipur(220)-Kunda(132)	-	40		
	132kV SC line Sangipur(220)-Lalganj(132)	-	30		
	FY : 2021-22				
	765/400/220KV S/S Modipuram (GIS), Meerut with 240 MVAR Bus Reactor on 765kV Bus & 80 MVAR Bus Reactor on 400kV Bus	765/400 400/220	2x1500 2x500		
	LILO of 765kV SC line(WUPPTCL) Greater Noida (765) - Hapur (765) at 765kV S/s Modipuram (Meerut) UPPTCL S/s.	-	45	38th	30.05.2016
	400 kV DC line Modipuram (765) - Shamli	-	75		
1	400 kV DC line Modipuram (765) - Simbhaoli	-	40		
	220 kV DC line Modipuram(765) - Jansath on Moose Conductor	-	45		
	220 kV DC line Modipuram (765) - Amroha on Moose Conductor	-	45		
	LILO of one ckt 220kV DC line Modipuram(765) - Amroha at 220kV S/s Chandpur on Moose Conductor		27		
	220 kV DC line Modipuram (765) - Greater Noida (II) on Moose Conductor	-	50		
	765/400/220KV S/S Rampur (GIS) with 330 MVAR Bus Reactor on 765kV Bus	765/400 400/220	2x1500 2x500		
	LILO of 765kV SC line Ghatampur TPS-Hapur at Rampur(765)- 116 km (Quad Bersimis 2xSC line on single ckt tower) with 240 MVAR line Reactor at Rampur end for Rampur-Ghatampur Section	-	116		
2	LILO of one ckt of 400kV DC line Bareilly (PG)-Moradabad(400) line at Rampur(765)	-	3	2nd	13.11.2018
	400kV DC line Rampur(765)-Sambhal(400)	-	70		
	LILO of 220kV SC line Moradabad(400)-Rampur(220) at Rampur (765)	-	10		
	220kV DC line Rampur(765)-Moradabad-II(220) on Moose Conductor	-	70		
	400/220/132KV S/S Simbhaoli (GIS) , Hapur with 80 MVAR Bus Reactor	400/220 220/132	2x500 2x200		
	400 kV DC line Simbhaoli (400)- Muradnagar-II(Ghaziabad) onTwin moose	-	95	38th	30.05.2016
3	400 kV DC line Modipuram(765) - Simbhaoli	-	40		
	LILO of 220 kV SC line Hapur(Hybrid) - Simbhaoli (220) at Simbhaoli (400)	-	30		
	LILO of 132 kV SC line Garhmukteshwar- Gajraula (132) at Simbhaoli (400)	-	8		
	400/220/132KV S/S Sambhal (GIS) with 125 MVAR Bus Reactor	400/220 220/132	2x500 2x160		
	400kV DC line Rampur(765)-Sambhal(400)	-	80		
	400kV DC line Sambhal(400)-Badaun(400)	-	67		
4	LILO of 220kV SC line Chandausi(220)-Sambhal(220) at Sambhal(400)	-	20	2nd	13.11.2018
	LILO of 220kV SC line Sambhal(220)-Gajraula(Amroha) at Sambhal(400)	-	50		
	LILO of 132kV SC line Babrala(132)-Bisauli(132) at Sambhal(400)	-	24		
	LILO of 132kV SC line Chandausi(132)-Bilari(132) at Sambhal(400)	-	32		
	132kV SC line Sambhal(400)-Kailadevi(132)		25		
	132kV DC line Sambhal(400)-Hasanpur(132) on Zebra Conductor.		35		
	400/220/132KV S/S Raebareli (GIS) with 125 MVAR Bus Reactor	400/220 220/132	2x500 2x160		
	LILO of one ckt.of 400 kV DC line Unchahar (NTPC) - Fatehpur (PG) at Raebareli(400)	-	60	38th	30.05.2016
5	220kV DC line Raebareli(400) - Bachhrawan on moose conductor	-	35		
	220kV DC line Raebareli(400) - Amethi	-	40	38th	30.05.2016
	220kV DC line Raebareli(400) - Sangipur(220)		15.5		
	LILO of one circuit of 132kV DC line Amawan(132) - Salon at Raebareli(400)	-	15		

Sl. No.	Name of Substation/Line	Voltage Ratio	Capacity (in MVA)/Ckt. Legth (in Km.)	Approval of SCM/NRSCT	
				No.	Date
6	**400/220/132KV Macchlisahar, Jaunpur with 63 MVAR Bus Reactor**	400/220 220/132	2x315 2x160	4th	25.07.2019
	Machhlisahar (400) - Varanai (765) PG 400kV DC line	-	75		
	LILO of one ckt. of 400kV DC line Obra 'C' (400) - Obra 'B' (400) at Machhlisahar (400) and *50 MVAR line reactor on each ckt at Machhlisahar (400) end.*	-	175		
	LILO of 220kV SC line Jaunpur(220) - Gajhokhar at Machhlisahar (400)	-	45		
	LILO of one ckt. of 220kV DC line (U/C) Azamgarh (II) - Bhadohi (220) at Machhlisahar (400)	-	50		
	LILO of 220kV SC line Jhusi - Phoolpur at Machhlisahar(400)		51.4		
	132kV DC line Machhalishahar (400) - Shahganj		40		
	132kV SC line Machhalishahar (400) - Badlapur		30		
	LILO of 132kV SC line U/C Mungrabadsahpur - Machhlisahar(132) at Machhlisahar(400)		20		
7	**400/220kV S/S Sahupuri, Chandauli with 125 MVAR Bus Reactor**	400/220	2x500	39th	29 & 30.05.2017
	LILO of 400kV ISTS (Quad) DC line Varanasi PG(765)-Bihar Shariff(Bihar) at Sahupuri(400) with 63 MVAR Line Reactor on each ckt at Sahupuri End	-	30		
	Extension of 220kV bus of 400/220kV Sahupuri S/S for interconnection with Sahupuri 220/132kV S/S with 1200 sq mm copper cable	-	2x0.7		
	Shifting of 220kV Sahupuri(220)-Bhelupur(220) DC line to 400/220kV Chandauli with U/G cable	-	2x0.7		
8	**400/220/132KV S/S Maheba (GREEN COR.), Jalaun with 125 MVAR Bus reactor**	400/220/132	2x500 2x160	40th	22.06.2018
	LILO of one ckt of DC line Banda (400) - Orai(400) at Maheba(400)	-	25		
	400kV DC line Maheba(400) - Farrukhabad(400)	-	140		
	220kV DC line sarila(220) - Maheba(400)	-	104		
	220kV SC line Dakaur(220) - Maheba(400)	-	35		
9	**220/132/33kV S/S Bhadohi GIS**	220/132 132/33	2x200 2x40		
	Stringing of 2nd ckt of U/C 220kV SC line on DC Tower from Azamgarh -II(220) - Aurai(400)	-	78		
	LILO of one ckt of 220kV DC line Azamgarh-II (220) - Aurai(400) section at Machhalishahar (400) After stringing of 2nd ckt of U/C 220kV SC line on DC Tower from Azamgarh -II(220) - Aurai(400)	-	50		
	Extension of 220kV DC line Azamgarh (220)- Aurai(400) upto Bhadohi after stringing of 2nd ckt of 220kV (U/C) SC line on DC Tower Azamgarh -II(220) - Aurai(400)	-	5		
	Extension of U/C 220kV SC line Mirzapur- Aurai (400) upto Bhadohi(220)	-	6		
	Extension of U/C 220kV SC line Phoolpur(220) - Aurai (400) upto Bhadohi(220)	-	8		
	Stringing of 2nd ckt of U/C 220kV SC line on DC Tower Sahupuri(220) - Raja Ka Talab upto Aurai(400)	-	63		
	Stringing of 2nd ckt of U/C 220kV SC line on DC Tower Raja ka Talab - Aurai(400)	-	17		
	Extension of 220kV DC line Raja ka Talab-Aurai(400) upto Bhadohi (220)	-	5		
	Extension of U/C 132kV DC line Aurai(400)-Aurai(132) upto Bhadohi (220)	-	6		
	Extension of U/C 132kV SC line Aurai(400)-Gopiganj(132) upto Bhadohi (220)	-	9		
	Extension of U/C 132kV SC line Aurai(400)-Raja ka talab (132) upto Bhadohi (220)	-	4		
	In place of LILO of 132kV SC line Jaunpur-Mariyahu-Bhadohi(132) at Aurai(400) using inter connector(using Existing line) Additional work *At LILO point of Jaunpur(220)-Mariyahu-Bhadohi construction of 132kV DC line LILO point to Bhadohi(132) *132kV DC line Aurai(400)-Bhadohi(220)(Extension of LILO of 132kV Jaunpur-Mariyahu-Bhadohi(132)	-	6 3		
10	**220/132/33KV S/S Farrukhabad(Bhojpur)**	220/132 132/33	2x160 2x40	3rd	24.05.2019
	220 kV DC line Chibramau (Kannauj) - Farrukhabad on Moose conductor	-	30		
	LILO of one ckt of 220 kV DC line Neebkarori (Farrukhabad) - Mainpuri (PG) at 220 kV Bhojpur (Farrukhabad)	-	20	3rd	24.05.2019
	LILO of 132 kV SC line Fategarh - Kayamganj at 220 kV Bhojpur (Farrukhabad)	-	15		
11	**220/132/33KV S/S Myorepur(Sonebhadra)**	220/132 132/33	2x160 2x40		
	220kV DC line Obra(220)TPS-Myorepore(Sonebhadra) each on single Moose conductor	-	75		
	LILO of one ckt of 132kV DC line Pipari Rihand - Sone nagar(Bihar) at 220kV S/s Myorepur		22		
12	**220/33 KV Sec-18 YEIDA**	220/33	2x100		
	220kV DC line Gr.Noida(765)-Sec(18)	-	24.5		
13	**220/33 KV Sec-24 YEIDA**	220/33	2x100		
	220kV DC line Gr.Noida(765)-Sec(24)	-	30		
14	**220/132/33KV S/S Dataganj(Badaun)**	220/132 132/33	2x160 2x40		
	220kV DC line Badaun(400)GIS-Dataganj(220) ckt on Single Moose	-	28		
	LILO of one ckt of 220kV DC line Rosa(TPS)-Badaun(220) at Dataganj(220)		12		
	LILO of 132kV SC line Usawan-Tilhar(132) at Dataganj(220)		21		
	LILO of 132kV SC line Awada Solar-Usawan(132) at Dataganj(220)	-	10		

Sl. No.	Name of Substation/Line	Voltage Ratio	Capacity (in MVA)/Ckt. Legth (in Km.)	Approval of SCM/NRSCT	
				No.	Date
15	**220/132/33KV S/S Kundani,Sitapur**	220/132 132/33	2x200 2x63	1st	24.01.2020
	220 kV DC line Kursi road (400) PG - Kundani (220) on Mosse conductor*(220 kV Bays -2 no. already exist at Kursi Road PG substation)*	-	60		
	LILO of 220 kV SC line Sitapur - Shahjahanpur (220) at Shahjahanpur (400) PG S/s	-	10		
	LILO of 220 kV SC line Sitapur - Nighasanat Kundani (220)	-	30		
	132 kV DC line Biswan (132) - Kundani (220) (Zebra Conductor)	-	20		
	Stringing of 2nd ckt of 132 kV existing SC line on DC tower Sidhauli (132) - Mahmoodabad (132) 32 Km. & 01 km. New SC line on DC Tower .	-	33		
	LILO of one ckt of 132 kV DC line (after stringing of 2nd ckt) Sidhauli (132) - Mahmoodabad (132) at Kundani (220)	-	20		
16	**220/33KV S/S Morta(Ghaziabad)**	220/33	3x60		
	After LILO of 220kV SC line MuradnagarII(400)-Ataur(400) at Madhuban Bapudham then LILO of 220kV Section of Muradnagar II-Madhuban Bapudham at Morta(220) on Monopole	-	0.8		
17	**220/132/33KV S/S Gola, Lakhimpur**	220/132 132/33	2x160 2x40	1st	11.09.2018
	220 kV DC line Shahjahanpur (PG) - Gola (220) Kheeri on Moose conductor	-	65		
	LILO of 220 kV SC line Shahjahanpur (220) - Nighasan (220) at S/s Gola (220)	-	10		
	LILO of 132 kV SC line Gola (132) -Bandaa (Shahjahanpur) at S/s Gola (220)	-	15		
	LILO of 132 kV Gola(132)-Mohammadi section of Shahjahanpur (220)-Mohammadi -Gola (132) line at S/s Gola (220)	-	20		
	132 kV DC line from Mohammdi to T/off point of Shahjahanpur (220) -Gola (132) 132 kV line	-	2		
	132 kV DC line Gola (220)-Oel(132) on Zebra conductor	-	45		
18	**220/132/33 KV S/S Modipuram II, Meerut**	220/132 132/33	2x160 2x40	35th	03.11.2014
	220kV DC line Modipuram(220)-Shamli(400)u/c	-	64		
	220kV DC line Modipuram(220)-Baghpat PG(400)u/c	-	35	38th	08.06.2016
	LILO of 220kV SC line Modipuram(220)-Faridnagar(220) at S/s Modipuram II(220)	-	5		
	LILO of 132kV SC line Sardhana-Kankarkhera II at S/s Modipuram II(220)		22		
	LILO of 132kV SC line Kankarkhera-Vedbyaspuri at S/s Modipuram II(220)	-	11		
	LILO of 132kV SC line Partapur-Niwari Road at S/s Modipuram II(220)	-	7		
19	**220/33 KV S/S Jewar Hybrid**	220/33	2x60		
	LILO of one ckt of 220kV DC line Jahangirpur(765)-IITGNL at Jewar(220)(5.5 km line on Narrow Base DC Tower then after 1.5km on Multi ckt narrow base 400kV tower equipments to quad moose on twin HTLS on Zebra conductor	-	7		
20	**220/132/33 ,220/33KV S/S Deoband, Saharanpur**	220/132 220/33 132/33	2x160 2x60 2x40	3rd	24.05.2019
	220 kV DC line SaharanpurPG(400) - Deoband on Moose conductor	-	30		
	220 kV DC line Shamli (400) - Deoband on Moose conductor	-	55		
	LILO of 132 kV SC line Kota - Deoband (132) at Deoband (220)	-	5		
21	**220/132/33KV S/S Amariya, Pilibhit**	220/132 132/33	2x100 2x40		
	220kV DC line Bareilly(400)-Amariya(pilibhit) on Single Moose conductor	-	40		
	132kV DC line Amariya-Pooranpur on Zebra conductor	-	60		
	132kV DC line Amariya-Richha	-	30		
22	**220/132KV S/S Moth, Jhansi (Upgaradation of 132kV S/s Moth)**	220/132	1x160		
	Upgradation of 132kV S/S Moth to 220kV S/S Moth	-			
	LILO of 220kV 2nd ckt of Paricha TPS-Orai at Moth(220)	-	20		
	LILO of 132kV SC line Moth-Orai(220) at Eraich(132)	-	20		
23	**220/132/33KV S/S Bijnore, Lucknow**	220/132 132/33	2x160 2x40		
	LILO of 220kV SC line Sarojininagar(400)-Bachhrawan at Bijnore(220) on Moose	-	1		
	LILO of one ckt. of 132 kV DC line Sarojininagar (440) - SGPGI at Bijnore (220)	-	1.5		
24	**220/132/33KV S/S Mallawan, Hardoi**	220/132 132/33	2x160 2x40(40 MVA enersiged)	1st	11.09.2018
	220kV DC line Jehta,Hardoi Road(400)-Mallawan on Moose Conductor	220	90		
	Mallawan-Hardoi (220) 220kV DC line ***(since space for 220 kV bays not available at 220 kV existing Substation Hardoi, Shahjahanpur (PG) - Hardoi 220 kV SC line from Hardoi end will be disconnected and will be terminated at Mallawan (Hardoi) 220 kV substation, thus system after reorientation will be Shahjahanpur (PG) - Mallawan 220 kV SC line -110 km. and Mallawan (Hardoi) - Hardoi (existing 220 kV) 220 kV SC line)***	220	56		
	132 kV DC line Baghauli (Hardoi) - Mallawan (Hardoi) on Zebra Conductor	-	15		
	LILO of 132 kV SC line Sandila (Hardoi) - Bangermau (Unnao) at Mallawan (220)	-	20		

Sl. No.	Name of Substation/Line	Voltage Ratio	Capacity (in MVA)/Ckt. Legth (in Km.)	Approval of SCM/NRSCT	
				No.	Date
25	**220/33KV S/S Satrikh Road, (Jugaur) Lucknow**	220/33	2x60		
	220kV DC line Barabanki(220)-Satrikh Road(220)	-	25		
	LILO of 220kV Single Moose line Chinhat (220)-CG City at Satrikh Road(220)	-	0.3		
26	**220/132/33 KV S/S Tundla, Firozabad**	220/132 132/33	2x160 2x40	3rd	24.05.2019
	LILO of 220 kV SC line Agra (765) PG - Firozabad (400) at Tundla (220)	-	1		
	LILO of 132 kV SC line Tundla (132) - Barhan at Tundla (220)	-	1.5		
27	**220/132/33 KV S/S Birdha (GREEN COR.), Lalitpur**	220/132 132/33	1x160 1x40	40th	22.06.2018
	220kV SC line Birdha(Lalitpur)-Lalitpur(220)		35		
28	**220/132/33KV S/S Mandwara, Lalitpur**	220/132 132/33	1x160 1x40		
	220kV SC line Mandwara(Lalitpur)-Lalitpur(220)		50		
29	**220/132/33 KV S/S Dakor(GREEN COR.), Jalaun**	220/132 132/33	1x160 1x40		
	220kV SC line Dakor(220)-Maheba(400)		35		
30	**220/132KV S/S Hamirpur(GREEN COR.)**	220/132	2x160		
	220kV DC line Hamirpur(220)-Maheba(Jalaun) with Twin Moose conductor		104		
31	**220/132KV S/S Panwari(GREEN COR.), Mahoba**	220/132 132/33	1x160 1x40		
	220kV SC line on DC tower Panwari(Mahoba)-Hamirpur (220)		40		
32	**220KV S/S Rampura (GREEN COR.), Jalaun**	220/132 132/33	1x160 1x40		
	220kV SC line Rampura-Sikandra(220)		30		
33	**220/132 kV Downstream at 400 kV S/s Banda (GREEN COR.)**	220/132	2x160		
	132kV Voltage level at Banda by Installation of 220/132kV 2x160 MVA ICT at Banda 400kV S/s.				
	FY : 2022-23				
1	**765/400/220 kV, S/s Gurusarai (Green Corr.) with 330 MVAR at 765 & 125 MVAR at 400kV Bus reactor**	765/400/220	2x1500+3x500	40th	22.06.2018
	765kV S/C line Gurusarai (Jhansi)-Mainpuri		185		
	400kV Gurusarai-Orai PG(765) Quad D/C line		100		
2	**400/220/132kV S/s Mohanlalganj(Lucknow) GIS with 125 MVAR Bus Reactor**	400/220/132	2x500+2x200	1st	24.01.2020
	LILO of 400kV SC line Sarojininagar-Unnao at Mohanlalganj(400)		37		
	LILO of 400kV SC line Lucknow PG-Sultanpur at Mohanlalganj(400)		6		
	LILO of 220kV SC line Chinhat-CG City at Mohanlalganj(400) on Moose Conductor		31.7		
	LILO of one ckt of 220kV DC line Barabanki-Satrikh Road at Mohanlalganj(400)		20		
	Interconnecting by DC U/G 1000 Sq. mm Copper Cable with optical fiber approach cable between U/C 132/33 kV S/s Mohanlalganj - Mohanlalganj(400)				
3	**400/220/132 kV, S/s Farrukhabad wih 125 MVAR Bus reactor**	400/220/132	2x500+2x160	40th	22.06.2018
	400kV D/C line Maheba (Jalaun)-Farrukhabad		140		
	400kV D/C line Farrukhabad-Badaun		95		
	220kV D/C line Farrukhabad (400)-Neebkarori		50		
	220kV D/C line Farrukhabad (400)-Etah (220)		90		
4	**220/132 kV, S/s Charkhari(Green Corr.), Mahoba**	220/132	1x160	40th	22.06.2018
	220kV D/C line Charkari (Mahoba)-Gurusarai (Jhansi) with High Ampacity conductor		80		
5	**220/132/33 kV, S/s Bamaur(Green Corr.), Jhansi**	220/132/33	2x160+2x40	40th	22.06.2018
	220kV S/C line Bamaur (Jhansi)-Gurusarai (Jhansi) on D/C tower		12		
6	**220/132/33 kV, S/s Bangra(Green Corr.), Jhansi**	220/132/33	2x160+2x40	40th	22.06.2018
	220kV S/C line Bangra Jhansi)-Gurusarai (Jhansi) on D/C tower		15		
7	**220/132/33 kV, S/s Kabrai(Green Corr.), Mahoba**	220/132/33	1x160+1x40	40th	22.06.2018
	220kV SC Kabrai (Mahoba)-Charkhari (Mahoba) on DC tower		26		
8	**220/132/33 kV S/s Mohan Road (Lucknow)**	220/132/33	2x160+3x63		
	220kV DC line Jehta(400) - Mohan Road(22km overhead line on Zebra conductor & 6km by underground cooper cable 1000 sqmm.)		28		
	LILO of 220kV SC line Sarojni nagar(400) - Hardoi road at Mohan road(400)		3		
	LILO of 132kV SC line Mohan road(132) - TRT at Moahan road(220) (By underground cooper cable 1000 sqmm.)		6		
9	**220/33 kV S/s Awas Vikas Sultanpur Road (Lucknow) with addition of 132/33kV**	220/33	5x60+2x40	1st	24.01.2020
	220kV DC line Mohanlalganj(400)-Awas Vikas Sultanpur Road		15		
	LILO of 132kV SC line SGPGI-Martinpurwa at Awas Vikas Sultanpur Road		0.2		
10	**220/132, 220/33 kV S/S Noida-45 (GIS)**	220/132,220/33	1x160+2x60	35th	03.11.2014
	Interconnetor between existing 132kV Noida-45 - 220kV Noida-45 GIS with 220kV bay by 400 meter GIB/Powerr Cable 1200 Sq mm copper 220 kV Multicircuit line from Noida 148(400)-Noida 45(GIS)		0.4		
	220 kV Multicircuit line from Noida 148(400)-Noida 45(GIS) -21.5km a) 220 kV Multi circuit (4x220) line from Noida 148(400)-Noida 45(GIS) & Noida Sector 38(A) - 17.5 km b) Following works after Bifercation point- i) 220kV DC line on Narrow base/Monopole from 17.5 km Bifcierfication point to Noida Sec-45 - 1.25km ii) 220kV DC line on Narrow base/Monopole from 17.5km Bifercation point to Noida Sec 38A - 3km and 0.5km underground with 1200 Sq mm Copper Cable		21.5		

Sl. No.	Name of Substation/Line	Voltage Ratio	Capacity (in MVA)/Ckt. Legth (in Km.)	Approval of SCM/NRSCT	
				No.	Date
11	**220/132/33kV S/S Kirawali(Agra)**	220/132/33	2x100+2x40	3rd	24.05.2019
	LILO of 220kV SC line Agra PGCIL(765) - Sikandra(220) 220kV PGCIL section of 220kV SC line Sikandra(220) Bharatpur(Rajasthan) at 220kV S/s Kirawali Agra		13		
	LILO of 132kV SC line Kirawali(132)-Fatehpur Sikari(U/C) at Kirawali		27		
	LILO of 132kV SC line Mathura(132)-Farah(U/C) at kirawali(220)		30		
12	**220/132/33kV S/S Anandnagar (Maharajganj)**	220/132/33	2x160+2x40	2nd	01.09.2020
	LILO of One ckt of 220kV DC line Gorakhpur PG(400)-Maharajganj at Anandnagar		30		
	LILO of one ckt of 132kV DC line Bansi (220) - Nautanwa at Anand nagar(220)		17		
	LILO of 132kC U/C SC line Anandnagar(132)-Naugarh at 220kV S/s Anand nagar		1.5		
13	**220/132/33kV S/s Khatauli Muzaffarnagar**	220/132/33	2x160+2x63		
	LILO of 220kV SC line Muzaffarnagar(400)-Modipuram(220) at Khatauli(220)		1		
	LILO of 220kV SC line Muzaffarnagar(400)-Shamli(220) at Khatauli(220)		12		
	LILO of 132kV SC line U/C Khatauli(132)-Pura (132) at Khatauli(220)		8		
	FY : 2023-24				
1	**765/400/220/132kV S/s Jakhora(Green Corr.), Lalitpur**	765/400/220/132	1x1500+2x500+2x160	40th	22.06.2018
	Jakhora (Lalitpur)-Gurusarai (Jhansi) 765kV S/C line		115		
	Interconnectin of Lalitpur TPS through 220kV Jakhora – Lalitpur TPS (HTLS)D/C line		50		
	LILO of one ckt of Lalitpur TPS–Agra 765kV 2xS/C line at Jakhora S/S – 50Km and shifting of 330 MVAR 765kV line reactor of Lalitpur TPS–Agra 765kV S/C line at Lalitpur TPS end to Jakora end of the Jakhora–Agra 765 kV S/C line.		50		
2	**220/132/33 kV, S/s Baragaon(Green Corr.), Jhansi**	220/132/33	2x160+2x40	40th	22.06.2018
	Baragaon (Jhansi)-Gurusarai (Jhansi) 220kV S/C on D/C line		50		
3	**220/132/33 kV, S/s Jaitpur(Green Corr.), Mahoba**	220/132/33	2x160+2x40	40th	22.06.2018
	Jaitpur (Mahoba)-Charkhari (Mahoba) 220kV S/C on D/C line		22		
4	**220/33kV S/s Khorabar(Gorakhpur) GIS**	220/33	3x60		
	LILO of one ckt of 220kV DC line Motiram Adda(400)-Bharahua(2 km on DC Monopole & 2 km UG Cable 1000 sq mm Corepare cable)		4		

Down Stream network by State utilities from ISTS Station

S. No.	Substation	Downstream network bays	Status of bays	Planned 220kV system and Implementation Status
1	400/220kV, 3x315 MVA Samba	2 nos. bays utilized under ISTS. 4 nos. bays to be utilized	Commissioned: 6 Under Implementation: 2	• LILO of both circuits of 220 kV Bishnha –Hiranagar D/c line. • 220kV D/c Samba (PG) – Samba (JKPDD) **No update received from PDD, J&K**
2	400/220kV, 2x315 MVA New Wanpoh	2 nos. bays utilized 4 Nos. of 220 kV bays to be utilized	Commissioned: 6	• 220 kV New Wanpoh -Mirbazar D/c line – Jan'21 • 220 kV New Wanpoh - Alusteng D/c Line – Sep'21 • 220 kV New Wanpoh - Mattan D/c Line
3	400/220kV, 2x315 MVA Amargarh	4 nos. bays utilized 2 Nos. of 220 kV bays to be utilized	Commissioned: 6	• 220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri **No update received from PDD, J&K**
4	400/220kV, 2x500 MVA Kurukshetra (GIS)	6 nos. bays utilized 2 nos. of 220 kV bays to be utilized	Commissioned: 8	• 220kV Bhadson (Kurukshetra) – Salempur D/c line **Status: Commissioned on 15.08.2020** Network yet to be planned for 2 bays
5	400/220kV, 2x315 MVA Dehradun	4 nos. of 220 kV bays to be utilized	Commissioned: 6	• 220 kV Dehradun-Jhajra D/c line - Nov, 2021 • Network to be planned for 2 bays **No update received from PTCUL**
6	Shahjahanpur, 2x315 MVA 400/220 kV	2 nos. bays utilized Balance 4 Nos. of 220 kV bays to be utilized.	Commissioned: 6 Approved: 1	• 220 kV D/C Shajahnapur (PG) - Azizpur D/C line. • 220 kV D/C Shahajahanpur (PG) - Gola line. • LILO of Sitapur – Shahjahanpur 220 kV SC line at Shahjahanpur (PG) **No update received from UPPTCL**
7	Hamirpur 400/220 kV Sub-station	2 nos. bays utilized under ISTS. Balance 6 nos. to be utilized.	Commissioned :8	•220 kV Hamirpur-Dehan D/c line under construction by HPPTCL. **COD- June-21**

S. No.	Substation	Downstream network bays	Status of bays	Planned 220kV system and Implementation Status
8	Kaithal 400/220 kV S/s	2 nos. of 220kV bays to be utilized	Commissioned :2	• 220 kV Kaithal(PG)- Neemwala D/c line. **Status: Commissioned on 04.08.2020**
9	Sikar 400/220kV, S/s	2 Nos. of 220 kV bays to be utilized	Commissioned :2	LILO of 220 kV Sikar (220 kV GSS)-Dhod S/C line at Sikar (PG) **The work is under execution and is targeted to be completed in May/June 2021**
10	Bhiwani 400/220kV S/s	6 nos. of 220kV bays to be utilized	Commissioned :6	• 220 kV D/C line Bhiwani (PG) – Bhiwani (HVPNL) line – Mar'21 **Status: Likely to be commissioned on 30.06.2021** • 220 kV Bhiwani (PG) - Isherwal (HVPNL) D/c line. **Status: Likely to be commissioned on 30.06.2021** Lines for 2 nos. of line bays: **Yet to be Planned**
11	Jind 400/220kV S/s	4 nos. of 220kV bays utilized 2 nos. of 220kV bays to be utilized Additional 2 No. 220 kV bays required by HVPNL	Commissioned :6	• LILO of both circuits of 220kV Narwana – Mund D/c line at Jind (PG). **Status: Charged from HVPNL end on 01.02.2021.** • LILO of 220 kV Jind HVPNL to PTPS D/C line at Jind PG and thereby LILO of Jind PG to PTPS D/C line at proposed 220 kV substation Nain. **Status: Proposal placed for approval by NRPCTP at Agenda Item no. 22. Additional 2 No. bays need to be constructed for the same.**
12	400/220kV Tughlakabad GIS	10 no of 220kV bays to be utilized	Commissioned:10	• RK Puram – Tughlakabad (UG Cable) 220kV D/c line – Under execution (Expected COD: July 2022) • Okhla – Tughlakabad 220kV D/c line - Commissioned. • Mehrauli – Tughlakabad 220kV D/c line- Commissioned • BTPS – Tughlakabad 220kV D/c line.

S. No.	Substation	Downstream network bays	Status of bays	Planned 220kV system and Implementation Status
				• Masjid Mor – Tughlakabad 220kV D/c line – Under execution (Expected COD: July 2022)
13	400/220kV Kala Amb GIS (TBCB) (7x105)	6 nos. of 220kV bays to be utilized	Commissioned :6	HPSEBL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Kala Amb S/s COD- **May-2023**
14	400/220kV Kadarpur Sub-station (TBCB) (2x500)	8 nos. of 220kV bays to be utilized	Commissioned : 8	• LILO of both circuits of 220 KV Pali - Sector 56 D/C line at Kadarpur along with augmentation of existing conductor from 220 KV Sector-56 to LILO point with 0.4 sq inch AL-59 conductor. **Status: Likely to be awarded by 31.03.2021.** • LILO of both circuits of 220KV Sector 65 - Pali D/C line at Kadarpur along with augmentation of balance 0.4 sq. inch ACSR conductor of 220 kV Kadarpur - Sector 65 D/C line with 0.4sq inch AL-59 conductor **Status: Likely to be awarded by 31.03.2021.**
15	400/220kV Sohna Road Sub-station (TBCB)	4 nos. of 220kV bays utilized 4 nos. of 220kV bays to be utilized	Commissioned : 8	• LILO of both circuits of 220kV D/c Sector-69 - Roj Ka Meo line at 400kV Sohna Road **Status: Likely to be commissioned by 30.04.2021.** • LILO of both circuits of 220kV D/c Badshahpur-Sec77 line at 400kV Sohna Road **Status: Commissioned on 20.07.2020** • Augmentation of balance conductor of 220 kV D/C Badshahpur - Sohna Road line from ACSR zebra conductor to 0.4" AL-59 conductor **Status: Likely to be commissioned by 31.03.2021.**

S. No.	Substation	Downstream network bays	Status of bays	Planned 220kV system and Implementation Status
16	400/220kV Prithla Sub-station (TBCB)	4 nos. of 220kV bays utilized 4 nos. of 220kV bays to be utilized	Commissioned : 8	• LILO of both ckt of 220kV D/c Ranga Rajpur – Palwal line **Status: Commissioned on 02.05.2020** • 220kV D/C from Sector78, Faridabad **Status: Likely to be awarded by 31.03.2021**. • 220 kV D/C from 220 kV Harfali with LILO of one circuit ar 220 kV Meerpur Kurali with 0.5 sq inch Moose conductor. **Status: Yet to be awarded.**

Establishment of new 400/220kV substations as well as augmentation of transformation capacity in Northern Region:

Sl. No.	Name of Substation	MVA Capacity	Expected Schedule	Downstream connectivity by States
1	400/220kV Dwarka-I GIS (8 nos. of 220kV bays)	4x 500	Jun'21	**No update received from DTL**
2	220/66kV Chandigarh GIS (8 nos. of 66kV bays)	2x 160	Jun'21	**No update received from Chandigarh**
3	400/220kV Jauljivi GIS Out of these 8 nos. 220kV Line Bays, 4 nos. (Pithoragath-2, & Dhauliganga-2) would be used by the lines being constructed by POWERGRID and balance 4 nos. bays would be used by the lines being constructed by PTCUL.	2x315	May'21	• 220kV Almora-Jauljibi line. • 220kV Brammah-Jauljibi line **No update received from PTCUL**
	Roorkee 400/220kV S/s (Existing) (1 no. of 220kV bays)	1x500 (3rd)	Mar'21	**No update received from PTCUL**
	Sonepat 400/220kV S/s (Existing) (2 nos. of 220kV bays)	1x500 (3rd)	Mar'21	• 220 kV D/C to Mohana **Status: Commissioned** • LILO of both circuits of 220 kV Samalkha- Mohana line **Status: Yet to be awarded.**

Sl. No.	Name of Substation	MVA Capacity	Expected Schedule	Downstream connectivity by States
				NIT likely to be floated by 10.03.2021. • 220 kV D/C to HSIIDC Rai **Status: Yet to be awarded. NIT likely to be floated by 10.03.2021.**
	Lucknow 400/220kV S/s (Existing) (2 nos. of 220kV bays)	1x500 (Replacement)	Mar'21	**No update received from UPPTCL**
	Gorakhpur 400/220kV S/s (Existing) (2 nos. of 220kV bays)	1x315	Mar'21	**No update received from UPPTCL**
	Fatehpur 400/220kV S/s (Existing) (2 nos. of 220kV bays)	1x500 (3rd)	Mar'21	**No update received from UPPTCL**
	Abdullapur 400/220kV S/s (Existing) (2 nos. of 220kV bays)	-	Mar'21	• 220 kV D/C to Jorian **Status: Commissioned** • 220 kV D/C to Rampur Kamboyan **Status: Commissioned** • 220 kV D/C to Tepla **Status: Commissioned** • 220 kV D/C to Railway TSS Jagadhri **Status: Commissioned** • 220 kV D/C to Rajokheri **Status: Line charged however bay construction pending at both ends.**

Annexure-E

Applications granted as per previous Connectivity and LTA meetings of NR

The details of Connectivity/LTA applications granted/agreed for grant in 38th – 42nd Connectivity and LTA meetings of NR is given below:

Stage-I Connectivity

Sl. No.	Application No.	Applicant	Location	Date of Application	Connectivity Sought (MW)	Nature of Applicant	Proposed location for Connectivity	Dedicated Tr. System
1	1200002817	Ampyr Renewable Energy Resources Five Private Limited	Jaisalmer, Rajasthan	16-08-2020	300	Solar	Fatehgarh-III PS	Ampyr Renewable Energy Resources Five Private Limited Solar Power Project – Fatehgarh-III PS 220 kV S/c line
2	1200002835	O2 Power Sg Pte. Ltd.	Jaisalmer, Rajasthan	31-08-2020	400	Solar	Fatehgarh-III PS	O2 Power Sg Pte. Ltd. Solar Power Project– Fatehgarh-III PS 220 kV S/c (High Capacity) line
3	1200002808	Azure Power India Private Limited	Barmer, Rajasthan	10-08-2020	500	Solar	Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project (1200002808) & Azure (500MW Solar Project (1200002809) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower (Common 400 kV S/c line on D/c tower to be used for Sl. no 3 &4 of Azure)
4	1200002809	Azure Power India Private Limited	Barmer, Rajasthan	10-08-2020	500		Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project

						Solar		(1200002808) & Azure (500MW Solar Project (1200002809) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower (Common 400 kV S/c line on D/c tower to be used for Sl. no 3 &4 of Azure)
5	1200002810	Azure Power India Private Limited	Barmer, Rajasthan	10-08-2020	500	Solar	Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project (1200002810) & Azure (500MW Solar Project (1200002811) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower (Common 400 kV S/c line on D/c tower to be used for Sl. no 5 & 6 of Azure)
6	1200002811	Azure Power India Private Limited	Jaisalmer, Rajasthan	10-08-2020	500	Solar	Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project (1200002810) & Azure (500MW Solar Project (1200002811) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower (Common 400 kV S/c line on D/c tower to be used for Sl. no 5 & 6 of Azure)
7	1200002839	Ampyr Renewable Energy Resources Six Private Ltd.	Bikaner, Rajasthan	01-09-2020	300	Solar	Bikaner-II PS	Ampyr Renewable Energy Resources Six Private Limited Solar Power Project – Bikaner-II PS 220 kV S/c line

8	1200002852	Sunroot Energy Private Ltd.	Bikaner, Rajasthan	11-09-2020	175	Solar	Bikaner PS	Sunroot Energy Private Ltd. Solar Power Project– Bikaner PS 220 kV S/c line (suitable to carry minimum of 300 MW at nominal voltage)
9	1200002877	XL Xergi Power Private Ltd.	Jaisalmer, Rajasthan	30-09-2020	500	Solar	Fatehgarh-III PS	XL Xergi Power Private Ltd. Solar Power Project - Fatehgarh-III PS 220 kV D/c line. (suitable to carry minimum of 300 MW per circuit at nominal voltage)
10	1200002891	The Tata Power Company Limited	Jaisalmer, Rajasthan	16-10-2020	370	Solar	Fatehgarh-III PS	The Tata Power Company Limited Solar Power Project – Fatehgarh-III PS 220 kV S/c (high capacity) line
11	1200002935	Azure Power India Private Limited	Jodhpur, Rajasthan	23-11-2020	300	Solar	Bhadla PS	Azure Power India Private Limited Solar Power Project – Bhadla-II PS 220 kV S/c line
12	1200002938	Aravalli Surya (Project 1) Private Limited	Jodhpur, Rajasthan	25-11-2020	300	Solar	Bhadla-II PS	Aravalli Surya (Project 1) Private Limited Solar Power Project –Bhadla-II PS 220 kV S/c line
13	1200003001	ABC Renewable Energy Private Limited	Barmer, Rajasthan	31-12-2020	500	Hybrid	Fatehgarh-IV PS	ABC Renewable Energy Private Limited Hybrid Power Project – Fatehgarh-IV PS 220 kV D/c line (suitable to carry minimum 300 MW per circuit at nominal voltage)

Stage-II Connectivity

Sl. No.	Application No.	Applicant	Location	Date of Application	Stage-II Connectivity Sought (MW)/date	Quantum won / Land & Auditor Basis	Proposed location for Grant of Stage-II Connectivity	Dedicated Tr. System
1	1200002812	Azure Power India Private Limited	Barmer, Rajasthan	10/08/2020	500/ 19-01-2024	Solar	Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project (1200002812) & Azure (500MW Solar Project (1200002813) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower along with bay at common PS- under the scope of applicant. (Suitable to carry at least 1000 MW at nominal voltage) 1 No. 400 kV Bay at Fatehgarh-III PS for above line to be implemented under ISTS.
2	1200002813	Azure Power India Private Limited	Barmer, Rajasthan	10/08/2020	500/ 19-01-2024	Solar	Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project (1200002812) & Azure (500MW Solar Project (1200002813) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower along with bay at common PS- under the scope of applicant. (Suitable to carry at least

								1000 MW at nominal voltage) 1 No. 400 kV Bay at Fatehgarh-III PS for above line to be implemented under ISTS.
3	1200002814	Azure Power India Private Limited	Barmer, Rajasthan	10/08/2020	500/ 19-01-2025	Solar	Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project (1200002814) & Azure (500MW Solar Project (1200002815) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower along with bay at common PS- under the scope of applicant. (Suitable to carry at least 1000 MW at nominal voltage) 1 No. 400 kV Bay at Fatehgarh-III PS for above line to be implemented under ISTS.
4	1200002815	Azure Power India Private Limited	Jaisalmer, Rajasthan	10/08/2020	500/ 19-01-2026	Solar	Fatehgarh-III PS	Common Pooling Station of Azure (500MW Solar Project (1200002814) & Azure (500MW Solar Project (1200002815) - Fatehgarh-III PS 400 kV (High Capacity) S/c line on D/c tower along with bay at common PS- under the

								scope of applicant. (Suitable to carry at least 1000 MW at nominal voltage) 1 No. 400 kV Bay at Fatehgarh-III PS for above line to be implemented under ISTS.
5	1200002847	XL Xergi Power Private Limited	Jaisalmer, Rajasthan	04-09-2020	400/ 31-05-2022	Solar	Fatehgarh-III PS	XL Xergi Power Pvt. Limited Solar Power Project - Fatehgarh-III PS 220 kV S/c (high capacity) line (suitable to carry minimum of 400 MW at nominal voltage) 1 no. 220kV bay at Fatehgarh-III PS for above line to be implemented as ISTS.
6	1200002907	Energizent Power Private Limited	Jaisalmer, Rajasthan	04-11-2020	125/ 31-08-2022	Hybrid	Fatehgarh-III PS	Energizent Power Private Limited Solar Power Project - Fatehgarh-III PS 220 kV S/c line (suitable to carry at least 300 MW at nominal voltage)
7	1200002939	Energizent Power Private Limited	Jaisalmer, Rajasthan	01-12-2020	80/ 31-08-2022	Hybrid (Solar 53MW, Wind 27MW)	Fatehgarh-III PS	Energizent Power Private Limited Hybrid Power Project - Fatehgarh-III PS 220 kV S/c line (line already granted with Application No. 1200002907 for Stage-II Connectivity)- – to be implemented by applicant along with bay at generation switchyard.

								(suitable to carry minimum 300 MW at nominal voltage)
8	1200002948	Aravalli Surya (Project 1) Private Limited	Jodhpur, Rajasthan	08-12-2020	150/ 31-01-2023	Generator (Solar)	Bhadla-II PS	Aravalli Surya (Project 1) Private Limited Solar Power Project – Bhadla-III PS 220 kV S/c line (to be clubbed with St-II application at Sl. No.5) – to be implemented by applicant along with bay at generation switchyard (suitable to carry minimum 300 MW at nominal voltage) 1 No. 220 kV Bay at Bhadla-III PS under ISTS.
9	1200002986	Ayana Renewable Power Three Private Limited	Bikaner, Rajasthan	30-12-2020	300/ 01-04-2022	Generator (Solar)	Bikaner PS	Ayana Renewable Power Three Power Plant-Common Plg Stn. of Ayana Renewable Power One & Three Pvt. Ltd.- - Bikaner PS 400 kV S/c line (400 kV line already granted with Application No. 1200002228 for Stage-II Connectivity). (suitable to carry minimum 900 MW at nominal voltage) – to be implemented by applicant along with bay at generation switchyard & Common PS.
10	1200002987	AMP Energy Green Private Limited	Jodhpur, Rajasthan	30-12-2020	100 (Enhancement)/ 15-10-2022	Generator (Solar)	Bhadla-II PS	Common Pooling Station of AMP Energy Green Solar Power Plant – Bhadla-II PS 220 kV S/c line (Line already granted with St-II applications Nos. 1200002559 & 1200002676 of AMP Energy)– to be implemented by applicant

								along with bay at generation switchyard (suitable to carry minimum 300 MW at nominal voltage)
11	1200002995	Aravalli Surya (Project 1) Private Limited	Jodhpur, Rajasthan	31-12-2020	74/ 31-01-2023	Generator (Solar)	Bhadla-II PS	Aravalli Surya (Project 1) Private Limited Solar Power Project – Bhadla-III PS 220 kV S/c line (to be clubbed with St-II application at Sl. No.2)– to be implemented by applicant along with bay at generation switchyard (suitable to carry minimum 300 MW at nominal voltage) 1 No. 220 kV Bay at Bhadla-III PS under ISTS.
12	1200003002	ABC Renewable Energy Private Limited	Barmer, Rajasthan	31-12-2020	380/ 30-06-2022	Generator (Hybrid) (Solar 254MW, Wind 126MW)	Fatehgarh-III PS	ABC Renewable Energy Private Limited Hybrid Power Plant- Fatehgarh-IV PS 220 kV S/c (High Capacity) line-– to be implemented by applicant along with bay at generation switchyard 1 No. 220 kV Bay at Fathegrah-IV PS under ISTS.

LTA Applications:

Sl. No	Application No./Date (Online)	Applicant	Connectivity/ Injection Point	Drawl Point	LTA (MW)/ Start & End Date (Sought)	Transmission system for LTA
1	1200002789/ 01-08-2020	SBE Renewables Seventeen Private Limited	Fatehgarh-III PS	WR (Target): 320 MW NR (Target): 280 MW	600 (Start: 01/03/2022 End: 28/02/2047)	As per **Annexure-I.**
2	1200002782/ 18-08-2020	ReNew Surya Aayan Private Limited	Fatehgarh-III PS	ER (Target)	300 (Start: 30/04/2022 End: 30/04/2047)	As per **Annexure-I.**
3	1200002783/ 18-08-2020	ReNew Surya Vihaan Private Limited	Fatehgarh-III PS	ER (Target)	100/ (Start: 30/04/2022 End: 30/04/2047)	As per **Annexure-I.**
4	1200002804/ 07/08/2020	Tata Power Green Energy Limited	Bikaner PS	WR (Target)	225/ (Start: 31/12/2021 End: 31/12/2046)	As per **Annexure-II.**
5	1200002836/ 31/08/2020	NTPC Ltd.	NTPC Auraiya Gas Power Station Switchyard	UPPCL (Firm)	20/ (Start: 25/10/2020 (15 MW) 30.11.20 (5 MW) End: 14/03/2045	LTA was to M/s NTPC Ltd. for 20 MW Solar PV from NTPC Auraiya to UPPCL, NR(Firm) with existing ISTS system connected at Auraiya GPS
6	1200002846/ 08-09-2020	Essel Saurya Urja Company of Rajasthan Limited	Bhadla PS	Bihar, ER (Firm): 450 MW	450 (Start: 01-01-2021 End: to 31-12-2045)	➢ Essel Saurya Urja Company of Rajasthan Limited (ESUCRL) was granted LTA vide letter dated 12/10/2017 for 750 MW from 765/400/220 kV

						Bhadla PS (PG) to NR & WR on target basis through following Transmission system: ✓ 765kV Bhadla (PG) – Bikaner (PG) D/c. ✓ 400 kV Bhadla (PG) – Bhadla (RVPN) D/c (Quad). ✓ Establishment of Pooling Station at Bhadla (PG) (765/400kV: 3x1500 MVA and 400/220kV: 3x500 MVA). ✓ 1x240MVAr switchable line reactor at each end (each circuit) of 765kV Bhadla (PG) – Bikaner (PG) D/c line. ✓ 1x240 MVAr (765kV) & 1x125 MVAr (400kV) bus reactors at Bhadla Pooling Station. ✓ 1x500MVA, 400/220kV transformer (4th ICT) at Bhadla Pooling Station (PG).

						M/s Essel has applied for change in region due to firming up of beneficiaries, accordingly LTAwas granted with above system.
7	1200002883/ 08-10-2020	Avikiran Surya India Private Limited	Bikaner PS	NR (Target): 100 MW WR (Target): 200 MW	300 (Start: 31-12-2021 End: to 31-12-2046)	As per **Annexure-II.**
8	1200002890/ 16-10-2020	Eden Renewable Passy Private Limited	Fatehgarh-II PS	WR, MPPMCL (Firm): 300 MW	300 (Start: 28-02-2022 End: to 27-02-2047)	As per **Annexure-III.**
9	1200002941/ 27-11-2020	Avaada Energy Private Limited	Bikaner PS	HPPC (Firm): 240 MW	240 (Start: 05-01-2022 End: to 05-01-2047)	As per **Annexure-II.**
10	1200002903/ 31-10-2020	Southern Power Distribution Company of Telangana Limited	Fatehgarh-II	TSSPDCL Revised Quantum: 105.83 MW (Firm)	105.83 (Start: 29-09-2021 End: to 28-09-2046)	As per **Annexure-IV.**
11	1200002904/ 31-10-2020	Southern Power Distribution Company of Telangana Limited	Bhadla-II	TSSPDCL Revised Quantum: 176.375 MW (Firm)	176.375 (Start: 29-09-2021 End: to 28-09-2046)	As per **Annexure-V**
12	1200002962 / 21-12-2020	Avaada Energy Private Limited	Bhadla-II PS (320 MW)	PSPCL: 300MW JKPCL: 20MW (Firm)	320 (Start: 19.04.2022 End: to 19.04.2047)	As per **Annexure-VI.**
13	1200002727/ 22-07-2020	THDC India Limited (Vishnugad Pipalkoti HEP)	Pipalkoti switching station, Uttarakhand, NR (444 MW)	PSPCL-26.9 MW, UPPCL-165.5 MW, Delhi (BRPL & TPDDL)-43.6 MW, Chandigarh (The Engineering Department)-2 MW, UPCL-71.8 MW, HPSEB-11.5 MW, Rajasthan (JVVNL,AVVNL,JdVVNL)-37.3 MW, JKPCL-23.6	444 (Start: 01/06/2023 End: 31/05/2048)	It was agreed to grant LTA to THDC for Pipalkoti HEP from 01/06/2023 to 31/05/2048 with firm beneficiaries in NR through: ➢ Khandukhal - Rampura 400 kV D/c (Quad)

				MW, HPPC-18.4 MW, Unallocated-43.4		line * **line to be taken up under ISTS*

Members may note.

Annexure-I

A. <u>Transmission system for present LTA (1000 MW) for Fatehgarh-III PS (LTA Application No. 1200002789 &1200002782 &1200002783)</u>

1) Establishment of 2x500 MVA (3rd & 4th) 400/220kV ICT at Fatehgarh-III Pooling station—Part-A
2) Fatehgarh-II PS – Fatehgarh-III PS 400 kV (Twin HTLS) 400 kV D/c line—Part-A
3) Jaisalmer (RVPN) S/s - Fatehgarh-III PS (Twin HTLS) 400 kV D/c line—Part-A

B. <u>Common Transmission system (Part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme)</u>

1) Augmentation with 765/400kV, 2x1500MVA Transformer (5th & 6th) at Fatehgarh-II PS—Part-B1
2) Fatehgarh-II PS – Bhadla-II PS 765kV D/c line (2nd)—Part-B
3) 1x240 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-II – Bhadla-II 765kV D/c line—Part-B

4) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Sikar (Sikar-II Substation) with 1x125 MVAr at 400kV level & 2x330 MVAr bus reactors at 765kV level at Sikar -II—Part-C
5) Bhadla-II PS – Sikar-II 765kV D/c line—Part-C
6) Sikar-II – Neemrana 400kV D/c line (Twin HTLS)—Part-C
7) 1x330 MVAr Switchable line reactor for each circuit at Sikar-II end of Bhadla-II –Sikar-II 765kV D/c line—Part-C
8) 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II end of Bhadla-II – Sikar-II 765kV D/c line—Part-C
9) Sikar-II – Aligarh 765kV D/c line—Part-D
10) 1x330 MVAr switchable line reactor for each circuit at each end of Sikar-II – Aligarh 765kV D/c line—Part-D

Annexure-II

A. <u>Transmission system for present LTA for Bikaner-II PS (LTA Application No. 1200002804, 1200002883 & 1200002941)</u>

1) Establishment of 400 kV Pooling Station at Bikaner –II PS with suitable bus sectionalisation at 400 kV along with 420kV (2x125 MVAR) bus reactor
2) Removal of LILO of one circuit of Bhadla-Bikaner (RVPN) 400kV D/c(Quad) line at Bikaner (PG). Extension of above LILO section from Bikaner (PG) upto Bikaner-II PS to form Bikaner-II PS – Part-F – Bikaner (PG) 400kV D/c(Quad) line– Part-F1
3) Bikaner-II PS – Khetri 400 kV 2xD/c line (Twin HTLS* on M/c Tower) – Part-F
4) 1x80MVAr switchable Line reactor on each circuit at Khetri end of Bikaner-II – Khetri 400 kV 2xD/c Line– Part-F
5) Khetri- Bhiwadi 400 kV D/c line (Twin HTLS)* – Part-F

B. <u>Common Transmission system (Part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme)</u>

1) ± 300 MVAr, STATCOM along with 2x125 MVAr MSC, 1x125 MVAr MSR at Bikaner-II– Part-F
2) Power reversal on ±500 KV, 2500 Balia- Bhiwadi HVDC line upto 2000 MW from Bhiwadi to Balia - Power reversal in Balia-Bhiwadi HVDC line *with minimum capacity of 2100 MVA on each circuit at nominal voltage

Annexure-III

A. Transmission system for present LTAs (300 MW) for Fatehgarh-II PS (LTA Application No. 1200002890)

1. Augmentation of 2x500 MVA, 400/220kV ICT (7^{th} & 8^{th}) at Fatehgarh-II Pooling station

B. Common Transmission system (Part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme)

1. Augmentation with 765/400kV, 2x1500MVA Transformer (5^{th} & 6^{th}) at Fatehgarh-II PS
2. Fatehgarh-II PS – Bhadla-II PS 765kV D/c line (2^{nd})
3. 1x240 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-II – Bhadla-II 765kV D/c line
4. Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Sikar (Sikar-II Substation) with 1x125 MVAr at 400kV level & 2x330 MVAr bus reactors at 765kV level at Sikar -II

5. Bhadla-II PS – Sikar-II 765kV D/c line
6. Sikar-II – Neemrana 400kV D/c line (Twin HTLS
7. 1x330 MVAr Switchable line reactor for each circuit at Sikar-II end of Bhadla-II –Sikar-II 765kV D/c line
8. 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II end of Bhadla-II – Sikar-II 765kV D/c line
9. Sikar-II – Aligarh 765kV D/c line
10. 1x330 MVAr switchable line reactor for each circuit at each end of Sikar-II – Aligarh 765kV D/c line
11. STATCOM:
    Fatehgarh – II S/s: STATCOM: ± 600 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR
    Bhadla – II S/s: STATCOM: ± 600 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR

Annexure-IV

A. Transmission system for present LTAs (105.83 MW) for Fatehgarh-II PS (LTA Application No. 1200002903)

1. Augmentation of 2x500 MVA, 400/220kV ICT (7^{th} & 8^{th}) at Fatehgarh-II Pooling station

B. Common Transmission system (Part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme)

2. Augmentation with 765/400kV, 2x1500MVA Transformer (5th & 6th) at Fatehgarh-II PS
3. Fatehgarh-II PS – Bhadla-II PS 765kV D/c line (2nd)
4. 1x240 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-II – Bhadla-II 765kV D/c line
5. Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Sikar (Sikar-II Substation) with 1x125 MVAr at 400kV level & 2x330 MVAr bus reactors at 765kV level at Sikar -II

6. Bhadla-II PS – Sikar-II 765kV D/c line
7. Sikar-II – Neemrana 400kV D/c line (Twin HTLS)*
8. 1x330 MVAr Switchable line reactor for each circuit at Sikar-II end of Bhadla-II –Sikar-II 765kV D/c line
9. 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II end of Bhadla-II – Sikar-II 765kV D/c line
10. Sikar-II – Aligarh 765kV D/c line
11. 1x330 MVAr switchable line reactor for each circuit at each end of Sikar-II – Aligarh 765kV D/c line
12. STATCOM:
    Fatehgarh – II S/s: STATCOM: ± 600 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR
    Bhadla – II S/s: STATCOM: ± 600 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR

*with minimum capacity of 2100 MVA on each circuit at nominal voltage

Annexure-V

A. Transmission system for present LTAs (176.375 MW) for Bhadla-II PS (LTA Application No. 1200002904)

1. Augmentation of 1x1500 MVA, 765/400 kV ICT (2^{nd}) at Bhadla-II Pooling station

B. Common Transmission system (Part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme)

1. 1x240 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-II – Bhadla-II 765kV D/c line
2. Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Sikar (Sikar-II Substation) with 1x125 MVAr at 400kV level & 2x330 MVAr bus reactors at 765kV level at Sikar -II
3. Bhadla-II PS – Sikar-II 765kV D/c line

4. Sikar-II – Neemrana 400kV D/c line (Twin HTLS)*
5. 1x330 MVAr Switchable line reactor for each circuit at Sikar-II end of Bhadla-II –Sikar-II 765kV D/c line
6. 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II end of Bhadla-II – Sikar-II 765kV D/c line
7. Sikar-II – Aligarh 765kV D/c line
8. 1x330 MVAr switchable line reactor for each circuit at each end of Sikar-II – Aligarh 765kV D/c line
9. STATCOM:
   Fatehgarh – II S/s: STATCOM: ± 600 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR
   Bhadla – II S/s: STATCOM: ± 600 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR

*with minimum capacity of 2100 MVA on each circuit at nominal voltage

Annexure-VI

For LTA Application No. 1200002962

A. Transmission system for present LTAs (320 MW) for Bhadla-II PS

1. Augmentation of 2x1500 MVA, 765/400 kV ICT (2^{nd} & 3^{rd}) at Bhadla-II Pooling station

B. Common Transmission system (Part of Transmission system associated with SEZ in Rajasthan under 8.1 GW Phase-II scheme)

2. Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Sikar (Sikar-II Substation) with 1x125 MVAr at 400kV level & 2x330 MVAr bus reactors at 765kV level at Sikar -II
3. Bhadla-II PS – Sikar-II 765kV D/c line
4. Sikar-II – Neemrana 400kV D/c line (Twin HTLS) *
5. 1x330 MVAr Switchable line reactor for each circuit at Sikar-II end of Bhadla-II –Sikar-II 765kV D/c line
6. 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II end of Bhadla-II – Sikar-II 765kV D/c line
7. Sikar-II – Aligarh 765kV D/c line
8. 1x330 MVAr switchable line reactor for each circuit at each end of Sikar-II – Aligarh 765kV D/c line
9. STATCOM:
   Fatehgarh – II S/s: STATCOM: ± 2x300 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR
   Bhadla – II S/s: STATCOM: ± 2x300 MVAr, 4x125 MVAR MSC, 2x125 MVAr MSR

*with minimum capacity of 2100 MVA on each circuit at nominal voltage

In addition to above, following Connectivity system shall also be required for LTA:

1. Establishment of 1x500 MVA, 400/220kV ICT (1st ICT of 220kV section-II) at Bhadla-II PS and Bhadla PS-Bhadla-II PS 400 kV D/c line

   or

   Establishment of 1x1500 MVA, 765/400 kV ICT & 1x500 MVA, 400/220kV ICT at Bhadla-II PS and LILO of Ajmer – Bikaner 765 kV D/c at Bhadla-II S/s(New)

   or Bhadla-II – Fatehgarh-II 765kV D/c line & LILO of Fatehgarh (TBCB) – Bhadla (PG) 765kV D/c line (to be operated at 400kV) at Fatehgarh-II so as to establish Fatehgarh (TBCB) – Fatehgarh-II 400kV D/c line (765kV line operated at 400 kV) and Fatehgarh-II - Bhadla 765kV D/c line.

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली योजना एवं मूल्यांकन-I प्रभाग
Power System Planning & Appraisal-I Division

सेवा में / To

-As per enclosed list-

विषय: "ट्रांसमिशन पर राष्ट्रीय समिति" (एनसीटी) की 4th बैठक का कार्यवृत्त **।**

Subject: Minutes of the 5th Meeting of "National Committee on Transmission (NCT)"

महोदया / महोदय/Sir/Madam,

The 5th meeting of the "National Committee on Transmission" (NCT) was held through VC on 25.08.2021 and 02.09.2021 under the Chairmanship of Chairperson, CEA & Chairman, NCT. The minutes of the meeting is enclosed herewith.

भवदीय

(ईशान शरण /Ishan Sharan)
मुख्य अभियन्ता एवं सदस्य सचिव/
Chief Engineer & Member Secretary (NCT)

Copy to:

(i) Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001.

List of addressees:

1.	Chairperson, Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2.	Member (Power System), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3.	Member (Economic & Commercial), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	4.	Director (Trans), Ministry of Power Shram Shakti Bhawan, New Delhi-110001.
5.	Sh. Dilip Nigam, Scientist 'G', MNRE, Block no. 14, CGO Complex, Lodhi Road, New Delhi – 110003	6.	Chief Operating Officer, Central Transmission Utility POWERGRID, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122 001.
7.	Sh. Rajnath Ram, Adviser (Energy), NITI Aayog, Parliament Street, New Delhi – 110 001.	8.	CMD, POSOCO, B-9, Qutub, Institutional Area, Katwaria Sarai, New Delhi – 110010
9.	Dr. Radheshyam Saha, Ex. Chief Engineer, Central Electricity Authority	10.	Shri Sushanta Kumar Ray Mohapatra, Ex. Chief Engineer, Central Electricity Authority

Minutes of the 5th meeting of National Committee on Transmission held on held on 25.08.2021 and 02.09.2021 through VC.

The list of participants is at **Annexure IA.**

1. Confirmation of the minutes of the 4th NCT meeting held on 20.01.2021 and 28.01.2021.

1.1. The two sittings of the 4th meeting of the "National Committee on Transmission" (NCT) were held on 20.01.2021 and 28.01.2021. Subsequently, the minutes of the meeting were issued vide CEA letter No. File No. CEA-PS-11-15(11)/1/2020-PSPA-I Division dated 22.03.2021.

1.2. Subsequently, CTU vide email dated 26 .03.2021 intimated that some issues deliberated in the meeting have not been included in the minutes of the meeting. Accordingly, Corrigendum to the Minutes of the 4th meeting of the National Committee on Transmission was issued vide CEA letter no CEA-PS-11-15(11)/1/2020-PSPA-I Div dated 13.04.2021.

1.3. Further, CTUIL vide email dated 23.07.2021 had conveyed the following observation on the Minutes of the Meeting and has requested for necessary modification in the minutes of the meeting:

In the minutes of the 4th NCT meeting under para 7.2.1, 5 nos. 400 kV bays were proposed to be implemented for RE generators at Bhadla-II PS (3 nos), Fatehgarh-II (1 no.), & Fatehgarh-III (1 no) (erstwhile Ramgarh-II) PS under ISTS. However, the same has been recorded as 6 nos. 400 kV bays [Bhadla-II PS (3 nos), Fatehgarh-II (2 no.) & Fatehgarh-III (1 no)] under the concluding para 7.2.11.

1.4. CTUIL stated the following:

i) MoP vide its OM dated 16th July' 2021 has already allocated the implementation of 2 no. of 400 kV bays at Fatehgarh-II PS through RTM route to PGCIL. NCT may approve the corrigendum proposed, regarding implementation of 400 kV bays at Fatehgarh-II (one bay only), based on which modification of MoP OM may be taken up.

ii) MoP vide Gazette notification dated 19.07.2021 has issued fresh notification of the "Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase-II- Part F" for implementation through TBCB route based on the change in the scope of works of the scheme as agreed in the 4th meeting of NCT. The scope of works interalia, includes Bikaner-II PS – Khetri 400 kV 2xD/c line (Twin HTLS* on M/c Tower) and Khetri- Bhiwadi 400 kV D/c line (Twin HTLS)* for which the ampacity of the lines has been specified as "*minimum capacity of 2200 MVA on each circuit at nominal voltage"*. This needs to be revised as *"minimum capacity of 2100 MVA on each circuit at nominal voltage"*. The scheme has already been awarded with ampacity of 2100 MVA. Accordingly, the same may be noted by 5th NCT.

iii) MoP vide Gazette notification dated 19.07.2021 has issued fresh notification of the "**Transmission system for evacuation of power from RE projects in Osmanabad area (1 GW) in Maharashtra** for implementation through TBCB route based on the change in the future scope of works of the scheme as agreed in the 4th meeting of NCT. The implementation timeframe for the scheme has not been mentioned in the Gazette Notification. The implementation timeframe of 18 months from date of SPV acquisition has been incorporated in the bidding documents of the said scheme. The same may be noted by NCT.

1.5. NCT approved the modifications proposed at 1.4(i) and noted the submission made by CTU at 1.4(ii) and (iii).

1.6. The minutes of the 4th NCT meeting issued vide CEA letter No. File No. CEA-PS-11-15(11)/1/2020-PSPA-I Division dated 22.03.2021 and corrigendum issued vide CEA letter no CEA-PS-11-15(11)/1/2020-PSPA-I Div dated 13.04.2021 (enclosed as **Annexure IB**) were confirmed alongwith para 1.5 above.

2. Amendments in the Terms of Reference of the National Committee on Transmission vide MoP OM dated 20.05.2021.

2.1. MoP vide OM no. 15/03/2017 (Trans) dated 04.11.2019 had constituted the National Committee on Transmission (attached as **Annexure IIA**). MoP vide its OM no 15/03/2018-Trans Pt(5) dated 20/05/2021 (attached as **Annexure IIB**) has issued the following amendments in the Terms of Reference and constitution of the NCT:

"

a) CMD, POSOCO will be a member of NCT

b) The following functions would be added to the Terms of Reference of NCT:

(i) To formulate the packages for the Transmission Schemes for their implementation and to recommend their mode of implementation i.e. Tariff Based Competitive Bidding (TBCB)/Regulated Tariff Mechanism (RTM), as per the existing Tariff Policy, to Ministry of Power

(ii) To examine the cost of the Transmission Schemes

(iii) To allocate the task of carrying out survey amongst CTU, RECTPCL and PFCCL by maintaining a roster. **"**

Further, NCT while considering the Transmission Planning shall also keep in mind the following aspects:

(i) Regional Power Committees (Transmission Planning) cannot decide on transfers across region.

(ii) Growth of Renewable Energy, being the national Mission, areas with high RE potential needs to be identified and connected to bulk power evacuation systems.

2.2. Subsequent to the issuance of the aforesaid amendments, in order to facilitate NCT in achieving the task of *"Examination of Cost of the Transmission Schemes",* Member (Power System), CEA vide letter no CEA-PS-11-16(11)1/2018 PSPA-I/I/15799 dated 02/06/2021 (attached as **Annexure IIC**) formulated the Cost Committee with the approval of Chairperson, CEA, and Chairman of the NCT. The composition of this Cost Committee is as follows:

1.	Chief Engineer (PSPA-I), CEA	Chairman
2.	Director (PSPA-I), CEA	Member & Convener
3.	Director (PSETD), CEA	Member
4.	Director (F&CA), CEA	Member
5.	Representative from CTUIL	Member
7.	Representative from Cost Engg. Dept, PGCIL	Member
8.	Representative from PFCCL	Member
9.	Representative from RECDPCL	Member
10.	Chief Engineer from STU/SEB/Electricity Department of concerned State in which transmission scheme lies	Member

2.3. The first meeting of this Cost Committee was held on 22.07.2021 wherein cost estimation of two schemes were done based on the Cost Matrix of March'2020 Price Level provided by POWERGRID alongwith inputs from other members. In line with amendments issued by MoP, the Transmission Schemes approved in the Regional Power Committees (Transmission Planning) has been proposed as transmission packages alongwith their estimated cost for approval of NCT. For cost estimation, methodology adopted by cost committee has been used by considering the approximate line lengths, as against the required details of the transmission route that can be obtained after the survey. NCT was requested to suggest way forward to be adopted to comply with the revised ToR.

2.4. Member (E&C), CEA, observed that allocation of survey works of the transmission schemes amongst CTU, RECTPCL and PFCCL on roster basis by NCT, would result in availability of adequate time for carrying out survey works. This would facilitate survey agency in carrying out detailed survey, which in turn would facilitate more realistic cost estimation of the transmission schemes. CTUIL clarified that the survey agency would carry out the preliminary route survey only whereas the detailed route survey would be carried out by the successful bidder.

2.5. NCT members observed that at present the role of Bid Process Co-ordinator (BPC) is being carried out by PFCCL and RECPDCL for schemes to be implemented through TBCB route. Further, all the transmission schemes to be implemented through RTM route are now being allocated to CTUIL, therefore, CTUIL may be allocated the task of carrying out survey for RTM projects.

2.6. CTUIL opined that since RTM projects mainly involves works pertaining to Augmentation/Technical Upgradation at existing S/stn/lines, as such there was no need of carrying out survey works for projects being awarded under RTM. Accordingly, the roster needs to be maintained only for schemes to be implemented through TBCB route.

2.7. Regarding readiness of CTUIL to carry out the survey of the transmission schemes, CTUIL stated that it would be able to carry out the survey of the transmission schemes as stipulated in the amendments issued to the ToR of the NCT. As CTUIL is currently not functioning as Bid Process Coordinator, CTUIL would hand over the survey report to the respective BPCs (PFCCL, RECPDCL). As far as recovery of expenses done for carrying out survey is concerned, the same may be reimbursed by the BPC or provision for

recovery of the same can be kept in the Fees and Charges for CTUIL Regulations to be framed by CERC.

2.8. NCT members observed that as there would be three agencies involved in carrying out the survey of TBCB schemes, there was a need to evolve Standard Specifications for carrying out the survey work. It was agreed that CTUIL in coordination with BPC's (RECPDCL & PFCCL) and CEA would prepare standard specifications for survey of transmission schemes being implemented through TBCB route.

2.9. Expert Member (NCT), Shri S. K. Ray Mohapatra observed that the Cost Committee constituted vide CEA letter dated 02/06/2021 inte ralia comprises of representative from Cost Engineering Department of PGCIL. Since PGCIL is one of the transmission licensees, to avoid any conflict of interest, co-opting of representative from EPTA to the cost committee may also be considered.

2.10. Director, MoP stated that the Cost Committee needs to be a non-partisan body and there would be conflict of interest if any transmission licensee is included in the Cost Committee. Director (PSPA-I), CEA, stated that inclusion of PGCIL as a member of cost committee was done as the Cost Matrix for cost estimation is made available by PGCIL. Cost Matrix is the basic input for cost estimation of the transmission schemes. CTUIL stated that they were also dependent on PGCIL for the cost data required for estimation of cost of transmission schemes.

2.11. Shri Dilip Nigam, Adviser, MNRE, suggested that as far as availability of Reference Cost Matrix from PGCIL is concerned, the same could be formally sought from PGCIL by Ministry of Power. Director, MoP agreed to the same and requested CEA to formally write to MoP so that necessary direction could be issued to PGCIL.

2.12. Member (E & C), CEA, stated that there is a need to collect the per unit cost data of sub-station equipments, per km cost of transmission lines at various voltage levels from different STU's, Private transmission licensees, PGCIL and some derived cost could be arrived at by the Cost Committee for estimation purpose. Member (Power System), CEA, stated that the cost data collection was attempted in the past but large variations were observed in the data furnished by Private Transmission Licensees, PGCIL and STUs.

2.13. After detailed deliberations on the Amendments in the ToR of NCT the following was agreed:

i) To examine the cost of the transmission schemes:
   - The cost estimation of the transmission scheme that is put for recommendation of the NCT, would be done by CEA and CTUIL based on the methodology followed by the Cost Committee. At this stage, no survey report of the scheme is available, therefore, cost estimation would be done using the available parameters/inputs.
   - After availability of the survey report, cost estimation would again be done by cost committee and put up for concurrence by NCT**.**

- PGCIL, being a transmission licensee, would not be a member of the cost committee. However, PGCIL would continue to provide cost inputs to cost committee. MoP to issue necessary directions to PGCIL for providing reference Cost Matrix data for cost estimation of transmission schemes on yearly basis.
- Accordingly, CEA to reconstitute the cost committee.

ii) To allocate the task of carrying out survey:

- CEA in coordination with BPC's (RECPDCL & PFCCL) and CTUIL would prepare standard specifications for carrying out survey of transmission schemes being implemented through TBCB route.
- List of the transmission schemes recommended for implementation through TBCB route by NCT and their subsequent approval by Ministry of Power, to be maintained, for facilitating allocation of survey works.
- NCT will allocate the surveying agency (CTUIL/RECPDCL/PFCCL) for the transmission schemes to be implemented through TBCB route.
- CTUIL may take necessary directions from MoP regarding recovery of expenses for carrying out survey works.

3. Status of earlier schemes recommended by NCT.

A. Status of schemes recommended in the 4th NCT meeting is enclosed as Annexure-IIIA

B. Summary of the bidding status of transmission schemes currently under bidding by BPCs as given below:

Sl. No.	BPC	No. of projects under bidding	Bidding on hold	Bidding yet to start	Total
1	RECPDCL	3	1	6	10
2	PFCCL	6	2	1	9

As per the details furnished by BPC's (PFCCL & RECPDCL), the current status of transmission schemes which are under bidding is attached as **Annexure-IIIB.**

4. Evaluation of the functioning of the National Grid on quarterly basis.

The copy of the presentation made by POSOCO on the functioning of the National Grid is enclosed as **Annexure-IV**.

5. New Transmission schemes recommended by RPC(TP)

(i) CEA stated that the inter-state transmission schemes agreed in the Regional Power Committee (Transmission Planning) are reviewed and recommended by NCT, based on which, the schemes are notified in the Gazette/ allotted by MoP for implementation through TBCB/ RTM route respectively. However, it has been observed that some transmission schemes have been put on hold even after MoP order/Gazette notification. This has been due to various reasons like non-receipt of LTA, adequate land not being available for setting up RE generation projects and delay in setting up of RE generation in the identified potential energy zones. MoP is of the view that once the project is notified/allotted by MoP, the project should not be kept on hold. To avoid such situation NCT may also assess the likely implementation schedule of transmission schemes based

on inputs from MNRE/ SECI/CTUIL/POSOCO etc., before recommending the same to MoP.

(ii) Further, MoP vide letter dated 02.08.2021, forwarding the minutes of the 5th meeting of sub-committee on cross cutting issues of setting up of transmission lines in RE rich areas has advised CEA and CTU to explore different options for maximizing transmission capacity utilization, including BESS.

(iii) Accordingly, NCT was requested to recommend the new schemes that has been included for deliberation, keeping in view the above observations of MoP.

Schemes agreed in Regional Power Committees (Transmission Planning)

A. New Inter-State Transmission Schemes in Western Region:

5.1. Transmission system for evacuation of power from Neemuch SEZ (1000 MW):

5.1.1. CEA stated that MNRE vide letter dated 15.04.2020 inter-alia granted approval for 1000 MW RE potential zones at Neemuch. In 3rd meeting of WRPC(TP), the following scheme was agreed for evacuation of power from Neemuch SEZ (1000 MW):

Transmission system for evacuation of power from Neemuch SEZ (1000 MW)

A. Transmission system for providing connectivity and LTA.
   (i) Establishment of 2x500 MVA, 400/220 kV Pooling Station at Neemuch with 1x125 MVAr, 400 kV Bus Reactor
   (ii) Neemuch PS – Chhittorgarh (PG) S/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage).

B. Transmission system strengthening in matching timeframe of Neemuch SEZ.
   (i) Neemuch PS- Mandsaur S/stn 400 kV D/c line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage).

Implementation of Part A and Part B of the scheme in same time frame would serve as inter-regional corridor for dispersal of RE power as well the evacuation system for Neemuch Solar Park.

The above scheme has been agreed by RPVNL in a meeting held on 08.07.2021 and the scheme would be put up for ratification of NPRC(TP) in its next meeting.

5.1.2. Expert Member, Shri S K Ray Mohapatra enquired about the type of switchgear at the proposed Neemuch pooling station. CEA confirmed that it is an AIS S/stn.

5.1.3. CTU stated that Stage-II Connectivity and LTA of 500 MW has already been granted at proposed Neemuch P.S. with start date of LTA as November, 2022 or availability of transmission system, whichever is later. However, the signing of LTA agreement and submission of CBG amount is still pending.

5.1.4. NCT members observed that with November 2022 being the schedule of RE generation at Neemuch P.S., only 15 month time was available for implementation of the transmission scheme. MNRE informed that the bidding of Neemuch RE park has been

concluded in the month of August 2021, therefore its implementation schedule is likely to get revised.

5.1.5. CTU informed that with the approval of the said scheme in 3rd meeting of WRPC (TP), it has initiated the parallel process of applying for Regulatory Approval for the scheme.

5.1.6. After detailed deliberations NCT recommended the following:

Name of the scheme/est. cost/schedule	**Mode of implementation**	**Purpose /Justification**
Transmission system for evacuation of power from Neemuch SEZ **Estimated Cost**: Rs 547 Crore **Implementation Timeframe** : 18 months from date of SPV acquisition.	TBCB	•Evacuation of power from Neemuch SEZ •Inter-regional link between NR & WR for facilitating dispersal of RE power

Implementation of the scheme to be taken up after receipt of LTA applications from RE developer at Neemuch Pooling Station.

The Detailed Scope of works in the scheme is as given below:

Transmission system for evacuation of power from Neemuch SEZ:

Sr. No	**Scope of the Transmission Scheme**	**Capacity /km**
1	Establishment of 2x500 MVA, 400/220 kV Pooling Station (AIS) at Neemuch with 1x125 MVAr Bus Reactor Future provisions: Space for 400/220 kV ICTs along with bays: 2 nos. 400 kV line bays: 6 nos. 220 kV line bays: 5 nos. 420kV bus reactor along with bays:1	400/220 kV, 500 MVA ICT –2 nos. 400 kV ICT bays – 2 nos. 220 kV ICT bays – 2 nos. 400 kV line bays –4 (2 each for Chittorgarh & Mandsaur lines) 220 kV line bays – *As per connectivity granted to RE developer. (2 no. of bays considered at present corresponding to 500 MW)* 125 MVAr, 420 kV reactor-1 no. 420 kV reactor bay – 1 no.
2	Neemuch PS – Chhittorgarh (PG) S/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	Length ~ 130 km
3	2 nos. of 400 kV line bays at Chhittorgarh (PG) 400 kV S/s for	400 kV line bays – 2 nos. at Chhittorgarh (PG)

	Neemuch PS – Chhittorgarh (PG) S/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	
4	Neemuch PS- Mandsaur S/stn 400 kV D/c line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	Length ~120 km
5	2 no. of 400 kV line bays at Mandsaur 400 kV S/s for Neemuch PS- Mandsaur S/stn 400 kV D/c line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	400 kV line bays – 2 nos. at Mandsaur

Note:

i. *Powergrid to provide space for 2 no. of 400 kV line bays at Chhittorgarh (PG) 400 kV S/s for termination of Neemuch PS – Chhittorgarh (PG) 400 kV D/c line.*
ii. *MPPTCL to provide space for 2 no. of 400 kV line bays at* Mandsaur *400 kV S/s for termination of Neemuch PS –* Mandsaur *400 kV D/c line.*
iii. *Implementation of the scheme to be taken up after receipt of LTA applications from RE developer at Neemuch pooling station.*

5.2. Transmission scheme for evacuation of power from Dholera UMSP:

5.2.1. The Transmission system for evacuation of power from Dholera UMSP (2 GW in Phase-I) was agreed in the 3rd meeting of WRPC (TP) held on 14.06.2021 and put for recommendation of NCT.

5.2.2. On being enquired about the implementation schedule of the project, MNRE informed that the project falls under coastal zone. The environmental studies, CRZ clearance for the project is yet to be done. Moreover, the RE potential of Dholera solar park is subject to the outcome of the potential studies. Accordingly, the scheme may be deferred for now.

5.2.3. NCT agreed to defer the scheme.

5.3. System Strengthening in Gujarat associated with integration of RE projects from Khavda potential REZ:

5.3.1. CEA stated that in the 3rd meeting of WRPC(TP) held on 14.06.2021, the following transmission system was agreed for System Strengthening in Gujarat associated with integration of RE projects from Khavda potential REZ:

(i) Banaskantha – Ahmedabad 765 kV D/c line.
(ii) Establishment of 2x1500 MVA, 765/400 kV & 2x500 MVA, 400/220 kV Kosamba S/s alongwith Kosamba - Kala (GIS) 400 kV D/c line and Kosamba – Magarwada (GIS) 400 kV D/c line.
(iii) Kosamba – Padghe (GIS) 765 kV D/c line.

(iv) Augmentation of transformation capacity at Padghe (GIS) 765/400 kV substation by 1x1500 MVA ICT.

(v) Augmentation of transformation capacity at Banaskantha 765/400 kV S/ s by 1x1500 MVA ICT and Banaskantha – Sankhari 400 kV 2nd D/c line.

The implementation of the above strengthening scheme was required in the matching time-frame Transmission for evacuation of power from Khavda RE park-Phase A (catering to evacuation of 8 GW from Khavda).

5.3.2. GETCO vide email dated 19.08.2021 has informed that 220 kV outlets from the proposed 765/400/220 kV Kosamba substation would be required in 4-5 years timeframe if substation is located surrounding Surat city. The 400/220 kV, 2 x 500 MVA transformers along with 4 Nos. of 220 kV feeder bays for GETCO downstream system may not be taken-up for immediate implementation and only space/design provision shall be kept and same would be taken up in future as per requirement. If the proposed 765 kV Kosamba substation is located in South Gujrat, GETCO may not need 220 kV outlets in near future considering the fact that 4 nos. of 220 kV outlets are already being planned from 400 kV Vapi-II (under construction as an ISTS scheme in south Gujarat).

5.3.3. Member (Power System), CEA, suggested that in view of the observations made by GETCO, the scheme may be deferred for now. Also the scheme could be re-studied with BESS for optimization of the proposed transmission system for evacuation of power from Khavda RE park.

5.3.4. NCT agreed to defer the scheme.

5.4. Modification in the already agreed Transmission system for evacuation of 8 GW RE from Khavda RE park

5.4.1. CEA stated that the transmission system for evacuation power Khavda RE park would be developed in three phases (Phase A-8 GW, Phase B-7 GW and Phase C-12.27 GW). Phase-A includes Phase- I & II which has already been approved and notified by MoP. Phase-I is associated with evacuation of 3 GW and is under bidding. Phase-II is associated with evacuation of additional 4.5GW and its bidding would be started on receipt of LTA beyond 3 GW from RE developers in Khavda RE park. The following modifications have been approved in the 3rd meeting of WRPC(TP) in respect of "Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II"

i) Establishment of 3 nos. of pooling stations namely, Khavda pooling station 1 (KPS1), Khavda pooling station 2 (KPS2) and Khavda pooling station 3 (KPS3) instead of single Khavda pooling station. Khavda pooling station re-designated as Khavda pooling station 1(KPS1).

ii) Splitting of Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A into two parts.

iii) Modification in the Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C.

iv) Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part E not required in view of the transmission scheme proposed under System Strengthening in Gujarat associated with integration of RE projects from Khavda potential REZ.

The summary of the schemes is as given below:

Sl.No.	Name of Transmission scheme	Broad Scope	Modification
1.	Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I	• Establishment of Khavda pooling station (GIS), 3x1500 MVA 765/400 kV and 2x500 MVA 400/220 kV. • Khavda PS (GIS) – Bhuj PS 765 kV D/c line.	• Khavda pooling station re-designated as Khavda pooling station 1 (KPS1) • No change in scope. • Establishment of KPS2 and KPS3 agreed as separate additional scheme
2.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A	• Augmentation of Khavda PS by 4x1500 MVA, 765/400 kV and 2x500 MVA, 400/220 kV. • Khavda PS (GIS) – Lakadia PS 765 kV D/c line	• Augmentation of KPS1 by 4x1500 MVA, 765/400 kV and 2x500 MVA, 400/220 kV. • KPS1-KPS2 765 kV D/ C line • KPS2 – Lakadia PS 765 kV D/c line
4.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part B	• Lakadia PS – Ahmedabad 765 kV D/c line	• No change
5.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C	• Establishment of 2x1500 MVA, 765/400 kV Ahmedabad substation. • Ahmedabad – Vadodara 765 kV D/c line	• Establishment of 3x1500 MVA, 765/400 kV Ahmedabad substation. • Ahmedabad – Kosamba/ South Gujrat S/S 765 kV D/c line
6.	Transmission	• LILO of Pirana (PG) –	• No change

	scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part D	Pirana (T) 400 kV D/c line at Ahmedabad S/s	
7.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part E	• Ahmedabad – Indore 765 kV D/c line	• Not required in view of new transmission lines proposed under the scheme *System Strengthening in Gujarat associated with integration of RE projects from Khavda potential REZ*.

5.4.2. NCT members enquired about the need to establish three pooling station in Khavda RE park. CEA stated that initially the evacuation system with single pooling station at Khavda RE park was planned to accommodate the 10.5 GW Renewable Energy Zones which were shifted from other parts of Gujarat to Khavda due to change in policy of Govt. of Gujarat. Govt. of Gujarat has allocated approx. 50,000 acres of land to a mix of private and public sector project developers (5 nos.) for development of renewable energy projects in the Renewable Energy Park at Khavda for evacuation of appx 30 GW RE from Khavda. As per layout of Khavda RE park as finalized by GPCL, three ISTS Pooling stations in Khavda RE park has been identified to pool RE power for further evacuation. Accordingly, three nos. of pooling stations have been proposed.

5.4.3. CTUIL stated that LTA of 1000 MW has already been granted at erstwhile Khavda Pooling Station which shall now be designated as Khavda Pooling Station 1 (KPS1). Further, LTA applications of 600 MW each has been received from GSECL and GIPCL at KPS2. Therefore, establishment of proposed Khavda Pooling Station 2 (KPS2) through LILO of one ckt of KPS1-Bhuj 765 kV D/C line at KPS2 is required.

5.4.4. Director MoP, enquired that whether the possibility of implementation of Battery Energy & Storage systems with the proposed RE integration scheme for evacuation of 4.5 GW from Khavda RE park under Phase-II has been explored. CEA stated that no BESS has been studied with the Transmission scheme for evacuation of power from Khavda RE park Phase-I & II. The implementation of Battery Energy Storage systems can be studied with the transmission system proposed for evacuation of additional 7 GW RE scheme under Phase-B.

5.4.5. CEA stated that in view of the observations of GETCO regarding location of Kosamba 765/400/220 kV substation, the System Strengthening schemes would be re-looked and there is possibility of shifting of Kosamba 765/400/220 S/s to other location in South of Gujarat. Therefore, Kosamba can be designated as South Gujarat substation. Accordingly, the Ahmedabad – Kosamba 765 kV D/c line can be renamed as

Ahmedabad – South Gujarat 765 kV D/c line under the scheme "Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C".

5.4.6. NCT recommendations are as given below:

(1) Establishment of new pooling stations in Khavda to be taken up only after receipt of LTA applications from RE developers**:**

S.no	Name of the scheme/est. cost/schedule	**Mode of implementation**	Justification
1.	Establishment of Khavda Pooling Station-2 (KPS2) in Khavda RE Park **Estimated Cost**: Rs 789 Crore **Implementation Timeframe** : 24 months from date of SPV acquisition	TBCB	For pooling of power from RE park developers and its further evacuation.
2.	Establishment of Khavda Pooling Station-3 (KPS3) in Khavda RE Park **Estimated Cost**: Rs 665 Crore **Implementation Timeframe** : 24 months from date of SPV acquisition	TBCB	For pooling of power from RE park developers and its further evacuation.

The detailed scope of works is attached as Annexure V

(2) Modification in following packages that have already been notified by MoP vide Gazette notification dated 23.09.2020 for Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II:

Sl. No.	**Earlier Notified Transmission Scheme**	**Scope of works of earlier notified Transmission scheme**	**Modified Transmission Scheme approved by NCT**
1.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda PS under Phase-II Part A	• Augmentation of Khavda PS by 4x1500 MVA, 765/400 kV and	Scheme split into two parts: **Part –I**: Transmission Scheme for evacuation of 4.5 GW RE

Sl. No.	Earlier Notified Transmission Scheme	Scope of works of earlier notified Transmission scheme	Modified Transmission Scheme approved by NCT
		2x500 MVA, 400/220 kV ICTs. • Khavda PS (GIS) – Lakadia PS 765 kV D/c line	injection at Khavda P.S. under Phase-II Part A: • KPS2 (GIS) – Lakadia 765 kV D/C line with 330 MVAr switchable line reactor at Khavda end. • 2 nos. of 765 kV line bays each at Lakadia PS & KPS2 (GIS) for Khavda PS2 (GIS) – Lakadia PS 765 kV D/c line
			Part-II: Transmission scheme for injection beyond 3GW RE power at Khavda PS1 (KPS1): a) Augmentation of Khavda PS1 by 765/400 kV transformation capacity* (max. upto 4x1500 MVA) with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 420 kV bus reactor on 2nd 765 kV and 400 kV bus respectively. b) KPS1- Khavda PS2 GIS (KPS2) 765 kV D/C line (to be established with bypassing of LILO of one ckt. of KPS1 - Bhuj at KPS2 and utilisation of LILO section) ** Actual no. of ICTs may be decided based on LTA requirement.*
2.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C	Establishment of 2x1500 MVA, 765/400 kV, Ahmedabad S/s with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 420 kV bus reactor.	Establishment of 3x1500 MVA, 765/400 kV Ahmedabad S/s with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 420 kV bus reactor
		Ahmedabad – Vadodara 765 kV D/c line	Ahmedabad – South Gujarat 765 kV D/c line with 240 MVAr switchable line reactor

Sl. No.	Earlier Notified Transmission Scheme	Scope of works of earlier notified Transmission scheme	Modified Transmission Scheme approved by NCT
			at both ends (~line length 220 km)
		2 nos. of 765 kV line bays at Vadodara for Ahmedabad – Vadodara 765 kV D/c line	2 nos. of 765 kV line bays at South Gujarat for Ahmedabad – South Gujarat 765 kV D/c line

The modifications recommended:

Sl. No.	Name of the scheme/est. cost/schedule	Mode of Implementation	Justification
1.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda PS under Phase-II Part A **Estimated Cost**: Rs 862 Crore **Implementation Timeframe** : 24 months from date of SPV acquisition	TBCB	Modification in the scope of already notified scheme.
2.	Transmission scheme for injection beyond 3 GW RE power at Khavda PS1 (KPS1) **Estimated Cost**: Rs 780 Crore **Implementation Timeframe** : 24 months from date of SPV acquisition	TBCB	Modification in the scope of already notified scheme.
3	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C **Estimated Cost**: Rs 1440 Crore **Implementation Timeframe**: 24 months from date of SPV acquisition	TBCB	Modification in the scope of already notified scheme.

The detailed scope of the above scheme is enclosed at **Annexure-VI**.

(3) Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part E already notified by MoP vide Gazette notification dated 23.09.2020 is not required in view of new transmission lines proposed under the scheme *System Strengthening in Gujarat associated with integration of RE projects from Khavda potential REZ*.

5.5. Transmission system for evacuation of additional 7 GW RE power from Khavda RE park Phase-B:

5.5.1. CEA stated that in the 3rd meeting of WRPC(TP) held on 14.06.2021, the transmission system for evacuation of additional 7 GW (in addition to 8 GW under Phase-A) RE

power from Khavda RE park was agreed. It included establishment of a 765 kV corridor namely, KPS2- Halvad-Vataman-Kosamba and establishment of 765/400 kV switching stations at Halvad and Vataman. Implementation of the transmission system has been proposed through four nos. transmission schemes.

5.5.2. Director, MoP stated that the possibility of implementation of Battery Energy & Storage systems can be explored alongwith with this additional 7 GW RE scheme under Phase-B.

5.5.3. Adviser, MNRE, also opined that transmission system for evacuation of 8 GW power from Khavda RE park has already been recommended, therefore additional transmission system may be re-studied considering BESS.

5.5.4. Expert member, Shri R. Saha, stated that with adoption of new technologies like BESS and other storage systems, the implication on overall cost of the scheme and the techno-economic feasibility of the scheme also needs to be analysed while firming up the system.

5.5.5. After deliberations, NCT deferred the scheme for re-study with consideration of BESS at Khavda RE park.

5.6. Transmission system strengthening beyond Kolhapur for export of power from Solar & Wind Energy Zones in Southern Region- Re-conductoring of Kolhapur (PG) – Kolhapur 400 kV D/c line.

5.6.1. CEA stated that in the 4th meeting of NCT held on 20th & 28th January, 2021, it was agreed that Strengthening of Kolhapur (PG) - Kolhapur (MSETCL) 400 kV section may be deliberated in WRPC(TP) meeting based on the operational constraint reported by POSOCO. The issue was deliberated in the 3rd meeting of WRPC(TP) held on 14.06.2021 wherein re-conductoring of Kolhapur (PG) – Kolhapur 400 kV D/c line with conductor of minimum capacity of 2100 MVA/Ckt was agreed.

5.6.2. NCT made the following recommendation:

Sl. No.	Name of the scheme	Mode of implementation	Justification
1.	Re-conductoring of Kolhapur (PG) – Kolhapur 400 kV D/c line Estimated cost: Rs 54 cr. Implementation timeframe: 15 months from date of issue of MoP OM	RTM	Remedial measure to overcome operational constraint (‘N-1’ non-compliance) reported by POSOCO.

The details of the scheme is given below:

Re-conductoring of Kolhapur (PG) – Kolhapur 400 kV D/c line

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Re-conductoring of Kolhapur (PG) – Kolhapur 400 kV D/c line with conductor of minimum capacity of 2100 MVA/Ckt at nominal voltage along with bay up-gradation work at Kolhapur (MSETCL).	Re-conductoring length – 60 km approx. 400 kV bay upgradation- 2 nos.

5.7. Scheme to control fault level at Indore S/s:

5.7.1. CEA stated that Indore 765/400/220 kV S/s in MP acts as a node for transfer of power from generation projects in MP and Gujarat to load centres in MP through high capacity 400 kV and 765 kV networks. A large number of RE generation projects are coming up in Gujarat whose power is getting dispersed through various substations (at 765 kV level) including Indore (PG) for onward transfer of power to other parts of the grid resulting in high short circuit levels of interconnected grid. As per system studies, it was observed that short circuit level at Indore (PG) 400 kV substation in 2022-2023 time-frame crosses 50 kA as against designed rating of 40 kA. The issue was deliberated in the 3rd meeting of WRPC(TP) held on 14.06.2021 wherein, 400 kV Bus Splitting of 765/400/220 kV Indore substation into two sections A&B and shifting of 765/400 kV, 1x1500 MVA ICT from section A to Section B (through jumpering arrangement) was agreed.

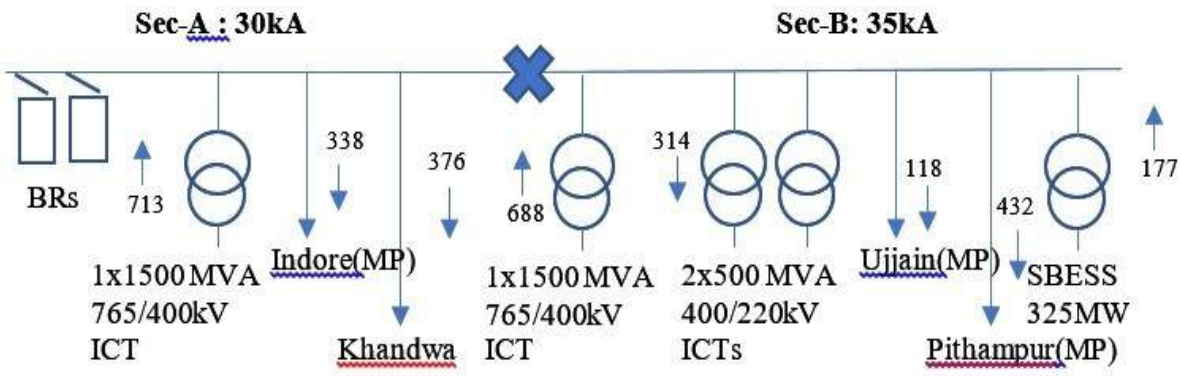
Transmission elements on 400 kV Bus Section A:

(i) 1 no. of 765/400 kV 1x1500MVA ICT
(ii) Indore (MP) 400 kV D/C line
(iii) Khandwa 400 kV D/C line
(iv) 2x125 MVA Bus reactors.

Transmission elements on 400 kV Bus Section B:

(i) 1 no. of 765/400 kV 1500MVA ICT
(ii) 2 nos. of 400/220 kV, 500MVA ICT
(iii) Ujjain (MP) 400 kV D/C line
(iv) Pithampur (MP) 400 kV D/C line.
(v) 1 no. of 400/220 kV 500MVA ICT associated with M/s SBESS

The schematic of the 400 kV section after bus splitting is as given below:



5.7.2. Regarding query on the actual scope of works involved in implementing the bus splitting scheme at Indore, CTUIL informed that the details of the same is to obtained from PGCIL.

5.7.3. NCT suggested to put up the scheme again in the next meeting along with scope of works and estimated cost of the scheme.

5.8. Scheme for fault level control at Dehgam (PG) & Ranchhodpura (GETCO) S/s

5.8.1. CEA stated that the following transmission scheme was agreed under ISTS in the 3rd WRPC(TP) meeting held on 14.06.2021 to control the fault level at Dehgam (PG) & Ranchhodpura (GETCO) S/s

- Bypassing of Rachhodpura(GETCO) – Dehgam(PG) 400 kV D/c line at Dehgam(PG) S/s and connecting it with Dehgam(PG) – Pirana 400 kV D/c line (one circuit via Nicol) so as to form Ranchhodpura(GETCO) – Pirana(PG) 400 kV D/c line (one circuit via Nicol).

GETCO vide its letter dated 19.08.2021 has raised issues with respect to ownership, transmission charges, O&M issues etc. of the Ranchodpura-Pirana 400 kV D/C line that would established with implementation of the above schemes. One section of this would be ISTS line and other section would be intra-state line. Accordingly, the scheme would be re-discussed in the WRPC(TP) meeting.

5.8.2. NCT agreed to defer the scheme.

5.9. Augmentation of 1x500 MVA, 400/220 kV ICT at Bhatapara (PG)

5.9.1. CEA stated that the 3rd 400/220 kV ICT at Bhatapara has been agreed in the 3rd meeting of WRPC(TP) to overcome the operational constraint ('N-1' non-compliance) during the high electricity demand of Chhattisgarh.

In addition to that, the loading on the Bhatapara (PG) – Bhatapara (CSPTCL) 220 kV S/c line is high in present scenario even with the existing 2x315 MVA, 400/220 kV ICTs at Bhatpara(PG) substation. With additional ICT at Bhatpara(PG), the loading on Bhatapara (PG) – Bhatapara (CSPTCL) 220 kV S/c line would further increase. Therefore, LILO of one circuit of Bhatapara (PG) – Suhela 220 kV T/c line at Bhatapara (CSPTCL) has also been agreed to be implemented in matching time-frame

of implementation of 1x500 MVA, 400/220 kV ICT at Bhatapara (PG) by CSPTCL as intra-state scheme.

5.9.2. NCT made the following recommendation:

S.no	Name of the scheme	Mode of implementation	Justification
1.	Augmentation of 1x500 MVA, 400/220 kV ICT (3rd) at Bhatapara (PG) **Estimated cost:** Rs 30 cr. **Implementation timeframe:** 15 months from date of issue of MoP OM	RTM	Remedial measure to overcome operational constraint ('N-1' non compliance) of 400/220 ICTs at Bhatpara (PG) 400/220 kV substation. LILO of one circuit of Bhatapara (PG) – Suhela 220 kV T/c line at Bhatapara to be implemented by CSPTCL in matching time-frame of Bhatpara ICT.

Details of the scheme is given below:

Augmentation of 1x500 MVA, 400/220 kV ICT (3rd) at Bhatapara (PG)

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation of 1x500 MVA, 400/220 kV ICT (3rd) at Bhatapara (PG)	400/220 kV, 500 MVA ICT –1 nos. 400 kV ICT bays – 1 nos. 220 kV ICT bays – 1 nos.
Approximate cost (Rs. Cr)		**30**

Note: To be implemented in the timeframe of implementation of LILO of one circuit of Bhatapara (PG) – Suhela 220 kV T/c line at Bhatapara (CSPTCL) under intra-state

B. Schemes agreed in Northern Regional Power Committees (Transmission Planning)

5.10 Transmission System requirement for additional 20 GW REZ in Northern Region (Phase-III)

Director (PSPA-I), CEA, stated that the transmission system for evacuation for 8.9 GW under Phase-I and 8.1 GW under Phase-II had been agreed and presently under implementation. Subsequently, SECI had requested to plan the transmission system for additional 20 GW SEZs envisaged in Rajasthan & proposed to be connected to the ISTS network in Bhadla, Fatehgarh and Ramgarh area. The locations of generation were identified by SECI based on the feedback of RE generation developers looking into the availability of land for setting up generation projects and proper access to these areas.

Further, these locations have the potential of both solar and wind generation. Considering it, load flow studies were carried out and discussed with NR constituents in various meetings. Based on the deliberations, transmission system for additional 20 GW REZ in Northern Region (Phase-III) was agreed in the 3rd NRPC (TP) meeting held on 19.02.2021 as given below:

i) Establishment of 5x500 MVA 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor
ii) Establishment of 2x1500 MVA 765/400kV & 10x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus Reactor
iii) Establishment of 3x1500 MVA 765/400kV & 2x500 MVA 400/220 kV pooling station at Ramgarh along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor
iv) Fatehgarh-2 – Bhadla-3 400kV D/c line (Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 2- Bhadla-3 400kV D/c line (200 km)
v) Fatehgarh-4- Fatehgarh-3 400 kV 2xD/c twin HLTS line (50 km)
vi) Fatehgarh 3- Bhadla-3 400kV D/c line(Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 3- Bhadla-3 400kV D/c line (200 km)
vii) Ramgarh – Bhadla-3 765kV D/c line (180 km) along with 240 MVAr line reactor at each circuit at Ramgarh end of Ramgarh – Bhadla-3 765kV D/c line
viii) Bhadla-3 – Sikar-II 765 kV D/c line (380 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Sikar-II 765 kV D/c line
ix) Sikar-II – Khetri 765 kV D/c line (90 Km)
x) Sikar-II – Narela 765 kV D/c line (260 Km) along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line
xi) Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)
xii) Augmentation with 400/220kV, 1x500MVA Transformer (10th) at Fatehgarh-II PS
xiii) Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-II PS
xiv) Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG)
xv) Jhatikara – Dwarka 400kV D/c line (Quad) (20km)
xvi) Establishment of 6x1500 MVA 765/400kV & 5x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section*) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr,765kV & 2x125 MVAr, 420kV Bus Reactors
xvii) Augmentation of 1x500 MVA ICT (5th), 400/220kV ICT at Fatehgarh-3 Substation (section-1*)
xviii) Establishment of 2x1500MVA 765/400kV Substation at suitable location near Beawar along with 2x330 MVAr, 765 kV Bus Reactor & 2x125 MVAr, 420 kVBus Reactor

xix) Fatehgarh-3– Beawar 765 kV 2xD/c (350 km) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line

xx) LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar (45 km)

xxi) LILO of 400kV Kota –Merta line at Beawar (20 km)

xxii) Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr 765 kV Bus Reactor & 2x125 MVAr, 420 kVBus Reactor

xxiii) Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end

xxiv) LILO of both circuits of Jaipur(Phagi)-Gwalior 765 kV D/c at Dausa (40km) along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line

xxv) LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa (30km) along with 50 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line

xxvi) 6000MW, ±800KV HVDC terminal at Bhadla-3 substation

xxvii) 6000MW, ±800KV HVDC terminal station at suitable location near Fatehpur (UP)

xxviii) Establishment of 5x1500MVA, 765/400KV ICT at pooling station at suitable location near Fatehpur along with 2x330MVAr (765kV) bus reactor

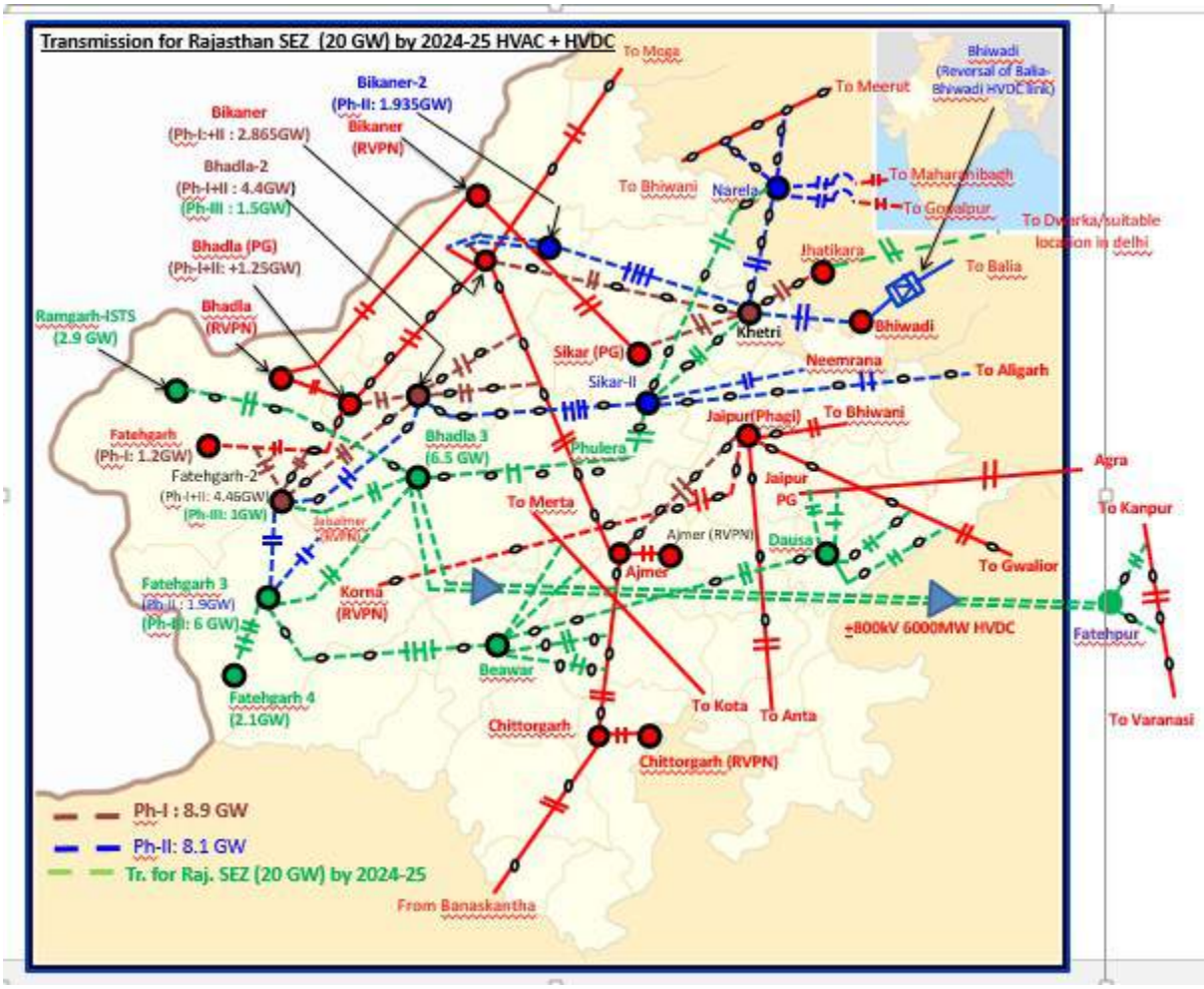
xxix) ±800 kV HVDC line (Hexa lapwing) between Bhadla-3 & Fatehpur (950km)

xxx) LILO of both ckts of 765 kV Varanasi – Kanpur (GIS) D/c at Fatehpur(30km)

xxxi) Augmentation of 1x1500 MVA ICT at 765/400kV Kanpur(GIS) substation

xxxii) STATCOM :

- Fatehgarh – III S/s: STATCOM: ± 2x300 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR
- Ramgarh S/s : STATCOM : ± 2x300 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR



She further stated that the transmission lines envisaged in the 20 GW scheme would be passing through the GIB (Great Indian Bustard) potential zone as per the area marked in the Hon'ble Supreme Court of India Order dated 19.04.2021 in Writ Petition No. 838 of 2019 regarding GIB case. Further, in the aforesaid order, Hon'ble Supreme Court has constituted a committee for the specific purpose of assessing the feasibility of laying the transmission line after taking into consideration all technical details. Hon'ble Supreme Court has also directed that for all future cases of installing transmission lines in the priority zone or potential zone, feasibility for the lines to be laid underground is to be assessed. Wherever feasible, the transmission line has to be laid underground otherwise of overhead line with bird diverters can be installed only after ratification of its feasibility by the Committee constituted by Hon'ble Supreme Court.

COO(CTUIL) stated that earlier only priority zone was defined, so the transmission schemes were planned bypassing this zone. Now with the above mentioned order of Hon'ble Supreme Court, due to the newly defined Potential zone, some of the transmission schemes earlier approved under Part B, C and D of Phase-II (8.1 GW) are falling under this potential zone. CERC has directed Powergrid subsidiaries for the schemes: Part B, C and D of Phase-II to comply with the direction of Hon'ble Supreme Court.

Member (Power System), CEA, added that beside the transmission lines under the ISTS schemes, the dedicated lines of generators would also be falling under the GIB zone.

Therefore, the generators as well as the developers of these transmission schemes would require to comply with the direction of Hon'ble Supreme Court, which in turn would cause delay the completion of the projects and the transmission schemes. Considering this, the transmission developers may have to approach the Committee constituted by Hon'ble Supreme Court well in advance.

Regarding the transmission scheme under Phase –III in Rajasthan, Expert Member, Dr. R. Saha, suggested that the option of series compensation, SVC, Synchronous condenser should be considered in future before zeroing in for STATCOM which is comparatively costly device. In this regard, Director (PSPA-I), CEA, stated that Rajasthan has huge RE potential of around 190 GW. As of now, the planned Transmission system under Phase-III consists of STATCOM for providing voltage stability. Other option like SVC, Synchronous condenser and the other options like Battery Energy Storage system will also be explored in near future.

Director (PSPA-I), stated that the transmission system for additional 20 GW REZ in Northern Region (Phase-III) has been divided into the following packages for the ease of implementation:

5.10.1 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A1:

1. The scope of scheme is as under:

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x500 MVA, 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor *<u>Future provisions</u>: Space for* *400/220kV ICTs along with bays: 5 nos.* *400 kV line bays along with switchable line reactor: 6 nos.* *400kV Bus Reactor along with bays: 2 nos.* *400kV Sectionalization bay: 1 nos.* *220 kV line bays: 10 nos.* *220kV sectionalization bay: 2 nos.*	400/220 kV, 500 MVA ICT - 2nos. 400 kV ICT bays - 2 nos. 220 kV ICT bays - 2 nos. 400 kV line bays - 2 nos. 220 kV line bays- *As per connectivity granted to RE developer. (4 no. of bays considered at present)* 125 MVAr, 420 kV bus reactor - 2 nos. 420 kV reactor bay - 2 nos.
2.	Fatehgarh-4- Fatehgarh-3 400 kV D/c twin HLTS* line (50 km)	Length – 50 km
3.	Fatehgarh 3- Bhadla-3 400kV D/c line(Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 3- Bhadla-3 400kV D/c line	Length – 200km 400 kV 50 MVAr Switchable line reactor – 4 nos.

Sl.No.	Scope of the Transmission Scheme	Capacity /km
		Switching equipment for 400 kV 50 MVAR switchable line reactor –4 nos.
	Total Estimated Cost (Rs Crore)	**660**

** with minimum capacity of 2100 MW on each circuit at nominal voltage*

Note:

(i) Provision of suitable sectionalization shall be kept at Fatehgarh-4 at 400kV & 220kV level to limit short circuit level

(ii) Developer of Fatehgarh-3 Substation (new section) to provide 2 nos. of 400 kV line bays at Fatehgarh-3 S/s for termination of Fatehgarh-4- Fatehgarh-3 400 kV D/c twin HLTS* line

(iii) Developer of Fatehgarh-3 S/s(new section) to provide 2 nos. of 400 kV line bays along with space for switchable line reactors at Fatehgarh-3 for termination of Fatehgarh 3- Bhadla-3 400kV D/c line

(iv) Developer of Bhadla –3 substation to provide 2 nos. of 400 kV line bays along with space for switchable line reactors at Bhadla -3

(v) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

2. CTUIL indicated that at Fatehgarh-4 PS, Stage-II connectivity applications have been granted for 510 MW, however no LTA application has been received yet. Therefore, implementation of Phase III –Part A1 is to be taken up upon receipt of LTA from RE developers at Fatehgarh-4 PS. In order to enable evacuation of RE power from Fatehgarh-4 PS, implementation schedule of phase III –Part A1 package is to match with package Phase III –Part E1 (Establishment of Fatehgarh-3 PS) & Phase III –Part F (Establishment of Beawar S/s, Fatehgarh-3 PS-Beawar line, LILO of Ajmer-Chittorgarh D/c at Beawar & LILO of Kota-Merta line at Beawar).

3. CTUIL also suggested that the Fatehgarh 3- Bhadla-3 400kV D/c line may be taken up as a separate package or in A2 package and may be taken up later. Therefore, it was decided that Fatehgarh 3- Bhadla-3 400kV D/c line may be taken up as a separate package.

4. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part A1 **Estimated Cost**: Rs 210 Crore. **Implementation Timeframe**: 18 months from date of SPV acquisition.	TBCB	For evacuation of RE power getting pooled at Fatehgarh –4.

5. The Detailed Scope of works in the scheme is as given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A1"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x500 MVA, 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor *Future provisions: Space for* *400/220 kV ICTs along with bays: 5 nos.* *400 kV line bays along with switchable line reactor: 6 nos.* *400 kV Bus Reactor along with bays: 2 nos.* *400 kV Sectionalization bay: 1 nos.* *220 kV line bays: 10 nos.* *220 kV sectionalization bay: 2 nos.*	400/220 kV, 500 MVA ICT - 2nos. 400 kV ICT bays - 2 nos. 220 kV ICT bays - 2 nos. 400 kV line bays - 2 nos. 220 kV line bays- *As per connectivity granted to RE developer. (4 no. of bays considered at present)* 125 MVAr, 420kV bus reactor - 2 nos. 420 kV reactor bay - 2 nos.
2.	Fatehgarh-4- Fatehgarh-3 400 kV D/c twin HLTS* line (50 km)	Length – 50km
3.	2 no. of 400 kV line bays at Fatehgarh-3	400 kV line bays - 2 nos.

** with minimum capacity of 2100 MW on each circuit at nominal voltage*

Note:

(i) Provision of suitable sectionalization shall be kept at Fatehgarh-4 at 400kV & 220kV level to limit short circuit level
(ii) Developer of Fatehgarh-3 S/s(new section) to provide space for 2 nos. of 400 kV line bays at Fatehgarh-3 S/s for termination of Fatehgarh-4- Fatehgarh-3 400 kV D/c twin HLTS* line
(iii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey
(iv) Implementation of the scheme to be taken up after receipt of LTA applications from RE developer at Fatehgarh-4 pooling station.

5.10.2 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A2

1. Director (PSPA-I), CEA, stated that the scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part A2" has been planned to enable the evacuation of RE power from Fatehgarh-4 under Phase III.

2. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part A2 **Estimated Cost**: Rs 100 Crore **Implementation Timeframe** : 15 months from MoP OM.	RTM (The above scheme includes augmentation of 3 no. of transformers at Fatehgarh-4, which are required to be taken up for implementation at later stage based on the number of LTA applications received)	For evacuation of RE power (beyond 1000 MW) getting pooled at Fatehgarh –4.

3. The detailed scope of scheme is as under:

"Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part A2"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation of 3x500 MVA, 400/220 kV pooling station at Fatehgarh-4 .	400/220 kV, 500 MVA ICT - 3nos. 400 kV ICT bays - 3 nos. 220 kV ICT bays - 3 nos. 220 kV line bays- *As per connectivity granted to RE developer. (5 no. of bays considered at present)*

Note:

(ii) The implementation of number of 220 kV bays and 400/220 kV transformers shall only be taken up based on receipt of stage-II connectivity and commensurate LTA respectively (beyond 1000 MW at Fatehgarh-4).

(iii) 220 kV line bays and Transformer augmentations shall be reviewed based on stage-II connectivity at 220kV voltage level and LTA applications respectively

5.10.3 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A3

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A3	TBCB (Fatehgarh 3- Bhadla-3	For evacuation of RE power (beyond 2000 MW) getting pooled at Fatehgarh

Estimated Cost: Rs 505 Crore **Implementation Timeframe**: 18 months from date of SPV acquisition.	400kV D/c line may be taken up for implementation on receipt of LTA beyond 2000 MW at Fatehgarh-4)	–4.

2. The detailed scope of the scheme is as follows:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A3"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Fatehgarh 3- Bhadla-3 400kV D/c line(Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 3-Bhadla-3 400kV D/c line	Length – 200km 400 kV 50 MVAr Switchable line reactor – 4 nos. Switching equipment for 400 kV 50 MVAR switchable line reactor –4 nos. 400kV line bays Bhadla-3 S/s & Fatehgarh-3 S/s -4 nos. (2+2)

Note:

(i) Fatehgarh 3- Bhadla-3 400kV D/c line may be taken up for implementation on receipt of LTA beyond 2000 MW at Fatehgarh-4.

(ii) Developer of Fatehgarh-3 S/s(new section) to provide space 2 nos. of 400 kV line bays along with space for switchable line reactors at Fatehgarh-3

(iii) Developer of Bhadla –3 substation to provide space for 2 nos. of 400 kV line bays along with space for switchable line reactors at Bhadla -3

5.10.4 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1

1. The scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part B1" has been planned to establish connectivity as well as enable the evacuation of RE power from Bhadla-3 and Ramgarh PS (beyond Bhadla-3) under phase III.

2. CTUIL stated that at present Stage-II connectivity applications for 224MW quantum has already been granted at Bhadla-3 PS, however regulatory compliance is still pending in above connectivity case. Further Stage-II connectivity applications for 2600MW has been granted at Ramgarh PS. However, no LTA application has been received yet at both the above pooling stations. Therefore, implementation of Phase III –Part B1 may be taken up upon receipt of LTA from RE developers at Ramgarh PS/Bhadla-3 PS.

3. After detailed deliberations, NCT recommended the following :

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part B1 **Estimated Cost**: Rs 2500 Crore **Implementation Timeframe**: 18 months from date of SPV acquisition.	TBCB (Implementation of Phase III –Part B1 may be taken up upon receipt of LTA from RE developers at Ramgarh PS/ Bhadla-3 PS)	For evacuation of RE power getting pooled at Bhadla-3.

4. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x1500 MVA 765/400kV & 3x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus Reactor <u>Future provisions</u>*: Space for* *765/400kV ICTs along with bays: 2nos.* *765kV line bay along with switchable line reactor: 4nos.* *765kV line bay: 4nos.* *765kV Bus Reactor along with bays: 2 nos.* *400/220 kV ICTs along with bays: 10nos.* *400 kV line bays: 8 nos.* *400 kV line bays along with switchable line reactor:4* *400kV Bus Reactor along with bays: 2*	765/400kV 1500 MVA ICTs: 2 nos *(7x500 MVA including one spare unit)* 765kV ICT bays - 2 nos. 400/220 kV, 500 MVA ICT - 3nos. 765kV line bays -2 nos. 400 kV ICT bays – 5 nos. 220 kV ICT bays - 3 nos. 400 kV line bays - 2 nos 220 kV line bays: *As per connectivity granted to RE developers (5 no. of bays considered at present)* 330 MVAr Bus Reactor-2 nos. *(7x110 MVAr, including one spare unit)* 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor - 2 nos. 420 kV reactor bay - 2 nos.

Sl. No.	Scope of the Transmission Scheme	Capacity /km
	nos. *400kV Sectionalization bay: 2 nos.* *220 kV line bays: 12 nos.* *220kV sectionalization bay: 2nos.*	
2.	Fatehgarh-2 – Bhadla-3 400kV D/c line (Quad moose) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 2- Bhadla-3 400kV D/c line	Length – 200km 400 kV 50 MVAR switchable line reactor –4 Switching equipment for 400 kV 50 MVAR switchable line reactor –4
3.	2 nos. of 400 kV line bays at Fatehgarh-2 for Fatehgarh-2 – Bhadla-3 400kV D/c line	400 kV line bays - 2 nos.
4.	Bhadla-3 – Sikar-II 765 kV D/c line along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Sikar-II 765 kV D/c line	Length – 380km Switching equipment for 765 kV 330 MVAR switchable line reactor –4 765 kV, 330 MVAr Switchable line reactor-4
5	2 nos. of 765kV line bays at Sikar-II	765 kV line bays - 2nos

Note:

(i) Implementation of the scheme to be taken up upon receipt of LTA from RE generation developers at Ramgarh PS/Bhadla-3 PS
(ii) Provision of suitable sectionalization shall be kept at Bhadla-3 at 400kV & 220kV level to limit short circuit level
(iii) Powergrid to provide space for 2 nos. of 400 kV line bays along with space for switchable line reactors at Fatehgarh-2 S/s
(iv) The line lengths mentioned above are approximate, as the exact length shall be obtained after detailed survey.
(v) Developer of Sikar-II S/s to provide space for 2 nos. of 765 kV line bays at Sikar-II S/s along with space for switchable line reactors

5.10.5 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B2

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part B2 **Estimated Cost**: Rs 235 Crore **Implementation Timeframe** : 15 months from MoP OM.	RTM (The implementation of number of 220kV bays and transformers to be taken up based on receipt of Stage-II connectivity and commensurate LTA respectively (beyond 1500MW at Bhadla-3))	For evacuation of RE power (beyond 1500 MW) getting pooled at Bhadla-3.

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B2"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation of 7x500 MVA 400/220 kV transformation capacity at Bhadla-3	400/220 kV, 500 MVA ICT - 7nos. 400 kV ICT bays – 7 nos. 220 kV ICT bays - 7 nos 220 kV line bays: As per connectivity granted to RE developers (10 no. of bays considered at present). 220 kV bus sectionalizer-1 nos

Note:

(i) The implementation of number of 220 kV bays and 400/220 kV transformers to be taken up based on receipt of stage-II connectivity and commensurate LTA respectively (beyond 1500 MW at Bhadla-3).

(ii) 220 kV line bays and Transformer augmentations shall be reviewed based on stage-II connectivity at 220 kV voltage level and LTA applications respectively.

5.10.6 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C1:

1. The scope of scheme is as under:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x1500 MVA 765/400kV & 2x500 MVA 400/220 kV pooling station at Ramgarh along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor *Future provisions: Space for* *765/400kV ICTs along with bays: 3nos.* *765kV line bay along with switchable line reactor: 2nos.* *765kV Bus Reactor along with bays: 2 nos.* *400/220 kV ICTs along with bays: 6 nos.* *400 kV line bays along with switchable line reactor: 4nos.* *400 kV line bays: 4 nos.* *400kV Bus Reactor along with bays: 2 nos.* *400kV Sectionalization bay: 3 nos.* *220 kV line bays: 8 nos.* *220kV sectionalisation bay: 2 nos.*	765/400kV1500 MVA ICTs : 2 nos *(7x500 MVA including one spare unit)* 765kV ICT bays –2 nos. 400/220 kV, 500 MVA ICT – 2nos. 400 kV ICT bays – 4 nos. 220 kV ICT bays – 2 nos. 400 kV line bays – 2 nos. (for RE connectivity) 220kV line bays -4 nos. 765 kV line bays – 2 nos. 240 MVAr Bus Reactor-2 nos. *(7x80 MVAr including one spare unit)* 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor – 2 nos. 420 kV reactor bay – 2 nos. 400 kV bus sectionalizer- 1no
2.	Ramgarh – Bhadla-3 765kV D/c line(180 km) along with 240 MVAr switchable line reactor at each circuit at Ramgarh end of Ramgarh – Bhadla-3 765kV D/c line	Length – 180km 765 kV, 240 MVAr switchable line reactor- 2 nos Switching equipment for 765 kV 240 MVAR switchable line reactor –2 nos.
3	STATCOM at Ramgarh S/s: ± 2x300 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR	
4	2 nos. of 765kV line bays at Bhadla-III	765 kV line bays - 2nos

Note:

(i) Developer of Bhadla-3 S/s to provide space for 2 nos. of 765 kV line bays at Bhadla-3 S/s for termination of Ramgarh – Bhadla-3 765kV D/c line

(ii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

(iii) Provision of suitable sectionalization shall be kept at Ramgarh at 400kV & 220kV level to limit short circuit level

2. CTU informed that at present 2600 MW Stage-II connectivity applications granted at Ramgarh PS, however no LTA application is received yet. Therefore, implementation of Phase III –Part C1 may be taken up upon receipt of LTA from RE developers at Ramgarh PS.

3. Further, STATCOM package was deliberated to be excluded from this package in view of its requirement at later stage with adequate LTA applications.

4. POSOCO stated that Battery Energy Storage System could be treated as an alternative to STATCOM and therefore needs to be explored for evacuation of power from RE sources. In this regard, Member (PS) stated that studies pertaining to Battery Storage System could be done in and accordingly revised proposal could be taken up, if required.

5. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	**Mode of implementation**	**Purpose /Justification**
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part C1 **Estimated Cost**: Rs 1160 Crore **Implementation Timeframe**: 18 months from date of SPV acquisition.	TBCB (Implementation schedule of Phase III – Part C1 package is to matched with package Phase III –Part B1 (establishment of Bhadla-3 PS, 765kV Bhadla-3 PS-Sikar-2 D/c line, 400kV Bhadla-3 PS-Fatehgarh-2 D/c line)	For evacuation of RE power getting pooled at Ramgarh.

6. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C1"

Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**
1.	Establishment of 2x1500 MVA 765/400kV & 2x500 MVA 400/220 kV pooling station at Ramgarh along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor *<u>Future provisions</u>: Space for*	765/400kV1500 MVA ICTs: 2 nos *(7x500 MVA including one spare unit)* 765kV ICT bays –2 nos.

Sl. No.	Scope of the Transmission Scheme	Capacity /km
	765/400kV ICTs along with bays: 3nos. *765kV line bay along with switchable line reactor: 2nos.* *765kV Bus Reactor along with bays: 2 nos.* *400/220 kV ICTs along with bays: 6 nos.* *400 kV line bays along with switchable line reactor: 4nos.* *400 kV line bays: 4 nos.* *400kV Bus Reactor along with bays: 2 nos.* *400kV Sectionalization bay: 3 nos.* *220 kV line bays: 8 nos.* *220kV sectionalisation bay: 2 nos.*	400/220 kV, 500 MVA ICT – 2nos. 400 kV ICT bays – 4 nos. 220 kV ICT bays – 2 nos. 400kV line bays - *As per connectivity granted to RE developer. (2 no. of bays considered at present)* 220kV line bays -*As per connectivity granted to RE developer. (4 no. of bays considered at present)* 765 kV line bays – 2 nos. 240 MVAr Bus Reactor-2 nos. *(7x80 MVAr considering one spare unit*) 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor – 2 nos. 420 kV reactor bay – 2 nos.
2.	Ramgarh – Bhadla-3 765 kV D/c line (180 km) along with 240 MVAr switchable line reactor at each circuit at Ramgarh end of Ramgarh – Bhadla-3 765kV D/c line	Length – 180km 765 kV, 240 MVAr switchable line reactor- 2 nos Switching equipment for 765 kV 240 MVAR switchable line reactor – 2 nos.
3.	2 nos. of 765kV line bays at Bhadla-3	765 kV line bays - 2nos

Note:

(i) Implementation schedule of Phase III –Part C1 package is to match with package Phase III –Part B1 (establishment of Bhadla-3 PS, 765kV Bhadla-3 PS-Sikar-2 D/c line, 400kV Bhadla-3 PS-Fatehgarh-2 D/c line)
(ii) Developer of Bhadla-3 S/s to provide space for 2 nos. of 765 kV line bays at Bhadla-3 S/s for termination of Ramgarh – Bhadla-3 765kV D/c line
(iii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey
(iv) Provision of suitable sectionalization shall be kept at Ramgarh at 400kV & 220kV level to limit short circuit level
(v) Implementation of the scheme to be taken up upon receipt of LTA from RE

generation developers at Ramgarh PS/Bhadla-3 PS

5.10.7 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C2

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part C2 **Estimated Cost**: Rs 80 Crore **Implementation Timeframe**: 15 months from MoP OM.	RTM (The implementation of package comprising number of 220kV bays and transformers to be taken up based on receipt of Stage-II connectivity and commensurate LTA respectively (beyond 1500MW at Ramgarh PS))	For evacuation of RE power (beyond 1500 MW) getting pooled at Ramgarh.

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C2"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation of 1x1500 MVA 765/400kV at Ramgarh	765/400kV 1500 MVA ICT : 1 no 765 kV ICT bay – 1 no 400 kV ICT bay -1 no 220 kV line bays: *As per connectivity granted to RE developer. (3 no. of bays considered at present)*

Note:

(i) The implementation of package comprising number of 220kV bays and transformers. The 220kV bays to be taken based on receipt of Stage-II connectivity (beyond 1200 MW at 220kV level) and the implementation of transformer to be taken up upon receipt of LTA beyond 1500MW at Ramgarh PS.

(ii) 220 kV line bays and Transformer augmentations shall be reviewed based on stage-II connectivity at 220 kV voltage level and LTA applications respectively

5.10.8 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C3:

1. After deliberations, NCT recommended that the scheme be deferred at present and would be considered at a later stage based on requirement as per studies.

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part C3 **Estimated Cost**: Rs 300 Crore **Implementation Timeframe**: 15 months from MoP OM.	RTM (The implementation of Phase-III Part C3 to be taken up after grant of LTA beyond 2000 MW(about) at Ramgarh PS, if required, as per the studies)	May be taken up based on the requirement as per the studies wrt BESS.

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C3"

Sl.No.	Scope of the Transmission Scheme	Capacity (MVAr)
1.	Ramgarh S/s : STATCOM : ± 2x300MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR	± 2 x 300MVAr

Note:

i) Transmission scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part C3" may be taken up based on the requirement as per the studies with respect to Battery Energy Storage System.

ii) The implementation of Phase-III Part C3 to be taken up after grant of LTA beyond 2000 MW(about) at Ramgarh PS, if required, as per the studies.

5.10.9 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part D:

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part D **Estimated Cost**: Rs 1680 Crore **Implementation Timeframe**: 18 months from date of SPV acquisition.	TBCB	For evacuation of RE power getting pooled at Ramgarh/Bhadla-3 and required to facilitate LTA to generators at Bhadla-3 and/or Ramgarh.

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part D"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Sikar-II – Khetri 765 kV D/c line	Length – 90km
2	Sikar-II – Narela 765 kV D/c line along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line	Length – 260km Switching equipment for 765 kV 240 MVAR switchable line reactor –4 nos. 240 MVAr, 765kV Switchable line reactor- 4 nos.
3	Jhatikara – Dwarka 400kV D/c line (Quad) (20km)	Length – 20km
5	765kV line bays at Sikar -II for Sikar-II – Khetri 765 kV D/c line and Sikar-II – Narela 765 kV D/c line	765 kV line bays - 4nos
6	2 nos. of 765kV line bays at both Khetri and Narela S/s	765 kV line bays - 4nos
7	2 nos. of 400kV line bays at both Jhatikara and Dwaraka S/s	400 kV line bays - 4nos

Note:

(i) Developer of Sikar-II S/s to provide space for 4 nos. of 765 kV line bays at Sikar-II S/s along with space for two nos. of switchable line reactors

(ii) Developer of Narela S/s to provide space for 2 nos. of 765 kV line bays along with space for switchable line reactors at Narela S/s

(iii) Powergrid to provide space for two nos. of 765 kV line bays at Khetri substation
(iv) Powergrid and DTL to provide space for two nos. of 400kV line bays both at Jhatikara and Dwarka S/s respectively
(v) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.
(vi) Scheme to be implemented in matching time frame of Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C1

5.10.10 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E1

1. The scope of scheme is as under:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 4x1500 MVA 765/400kV &3x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section*) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr, 765kV & 2x125 MVAr, 420kV Bus Reactors	765/400kV 1500 MVA, ICT: 4 nos (*13x500 MVA, including one spare unit*) 330 MVAr, 765 kV bus reactor- 2 nos. (*7x110 MVAr, including one spare unit*) 765kV ICT bays - 4 nos. 400/220 kV, 500 MVA ICT - 3nos. 400 kV ICT bays –7 nos. 220 kV ICT bays - 3 nos. 765 kV line bays - 2nos. 400 kV line bays - 4 nos. 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor - 2 nos. 420 kV reactor bay - 2 nos.
2	Fatehgarh – III S/s : STATCOM : ± 2x300 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR	

Note:

(i) Provision of suitable sectionalization shall be kept at Fatehgarh-3 at 400kV & 220kV level to limit short circuit level STATCOM to be placed at new section of Fatehgarh-III PS from where phase-III scheme emanating

(ii) Developer of Fatehgarh-III substation to provide space for Fatehgarh-III new section

2. Director (PSPA-I), CEA, stated that 1.9 GW at Fatehgarh -3 (Phase –II) is already under implementation by the subsidiary of PGCIL. The above transmission scheme is for evacuating 6 GW potential at Fatehgarh-3 (Phase-III), which is utilising the future provision of the earlier approved scheme under Phase-II. Therefore, the future provisions mentioned in the proposed scheme would be deleted.

3. She further explained that some generators which are to be connected at 220 kV at Fatehgarh-III have been given connectivity in the new section and they have sought connectivity from March, 2022, onwards.

4. CTU stated that at present, 5425 MW Stage-II connectivity applications and 820MW LTA applications granted at Fatehgarh-3 PS. Therefore, implementation of Phase III – Part E1 is to be taken up for evacuation of power from for RE developers at Fatehgarh-3 PS. Also based on the present application, it is worthwhile to consider only three 1500 MVA ICTs. Further, STATCOM package was deliberated to be excluded from this package and may be taken up as per requirement at later stage.

5. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	**Mode of implementation**	**Purpose /Justification**
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part E1 **Estimated Cost**: Rs 435 Crore **Implementation Timeframe**: 18 months from MoP OM.	RTM [Transmission system for 1.9 GW at Fatehgarh -3 (Phase –II) is already under implementation by the subsidiary of PGCIL. Transmission system under Phase-III- Part E1 is for evacuating 6 GW potential at Fatehgarh-3 (Phase-III), which is utilising the future provision of the earlier approved scheme under Phase-II. Hence, the scheme is proposed to be awarded under RTM]	For evacuation of RE power getting pooled at Fatehgarh-3.

6. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E1"

Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**
1.	Establishment of 3x1500 MVA 765/400kV	765/400kV 1500 MVA ICT: 3 nos

Sl. No.	Scope of the Transmission Scheme	Capacity /km
	&3x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section*) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr, 765kV & 2x125 MVAr, 420kV Bus Reactors	(*10x500 MVA, including one spare unit*) 330 MVAr, 765 kV bus reactor- 2 (*7x110 MVAr, including one spare unit*) 765kV ICT bays - 3 nos. 400/220 kV, 500 MVA ICT - 3nos. 400 kV ICT bays –6 nos. 220 kV ICT bays - 3 nos. 765 kV line bays - 2nos. 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor - 2 nos. 420 kV reactor bay - 2 nos.

Note:

(i) Provision of suitable sectionalization shall be kept at Fatehgarh-3 at 400kV & 220kV level to limit short circuit level

5.10.11 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E2

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part E2 **Estimated Cost**: Rs 245 Crore **Implementation Timeframe**: 15 months from MoP OM	RTM [Implementation to be taken up at later stage based on the number of LTA applications received beyond 3000MW cumulative at Fatehgarh-3 (new section) & Fatehgarh-4 PS]	For evacuation of RE power getting pooled at Fatehgarh-3.

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E2"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation of 3x1500 MVA 765/400kV & 2x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section)	765/400kV 1500 MVA ICT:3 nos. 400/220 kV 500 MVA ICT:2 nos 765kV ICT bay – 3 nos 400kV ICT bay -5 nos. 220 kV ICT bay- 2nos

Note: Implementation to be taken up at later stage based on the number of LTA applications received beyond 3000MW cumulative at Fatehgarh-3 (new section) & Fatehgarh-4 PS.

5.10.12 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III: Part E3

1. NCT stated that provision of STATCOM at Fatehgarh-III may be taken up as a separate package and implemented as per the requirement and studies wrt Battery Energy Storage System. Further, its requirement would be reviewed at a later date.
2. The revised scope of the scheme is as under:

Sl.No.	Scope of the Transmission Scheme	Capacity /km	Remarks
1	Fatehgarh – III S/s : STATCOM : ± 2x300 MVAr, 4x125 MVAr MSC, 2x125 MVAr MSR	2x±300MVAr	May be taken up based on the requirement as per the studies wrt BESS.

Note: STATCOM to be placed at new section of Fatehgarh-III PS from where Phase-III scheme emanating

5.10.13 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part F:

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part F **Estimated Cost**: Rs 2220 Crore **Implementation Timeframe**: 18 months from date of SPV acquisition.	TBCB	For evacuation of RE power getting pooled at Fatehgarh-3 (new section) and/or Fatehgarh-4

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part F"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1	Establishment of 2x1500MVA 765/400kV Substation at suitable location near Beawar along with 2x330 MVAr 765kV Bus Reactor & 2x125 MVAr 420kV Bus Reactor *Future provisions: Space for* *765/400kV ICTs along with bays:2 nos.* *765kV line bay along with switchable line reactor: 6nos.* *765kV Bus Reactor along with bays: 2 nos.* *400/220 kV ICTs along with bays:2nos.* *400 kV line bays along with switchable line reactor: 4 nos.* *400kV Bus Reactor along with bays: 1nos.* *220 kV line bays: 4nos.*	765/400kV 1500 MVA ICTs: 2 nos (*7x500 MVA, including one spare unit*) 330 MVAr, 765 kV bus reactor- 2 (*7x110 MVAr, including one spare unit*) 765kV ICT bays – 2 nos. 400 kV ICT bays – 2 nos. 765 kV line bays – 6 nos 400kV line bay- 2nos. 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor – 2 nos. 420 kV reactor bay – 2 nos.
2	LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar	Length – 45km
3	LILO of 400kV Kota –Merta line at Beawar	Length – 20km

Sl. No.	Scope of the Transmission Scheme	Capacity /km
4	Fatehgarh-3– Beawar 765 kV D/c along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line	Length – 350km Switching equipment for 765 kV 330 MVAR switchable line reactor –4 nos. 765 kV, 330 MVAr Switchable line reactor- 4 nos.

Note:

(i) Developer of Fategarh-3 S/s to provide 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765kV switchable line reactors

(ii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

(iii) Scheme to be taken up subject to receipt of LTA applications at Fatehgarh-3 (new section and/or Fatehgarh-4.

5.10.14 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G:

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part G **Estimated Cost**: Rs 1530 Crore **Implementation Timeframe**: 18 months from date of SPV acquisition.	TBCB (Implementation to be taken up upon receipt of LTA beyond 3000 MW cumulative at Fatehgarh-3 PS (new section) & Fatehgarh-4 PS)	For evacuation of RE power (beyond 3000 MW) getting pooled at Fatehgarh-3 (new section) and/or Fatehgarh-4

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Fatehgarh-3– Beawar 765 kV D/c(2nd) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line	Length – 350km Switching equipment for 765 kV 330 MVAR switchable line reactor –4 765 kV, 330 MVAr Switchable line reactor- 4
2	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3	765 kV line bays - 4nos

Note:

(i) Implementation to be taken up upon receipt of LTA beyond 3000 MW cumulative at Fatehgarh-3 PS (new section) & Fatehgarh-4 PS).

(ii) Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.

(iii) Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors.

(iv) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

5.10.15 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part H:

1. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part H **Estimated Cost**: Rs 1910 Crore **Implementation Timeframe**: 18 months from date of SPV acquisition.	TBCB (Implementation to be taken up upon receipt of LTA beyond 3000 MW cumulative at Fatehgarh-3 PS (new section) & Fatehgarh-4 PS)	For evacuation of RE power getting pooled at Fatehgarh-3 (new section) and/or Fatehgarh-4

2. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part H"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr, 765 kV Bus Reactor & 2x125 MVAr, 420 kV bus Reactor *Future provisions: Space for* *765/400kV ICTs along with bays: 2 nos.* *765kV line bay along with switchable line reactor: 4nos.* *765kV Bus Reactor along with bays: 2 nos.* *400/220 kV ICTs along with bays: 2 nos.* *400 kV line bays along with switchable line reactor: 4 nos.* *400kV Bus Reactor along with bays: 1 nos.* *220 kV line bays: 4nos.*	765/400kV 1500 MVA ICTs: 2 nos. (*7x500 MVA, including one spare unit*) 330 MVAr, 765 kV bus reactor- 2nos. (*7x110 MVAr, including one spare unit*) 765kV ICT bays – 2 nos 400 kV ICT bays – 2 nos. 765 kV line bays – 6 nos. 400kV line bay- 4 nos. 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor – 2 nos. 420 kV reactor bay – 2 nos.
2.	LILO of both circuits of Jaipur(Phagi)-Gwalior 765 kV D/c at Dausa along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line	Length – 40km Switching equipment for 765 kV 240 MVAR switchable line reactor –2 240 MVAr 765 kV Switchable line reactor- 2 (*7x80 MVAr considering one spare unit*) (also to be used as spare reactor at Dausa end for 765kV Beawar – Dausa D/c line)
3	LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa along with 50 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line	Length – 30km Switching equipment for 420 kV, 50 MVAR switchable line reactor –2 420 kV, 50 MVAr Switchable line reactor-2 nos.

Sl. No.	Scope of the Transmission Scheme	Capacity /km
4	Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end	Length – 240km Switching equipment for 765 kV 240 MVAR switchable line reactor –4 765 kV, 240 MVAr Switchable line reactor- 4 nos.
5	2 nos. of 765kV line bays at Beawar for Beawar – Dausa 765 kV D/c line	765 kV line bays – 2 nos

Note:

(i) Implementation of the scheme to be taken up upon receipt of LTA beyond 3000MW (about) cumulative at Fatehgarh-3 PS (new section) and Fatehgarh-4 PS.

(ii) Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays along with space for 765kV switchable line reactors at their substations

(iii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

5.10.16 Name of Scheme: Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part I:

1. The scope of scheme is as under:

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 6000MW, ±800KV Bhadla(HVDC) terminal station at a suitable location near Bhadla-3 substation	
2.	Establishment of 6000MW, ±800KV Fatehpur(HVDC) terminal station at suitable location near Fatehpur (UP)	
3.	Bhadla-3 - Bhadla(HVDC) 400kV 2xD/c quad moose line along with the line bays at both substations	Line length- 2km 400kV line bays -8 nos.
4	±800KV HVDC line (Hexa lapwing) (4x1500 MW) between Bhadla-3 & Fatehpur (950km)	Length – 950km
5.	Establishment of 5x1500MVA, 765/400KV ICTs at Fatehpur (HVDC) along with	765/400kV 1500 MVA ICT : 5 nos (*16x500 MVA, including one spare*

	2x330MVAr (765kV) bus reactor *Future provisions: Space for* *765/400kV ICTs along with bays: 1 nos.* *765kV line bay along with switchable line reactor: 4nos.* *765kV Bus Reactor along with bays: 2 nos.* *400/220 kV ICTs along with bays: 4nos.* *400 kV line bays along with switchable line reactor: 4 nos.* *400kV Bus Reactor along with bays: 1 nos.* *220 kV line bays: 6nos.*	*unit)* 765kV ICT bays – 5 nos. 400 kV ICT bays – 5 nos. 765 kV line bays – 4 nos. 330 MVAr, 765kV Bus Reactor-2 nos. *(7x110 MVAr, including one spare unit)* 765kV reactor bay- 2 nos.
7.	LILO of both ckts of 765kV Varanasi – Kanpur (GIS) D/c at Fatehpur(30km)	Length – 30km
	Total Estimated Cost (Rs Crores)	**12700**

Note:

(i) Developer of Bhadla-3 S/s to provide space 4nos. of 400kV bays at their substation

(ii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

2. CTUIL stated that at present 2824MW Stage-II connectivity applications granted at Ramgarh/Bhadla-3 PS, however no LTA application yet granted. For further dispersal of RE power from Ramgarh PS/Bhadla-3 PS, 765kV D/c HVAC corridor towards Sikar-2 and 6000MW HVDC corridor towards Fatehpur was agreed in 3rd NRPC(TP) meeting. However, due to longer time in implementation and higher cost of HVDC system, 765kV HVAC corridor towards Sikar-2 is to be taken up for implementation in first phase. It is emerged that when LTA at Ramgarh/Bhadla-3 PS is beyond 3500 MW, there shall be need for implementation of HVDC system additionally which may be reviewed in next NCT meeting based on LTA status at Ramgarh/Bhadla-3.

3. Member (Power System), CEA, stated that it would be better to defer this scheme and simultaneously option of Battery Storage System could be explored which could reduce the requirement of HVDC lines. Accordingly, the revised proposal could be discussed in the next NCT meeting.

4. POSOCO also stated that due to the uncertainty of GIB issue, it would be better to defer this scheme at this stage.

5. After deliberations, NCT recommended that Transmission scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part I" may be deferred and to be reviewed in next NCT meeting.

5.10.17 Name of Scheme: Transformer augmentation at various substations for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part J:

1. The scope of scheme is as under:

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	2Augmentation with 400/220kV, 1x500MVA Transformer (10th) at Fatehgarh-2 PS	400/220kV 500 MVA ICT:1 no 400 kV ICT bays – 1 nos. 220 kV ICT bays – 1 nos.
2.	3Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS	765/400kV 1500 MVA ICT: 1 no. 765kV ICT bays – 1no. 400 kV ICT bays – 1 no.
3.	4Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG)	765/400kV 1500 MVA ICT: 1 no 765kV ICT bays – 1no. 400 kV ICT bays – 1 no.
4.	5Augmentation of 1x500 MVA ICT (5th), 400/220kV ICT at Fatehgarh-3 Substation (section-1*)	400/220kV 500 MVA ICT:1 no. 400 kV ICT bays – 1 no. 220 kV ICT bays – 1 no.
5.	6Augmentation of 1x1500MVA ICT at 765/400kV Kanpur(GIS) substation	765/400kV 1500 MVA ICT: 1 no. 765kV ICT bays – 1no. 400 kV ICT bays – 1 no.
6.	7Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)	765/400kV 1500 MVA ICTs : 1 no 765kV ICT bays – 1no. 400 kV ICT bays – 1 no.

2. CTUIL stated that one of the pilot project of Battery Storage System of 250 MW is being planned at perspective location near Fatehgarh-3, therefore there might be a possibility that the 5th ICT of 500 MVA at Fatehgarh-3 S/s may not be required and hence this item needs to be reviewed. Also, augmentation of 1x1500MVA ICT at 765/400kV Kanpur(GIS) substation is linked with HVDC system (LILO of Varanasi-Kanpur at Fatehpur) and since the timeframe of HVDC has now been delayed, therefore, this item could also be taken up later.

3. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III –Part J **Estimated Cost**: Rs 225 Crore **Implementation Timeframe**: The Implementation timeframe of the package is linked with the implementation of various schemes under Phase-III.	RTM	For evacuation of RE power getting pooled at Fatehgarh-2, Bhadla-2, Bikaner (PG) and Jhatikara Substation.

4. Detailed scope of the scheme is given below:

"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part J"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation with 400/220kV, 1x500MVA Transformer (10^{th}) at Fatehgarh-2 PS	400/220kV 500 MVA ICT:1 no 400 kV ICT bays – 1 nos. 220 kV ICT bays – 1 nos.
2.	Augmentation with 765/400kV, 1x1500MVA Transformer (5^{th}) at Bhadla-2 PS	765/400kV 1500 MVA ICT: 1 no. 765kV ICT bays – 1no. 400 kV ICT bays – 1 no.
3.	Augmentation with 765/400kV, 1x1500MVA Transformer (3^{rd}) at Bikaner (PG)	765/400kV 1500 MVA ICT: 1 no 765kV ICT bays – 1no. 400 kV ICT bays – 1 no.
4.	Augmentation of 1x1500 MVA ICT (3^{rd}), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section)	765/400kV 1500 MVA ICTs : 1 no 765kV ICT bays – 1no. 400 kV ICT bays – 1 no.

Note:

Implementation schedule of above transmission elements under Part J is as under:

a) Augmentation with 400/220kV, 1x500MVA Transformer (10^{th}) at Fatehgarh-2 PS: *Implementation shall be taken up after LTA of 4490MW at 220kV level of Fatehgarh-2 (Presently 3660MW LTA granted at 220kV level of Fatehgarh-2)*

b) Augmentation with 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS : *At present 5945MW Stage-II connectivity applications and 2645MW LTA applications granted at Bhadla-2 PS. Implementation of 765/400kV, 1x1500MVA Transformer (5th) at Bhadla-2 PS shall be taken up after receipt of LTA of about 4000MW at Bhadla-2 PS*

c) Augmentation with 765/400kV, 1x1500MVA Transformer (3rd) at Bikaner (PG) *: At present 3935MW Stage-II connectivity applications and 2975MW LTA applications granted at Bikaner/Bikaner-2 PS. Implementation of 1x1500MVA transformer (3rd) at Bikaner (PG) shall be taken up upon additional 1000MW (about) LTA at Bikaner(PG)/ Bikaner-2 PS*

d) Augmentation of 1x1500 MVA ICT (3rd), 765/400kV ICT at Jhatikara Substation (Bamnoli/Dwarka section): *Implementation shall be taken up after receipt of LTA at Bhadla-3 PS/Ramgarh PS matching with transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part D*

5.11 Name of Scheme: Creation of 400/220 kV, 2x315 MVA S/S at Siot, Jammu & Kashmir

1. Director, PSPA-1 stated that in the 3rd meeting of NRPC (TP) held on 19.02.2021, JKPTCL stated that they are in urgent requirement of a 400 kV substation at Siot as they are facing shortfall of transmission capacity in the areas of Jammu, Rajouri and Punch district. The proposed 400 kV substation would feed the areas near Akhnoor and Jammu region and the interconnection with Katra-II would also improve reliability of supply, considering the importance of Katra being a holy town with lots of visiting pilgrims. The substation would also provide relief from the low voltage issues at Draba/Chandak. The details of the scheme are as under:

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x315MVA, 400/220kV Siot S/s with 1x125 MVAR (420 kV) bus reactors <u>Future provisions</u>*: Space for* *400/220kV ICTs along with bays: 2 nos.* *400 kV line bays along with switchable line reactor: 4nos.* *220 kV line bays: 4 nos.*	400/220 kV, 315 MVA ICT – 2 nos. 400 kV ICT bays - 2 nos. 220 kV ICT bays - 2 nos. 400 kV line bays - 4 nos. 220 kV line bays - 6 nos. 125MVAr, 420kV bus reactor - 1 nos. 420 kV reactor bay - 1 nos.
2.	LILO of 400 kV D/c Amargarh (Kunzer)-Samba line at 400/220 kV Siot S/s	Length – 15 km

2. CTUIL opined that considering the transportation constraints due to difficult terrain,

single phase units for transformers may be considered in place of three phase transformer at proposed Siot S/s. Further, bus reactor of 80MVAr suggested in place of 125MVAr due to above limitation.

3. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Creation of 400/220 kV, 2x315 MVA S/S at Siot, Jammu & Kashmir **Estimated Cost**: Rs 270 Crore **Implementation Timeframe**: March, 2024	TBCB	To feed the areas near Akhnoor and Jammu region and the interconnection with Katra-II would also improve reliability of supply

4. Detailed scope of the scheme is given below:

"Creation of 400/220 kV, 2x315 MVA S/S at Siot, Jammu & Kashmir"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 7x105 MVA, 400/220kV Siot S/s with 1x80 MVAR (420 kV) bus reactors <u>Future provisions</u>*: Space for* *400/220kV ICTs along with bays: 2 nos.* *400 kV line bays along with switchable line reactor: 4 nos.* *220 kV line bays: 4 nos.*	315 MVA, 400/220 kV ICT (*7x105 MVA, including one spare*) 400 kV ICT bays - 2 nos. 220 kV ICT bays - 2 nos. 400 kV line bays - 4 nos. 220 kV line bays - 6 nos. 80 MVAr, 420kV bus reactor - 1 nos. 420 kV reactor bay - 1 nos.
2.	LILO of 400 kV D/c Amargarh (Kunzer)- Samba line at 400/220 kV Siot S/s	Length – 15 km

5.12 400 kV Khandukhal(Srinagar)-Rampura (Kashipur) D/c line:

1. Director, PSPA-1 stated that Uttarakhand Integrated Transmission Project (UITP) scheme

is under implementation by PTCUL. CERC vide order dated 31.01.2013 had declared the scheme as a deemed ISTS scheme. The scheme comprises of transmission system for evacuation of power from proposed HEP's in various river basins of Uttarakhand. There are certain deemed Inter-State Transmission System (deemed ISTS) elements of UITP, where PTCUL had not been able to achieve the targeted timeline (deadlines). Amongst these are the 400 kV D/C Srinagar (Khandukhal) – Kashipur (Rampura)Transmission line which was required to evacuate power from upcoming projects in the Alaknanda basin (Vishnugad Pipalkoti HEP of THDC and Tapovan Vishnugad HEP of NTPC), and the 220 kV D/C Mori-Dehradun line which was proposed to evacuate power from proposed generators in Yamuna basin. M/s PTCUL vide letter dated 12.01.2021 conveyed that Board of Directors of PTCUL had accorded approval for handing over of construction of 400 kV Khandukhal-Rampura Transmission Line to Central Sector.

2. The matter was deliberated in the 3rd meeting of NRPC (TP), wherein implementation of 400 kV D/c Khandukhal(Srinagar)-Rampura (Kashipur) line was agreed to be taken up under central sector as an ISTS scheme with the matching time frame of commissioning of Vishnugad Pipalkoti HEP of THDC or Tapovan Vishnugad HEP of NTPC, whichever is earlier.

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	400 kV D/c Khandukhal(Srinagar)-Rampura (Kashipur) line	Length – 195 km
2.	2 nos. of 400 KV bays both at Khandukhal Srinagar) & Rampura(Kashipur) S/s	400 kV line bays -4

Note:

(i) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

(ii) PTCUL to provide space for2 nos. of 400kV bays each at Rampura (Kashipur) & Khandukhal(Srinagar) S/s respectively.

3. CTU stated that the conductor configuration of the line, Quad Bersimis needs to be mentioned. Also, earlier the line length noted was 150 km and now, it has been modified to 195 km, which would require the need of line reactor. 2x80 MVAR switchable line reactors with inter-tripping arrangement could be utilized at both ends.

4. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
400 kV Khandukhal(Srinagar)-Rampura (Kashipur) D/c line **Estimated Cost**: Rs 800 Crore **Implementation Timeframe**: The timeline to be considered as matching time frame of commissioning of Vishnugad Pipalkoti HEP (Dec'23) of THDC or Tapovan Vishnugad HEP of NTPC, whichever is earlier.	TBCB	To evacuate power from upcoming projects in the Alaknanda basin (Vishnugad Pipalkoti HEP of THDC and Tapovan Vishnugad HEP of NTPC)

5. Detailed scope of the scheme is given below:

"400 kV Khandukhal(Srinagar)-Rampura (Kashipur) D/c line":

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	400 kV D/c Khandukhal(Srinagar)-Rampura (Kashipur) line (Quad Bersimis)	Length – 195 km
2	1x80MVAr swithcable line reactor at Khandukhal(Srinagar) end at each ckt of Khandukhal(Srinagar) -Rampura (Kashipur) line (Quad Bersimis)	Switching equipment for 420 kV 80 MVAR switchable line reactor –2 420 kV, 80 MVAr Switchable line reactor- 2
3.	2 nos. of 400 KV bays both at Khandukhal Srinagar) & Rampura(Kashipur) S/s	400 kV line bays -4

Note:

(i) The timeline to be considered as matching time frame of commissioning of Vishnugad Pipalkoti HEP (Dec'23) of THDC or Tapovan Vishnugad HEP of NTPC, whichever is earlier.

(ii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

(iii) PTCUL to provide space for 2 nos. of 400kV bays each at Rampura (Kashipur) & Khandukhal(Srinagar) S/s respectively along with the space for switchable line reactor

5.13 System Strengthening scheme for reconductoring of portion of Dulhasti-Kishtwar-Kishenpur 400 kV (Quad) S/c:

1. Director, PSPA-1 stated that earlier Ratle HEP (690 MW) was planned to be developed in the downstream of Dulhasti HEP and it was agreed that Dulhasti-Kishenpur D/c Quad (S/c strung) would be LILOed at Ratle HEP and 2nd quad circuit shall be strung from Kishenpur and terminated at Ratle matching with the commissioning of Ratle HEP. For cost optimization, it was agreed to implement Dulhasti-Kishenpur 400kV S/c line (Quad) with Twin Moose conductor till Ratle LILO point. Beyond Ratle LILO point, line was implemented with Quad Moose conductor. However, LTA & Connectivity application for Ratle HEP was revoked at later stage due to non-signing of requisite agreements.
2. For connectivity of Pakaldul HEP (1000 MW), LILO of one circuit of Dulhasti - Kishenpur 400 kV line (quad) has been agreed at Kishtwar Pooling station. However, as location of proposed Kishtwar S/s is above Ratle location and towards Dulhasti, portion of Dulhasti-Ratle LILO tap Point of Dulhasti (TW loc 10 indicated at Fig-1) - Kishenpur 400 kV line (TW loc 49-indicated at Fig-1) (approx. 13 kms) implemented through twin moose conductor, needs to be re-conductored with Quad moose conductor. This reconductoring of approx. 13 km section (LILO tap Point of Dulhasti - Kishenpur 400 kV line) would be needed to cater to power transfer requirement from hydro projects (Pakaldul, Kiru & Kwar) including LTA of Pakaldul (1000 MW) HEP. An exhibit depicting above arrangement is at Fig-1.

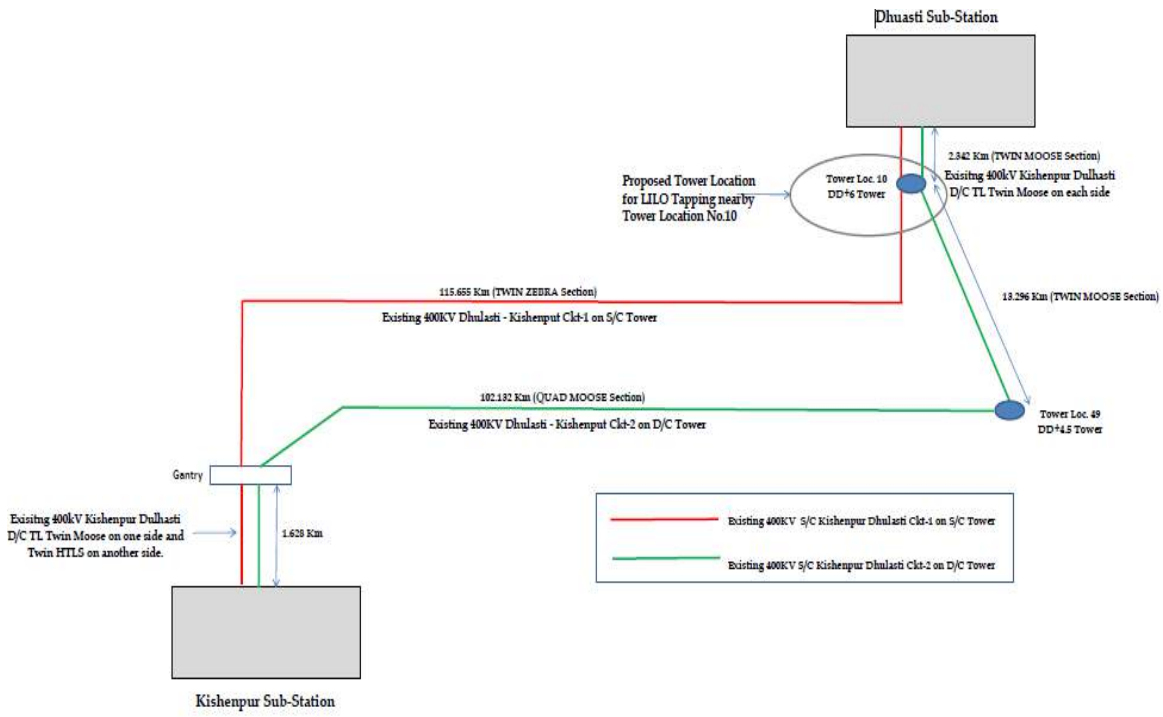


Fig-1

3. Also, the matter was deliberated in 3rd meeting of NRPC (TP) held on 19.02.2021 wherein reconductoring of Dulhasti-Ratle LILO tap Point of Dulhasti - Kishenpur 400 kV line (approx. 13 kms) implemented through twin moose conductor with Quad moose conductor in matching time frame of Pakaldul HEP generation was agreed.
4. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
System Strengthening scheme for reconductoring of portion of Dulhasti-Kishtwar- Kishenpur 400 kV (Quad) S/c **Estimated Cost**: Rs 13 Crore **Implementation Timeframe**: In matching time frame of Pakaldul HEP generation.	RTM (Existing line of POWERGRID)	To cater to power transfer requirement from hydro projects (Pakaldul, Kiru & Kwar) including LTA of Pakaldul (1000 MW) HEP

5. Detailed scope of the scheme is given below:
"System Strengthening scheme for reconductoring of portion of Dulhasti-Kishtwar-Kishenpur 400 kV (Quad) S/c"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Reconductoring of Dulhasti-Ratle LILO tap Point of Dulhasti - Kishenpur 400 kV line (approx. 13 kms) implemented through twin moose conductor, with Quad moose conductor in matching time frame of Pakaldul HEP generation.	Length – 13 km

Note: To be implemented in matching time frame of Pakaldul HEP generation.

5.14 Grant of 400 kV & 220 kV bays to RE generators at Fatehgarh-III (erstwhile Ramgarh-II) PS under ISTS:

1. Director, PSPA-1 stated that the establishment of 4x500MVA, 400/220kV Fatehgarh-III PS Ramgarh-II Pooling Station was agreed in the 5th meeting of NRSCT held on 13.09.2019 under "Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase II –Part A". The Transmission scheme is currently under bidding through TBCB.
2. In the 3rd meeting of NRPC (TP) held on 19.02.2021, CTU intimated that several Stage-II Connectivity applications have been received at Fatehgarh-III PS at various voltage levels i.e. 400kV & 220kV level for which 6 nos. of 220kV bays and 3 nos. of 400kV bays are required at Fatehgarh-III PS and proposed that bays may be implemented under ISTS matching with RE generators.

3. Accordingly, as per the detailed procedure for grant of connectivity to RE generators, it was agreed that 6 nos. of 220kV bays and 3 nos. of 400kV bays at Fatehgarh-III PS may be implemented under ISTS matching with RE generators.

4. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
Grant of 400 kV & 220 kV bays to RE generators at Fatehgarh-III (erstwhile Ramgarh-II) PS under ISTS **Estimated Cost**: Rs 75 Crore **Implementation Timeframe**: 15 months from MoP OM	RTM	To grant connectivity to RE generators

5. Detailed scope of the scheme is given below:

"Grant of 400 kV & 220 kV bays to RE generators at Fatehgarh-III (erstwhile Ramgarh-II) PS under ISTS"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	6 nos. of 220 kV bays and 3 nos. of 400 kV bays along with bus extension of 220 kV & 400 kV bus as well as bus sectionaliser arrangement between both the levels i.e 400 kV new section and 220 kV new section with under implementation section at Fatehgarh-III PS	400 kV line bays - 3 nos. 220kV line bays - 6 nos. 400kV bus sectionaliser : 1 no. 220kV bus sectionalizer : 1 no.

5.15 Addition of new 1x315 MVA, 400/220kV ICT at Amargarh, J&K:

1. Director, PSPA-1 stated that JKPDD had submitted DPRs for Jammu Region & Kashmir region for strengthening of the transmission network of J &K considering a load of around 4800 MW by 2026-27. Considering the same, system studies were carried out by CEA and as per the system studies, it emerged that 2x315MVA, 400/220kV ICTs at Amargarh (Kunzar) are 'N-1' non complaint in 2025-26 scenario.
2. Further, Matter was deliberated in the 3rd meeting of NRPC (TP) held on 19.02.2021 wherein addition of new 1x315 MVA, 400/220kV ICT at Amargarh was agreed to be taken up under ISTS with the time frame of March 2026.
3. It was opined that considering transportation constraints due to difficult terrain, single phase units for transformers may be considered in place of three phase transformer at Amargarh S/s.

4. Detailed scope of the scheme is given below:

"**Addition of new 1x315 MVA, 400/220kV ICT at Amargarh, J&K"**

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1	Augmentation with 400/220kV, 1x315MVA Transformer (3rd) at Amargarh, J&K	400/220kV 105 MVA single phase ICT: 3 no 400 kV ICT bays – 1 nos. 220 kV ICT bays – 1 nos.
	Total Estimated Cost (Rs Crores)	**40**

Time frame as per NRPC(TP) – March, 2026

5. NCT recommended that the scheme may be implemented through RTM route. However, since the timeframe of Amargarh is March, 2026, therefore, this could be deferred and may be taken up later.

5.16 Establishment of 400/220kV Nange Pooling Station for proposed SJVN Hydro Power Plant Luhri Stage-I, II & Sunni Dam:

1. Director, PSPA-1 stated that in the 2nd NRSCT meeting held on 13.11.18, transmission system for connectivity to Luhri-I (210 MW), Luhri-II (172 MW) & Sunni Dam (382 MW) HEP were agreed. It was decided that power from all the three stages of Luhri HEP would be evacuated at 220 kV level and would be pooled at 400/220 kV proposed ISTS Nange pooling station located near Luhri-II HEP and further evacuated to Koldam through 400 kV D/c line.

2. Matter was further deliberated in the 3rd meeting of NRPC (TP) held on 19.02.2021, wherein SJVNL intimated that commissioning schedules for Luhri Stage-I (210 MW), Sunni Dam (382 MW) and Luhri Stage -II (172 MW) are April 2025, January 2027 and October 2027 respectively. Accordingly, 2x315 MVA ICT capacity at Nange Pooling station shall be required in the time frame of Luhri Stage-I HEP (210 MW).

3. After deliberations, it was agreed that following transmission system may be taken up for implementation with the time frame of Luhri-I HEP (April 2025):

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 7x105 MVA, 400/220kV Nange GIS Pooling Station *<u>Future provisions</u>: Space for* *400/220kV ICTs along with bays: 2 nos.* *400 kV line bays along with switchable line*	400/220 kV 105 MVA ICT - 7nos. 400 kV ICT bays - 2 nos. 220 kV ICT bays - 2 nos. 400 kV line bays - 2 nos. 125 MVAr, 420kV bus

	reactor: 2nos. *220 kV line bays: 10 nos.*	reactor – 1 no. 420 kV reactor bay - 1no.
2.	Nange GIS Pooling Station – Koldam 400 kV D/c line	Length – 50 km
3.	2 nos. of 400kV GIS line bays at Koldam	400 kV line bays (GIS) - 2 nos
	Total Estimated Cost (Rs Crores)	**330**

Note:

(i) NTPC to provide space for2 nos. of 400 kV line bays at Koldam S/s

(ii) The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

The above transmission system would also be utilized for connectivity of Sunni Dam and Luhri-II HEPs of M/s SJVNL. Time frame as per NRPC (TP)- April, 2025.

4. Member (PS) informed that NTPC has forwarded some observation regarding the availability of space at Koldam S/s for 2nos. of 400kV bays, **therefore the scheme may be deferred presently. The same would be put up again after resolution of the issue with NTPC.**

Members noted the same.

5.17 1x500 MVA, 400/220 kV ICT augmentation (3rd) at Sohawal (PG) under system strengthening.

1. Director, PSPA-1 stated that in the 3rd meeting of NRPC (TP) held on 19.02.2021, UPPTCL intimated that 2x315 MVA ICTs at Sohawal(PG) have been observed to be 'N-1' non-compliant under peak load conditions and requested for its augmentation. Accordingly, 1x500 MVA, 400/220 kV ICT augmentation (3rd) at Sohawal (PG) was agreed under system strengthening. Also, UPPTCL has requested to implement the ICT at the earliest due to increase in load.

2. CTUIL stated that UPPTCL vide letter 24.08.21 again requested that transformer augmentation work at Sohawal (PG) substation may be implemented on top priority to maintain reliable supply besides TTC enhancement perspective.

3. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
1x500 MVA, 400/220 kV ICT augmentation (3rd) at Sohawal (PG) under system strengthening **Estimated Cost**: Rs 30 Crore **Implementation Timeframe**: 15 months from MoP OM	RTM	To maintain reliable supply besides TTC enhancement perspective.

4. Detailed scope of the scheme is given below:

"1x500 MVA, 400/220 kV ICT augmentation (3rd) at Sohawal (PG) under system strengthening"

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1	Augmentation with 400/220kV, 1x500 MVA Transformer (3rd)at Sohawal (PG)	400/220kV 500 MVAICT:1 no 400 kV ICT bays – 1 nos. 220 kV ICT bays – 1 nos.

5.18 One no of 220 kV bay at Chamera Pooling point for 2nd Circuit stringing of 220 kV Karian – Chamera Pool line under implementation by HPPTCL with time fame of December 21.

1. Director, PSPA-1 stated that construction of 220/33 kV substation at Karian in Ravi Basin had been approved in 29th meeting of SCPSPNR held on 29.12.2010. Accordingly, 2 No. of 220 kV Bays were approved for termination of 220 kV D/C line from Karian at 400/220 kV, 2x315 MVA Chamera Pooling station of PGCIL at Rajera. Subsequently, in the 30th SCPSPNR meeting held on 19.12.2011, HPPTCL had informed that one bay would be required in first instance.
2. Subsequently, in order to strengthen the intra-state transmission system, HPPTCL has planned 2nd circuit stringing of 220 kV Karian to Chamera transmission line, for which 220kV bay is required to be implemented at Chamera Pool and the same was approved in 3rd meeting of NRPC(TP). HPPTCL had requested that the implementation of the above scheme may be carried out by December 2021.
3. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
One no of 220 kV bay at Chamera Pooling point for 2nd Circuit stringing of 220 kV Karian – Chamera Pool line **Estimated Cost**: Rs 4 Crore **Implementation Timeframe**: 12 months from MoP OM.	RTM	To strengthen the intra-state transmission system of HP

4. Detailed scope of the scheme is given below:

"One no of 220 kV bay at Chamera Pooling point for 2nd Circuit stringing of 220 kV Karian – Chamera Pool line"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1	One no of 220kV bay at Chamera Pooling point (PG) for 2ndCircuit stringing of 220 kV Karian – Chamera Pool line	220 kV line bay -1 no

5.19 220 kV bays at 400 kV substation PGCIL Khatkar (Jind) & Naggal (Panchkula) substation:

1. Director, PSPA-1 stated that the following 220kV bays have been agreed in the 3rd meeting of NRPC(TP):

   - For LILO of both circuits of 220 kV Jind HVPNL to PTPS D/C line at 400 kV substation PGCIL Khatkar (Jind), 4 nos. of bays are required, out of which 2 nos. of bays are already existing. Therefore, implementation of 2 nos. of bays has been agreed. HVPNL has indicated the timeframe for implementation of the above 2 bays as July 2023.
   - For termination of 220 kV D/C line from 400 kV PGCIL Naggal (Panchkula) to proposed 220 kV substation Sadhaura, 2 nos. of 2 nos. of bays has been agreed. HVPNL has indicated the timeframe for implementation of the 2 bays at 400 kV PGCIL Naggal as September, 2023.

2. After deliberations, NCT recommended the following:

Name of the scheme/est. cost/schedule	Mode of implementation	Purpose /Justification
220 kV bays at 400 kV substation PGCIL Khatkar (Jind) & Naggal (Panchkula) substation **Estimated Cost**: Rs 16 Crore **Implementation Timeframe**: PGCIL Khatkar (Jind)- July, 2023 Naggal (Panchkula) substation- September, 2023	RTM	• For LILO of both circuits of 220 kV Jind HVPNL to PTPS D/C line at 400 kV substation PGCIL Khatkar (Jind). • For termination of 220 kV D/C line from 400 kV PGCIL Naggal (Panchkula) to proposed 220 kV substation Sadhaura

3. Detailed scope of the scheme is given below:

"220 kV bays at 400 kV substation PGCIL Khatkar (Jind) & Naggal (Panchkula) substation"

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1	220 kV bays at 400 kV substation PGCIL Khatkar (Jind) for LILO of both circuits of 220 kV Jind HVPNL to PTPS D/C line at 400 kV substation PGCIL Khatkar (Jind)	220 kV line bays -2nos
2	220 kV bays at 400 kV PGCIL Naggal (Panchkula) substation for 220 kV D/C line from 400 kV PGCIL Naggal (Panchkula) to proposed 220 kV substation Sadhaura	220 kV line bays -2 nos

5.20 Strengthening of 220 kV Alusteng (Srinagar)- Leh Transmission System:

1. Director, PSPA-1 stated that Powergrid vide letter dated 25.02.2021 has submitted a proposal for strengthening of 220 kV Alusteng (Srinagar)- Leh Transmission System with following elements with total estimated cost of Rs 226 Crores:

(a) Laying of cable for about 15km between Minamarg and Zojila Top section of Alusteng –Drass 220kV section.

(b) Installation of 2x25 MVAR, 220kV bus reactors at 220/66kV Drass S/s

(c) Installation of 1x25 MVAR, 220kV bus reactors at 220/66kV Alusteng S/s

2. She further informed that Srinagar- Leh 220 kV S/c transmission line has become an ISTS line after bifurcation of state of J&K into UT of J&K and UT of Ladakh and the transmission line has been transferred to Powergrid by MoP vide letter dated 23.03.2021. MoP has directed CEA to take up the proposal of Powergrid in the NCT meeting for taking decision regarding its implementation under RTM The detail scope is as under:

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1	Laying of cable about 15km provided between Minamarg and Zojila Top section of Alusteng – Drass 220kV section	Length- 15 km
2	2x25 MVAR, 220kV bus reactors at 220/66kV Drass S/s	25 MVAr, 220kV bus reactor – 2 nos. 220 kV reactor bay – 2 nos.
3	1x25 MVAR, 220kV bus reactors at 220/66kV Alusteng S/s	25 MVAr, 220kV bus reactor – 1 no. 220 kV reactor bay – 1 no.
	Estimated Cost (Rs. Crore) **(as provided by Powergrid)**	**226**

3. NCT recommended that since the line is an ISTS line, the scheme need to be first deliberated in the meeting of NRPC (TP) and may be put up in the next meeting of NCT.

5.21 Summary of the new transmission schemes recommended by NCT in Western and Northern region along with mode of implementation and survey agency.

Mode of Implementation	**New schemes**	**Modifications in earlier notified schemes**	**Schemes assigned for survey No. (Estimated cost of the schemes)**		
			PFCCL	**RECPDCL**	**CTUIL**
TBCB	14	2 (allotted to RECPDCL	5 (Rs 5015 cr.)	5 (Rs. 5614 cr.)	4 (Rs 4937 cr.)
RTM	13	0			

Sl. No.	Transmission scheme	Scheme (New/ Modification of Notified scheme)	Implementation mode	Survey agency	Estimated cost (Rs. Crs.)
1.	Transmission system for evacuation of power from Neemuch SEZ (1000 MW)	New	TBCB	CTUIL	547
2.	Establishment of Khavda Pooling Station-2 (KPS2) in Khavda RE Park	New	TBCB	RECPDCL	789
3.	Establishment of Khavda Pooling Station-3 (KPS3) in Khavda RE Park	New	TBCB	RECPDCL	665
4.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A	Modification	TBCB	RECPDCL	862
5.	Transmission scheme for injection beyond 3 GW RE power at Khavda PS1 (KPS1)	New	TBCB	RECPDCL	780
6.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C	Modification	TBCB	RECPDCL	1440
7.	Transmission system strengthening beyond Kolhapur for export of power from Solar & Wind Energy Zones in Southern Region- Re-conductoring of Kolhapur (PG) – Kolhapur 400 kV D/c line	New	RTM		54
8.	Augmentation of 1x500 MVA, 400/220 kV ICT (3rd) at Bhatapara (PG)	New	RTM		30
9.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A1	New	TBCB	PFCCL	210
10.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A2	New	RTM		100
11.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A3	New	TBCB	PFCCL	505
12.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1	New	TBCB	PFCCL	2500
13.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-	New	RTM		235

Sl. No.	Transmission scheme	Scheme (New/ Modification of	Implementation mode	Survey agency	Estimated cost (Rs. Crs.)
	III Part B2				
14.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C1	New	TBCB	RECPDCL	1160
15.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C2	New	RTM		80
16.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part D	New	TBCB	CTUIL	1680
17.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E1	New	RTM		435
18.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E2	New	RTM		245
19.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part F	New	TBCB	RECPDCL	2220
20.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G	New	TBCB	PFCCL	1530
21.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part H	New	TBCB	CTUIL	1910
22.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part J	New	RTM		225
23.	Creation of 400/220 kV, 2x315 MVA S/S at Siot , Jammu & Kashmir	New	TBCB	PFCCL	270
24.	Implementation of 400 kV D/c Khandukhal(Srinagar)-Rampura (Kashipur) line to be taken up under central sector as an ISTS scheme	New	TBCB	CTUIL	800

Sl. No.	Transmission scheme	Scheme (New/ Modification of	Implementation mode	Survey agency	Estimated cost (Rs. Crs.)
25.	System Strengthening scheme for Reconductoring of portion of Dulhasti-Kishtwar- Kishenpur 400 kV (Quad) S/c	New	RTM		13
26.	Grant of 400kV & 220kV bays to RE generators at Fatehgarh-III (erstwhile Ramgarh-II) PS under ISTS	New	RTM		75
27.	1x500 MVA, 400/220 kV ICT augmentation (3rd) at Sohawal (PG)) under system strengthening	New	RTM		30
28.	One no of 220kV bay at Chamera Pooling point for 2ndCircuit stringing of 220 kV Karian – Chamera Pool line under implementation by HPPTCL	New	RTM		4
29.	220 kV bays at 400 kV substation PGCIL Khatkar (Jind)&Naggal (Panchkula) substation	New	RTM		16

Annexure IA

List of participants of 5th NCT meeting held on 25.08.2021 and 02.09.2021 through VC

Sr. No.	Name (Sh./Smt.)	Designation	1st meeting held on 25.08.2021	2nd meeting held on 02.09.2021
Central Electricity Authority				
1.	Dinesh Chandra	Chairperson	Yes	Yes
2.	Goutam Roy	Member (PS) CEA	Yes	Yes
3.	Gorityala Veera Mahendar	Member (E&C) CEA	Yes	Yes
4.	Ishan Sharan	Chief Engineer (PSPA-I)	Yes	Yes
5.	Awdhesh Kumar Yadav	Director (PSPA-I)	Yes	Yes
6.	Manjari Chaturvedi	Director (PSPA-I)	Yes	Yes
7.	J. Ganeshwara Rao	Dy. Director	Yes	Yes
8.	Priyam Srivastava	Dy. Director	Yes	Yes
9.	Vikas Sachan	Dy. Director	Yes	Yes
Ministry of Power				
10.	Goutam Ghosh	Director (Trans)	Yes	No
MNRE				
11.	Irfan Ahmad	Director	Yes	Yes
12.	Dilip Nigam	Adviser	Yes	Yes
13.	Rohit Thakwani	Scientist-C	Yes	No
Technical Experts				
14.	S. K. Ray Mohapatra	Technical Expert	Yes	Yes
15.	Radheshyam Saha	Technical Expert	Yes	Yes
Central Transmission Utility of India Limited				
16.	Subir Sen	COO	Yes	Yes
17.	Ashok Pal	Dy. COO	Yes	Yes
18.	Partha Sarthi Das	Sr. General Manager	No	Yes
19.	Kashish Bhambhani	Sr DGM	Yes	No
20.	Puneet Tyagi	Sr GM	No	Yes
21.	Chinmay Sharma	Sr. Engineer	No	Yes
POSOCO				
22.	KVS Baba	CMD	Yes	No

23.	S.R. Narasimhan	Director (System Operation)	Yes	Yes
24.	Rajiv Porwal	Chief General Manager (NLDC)	Yes	Yes
25.	Vivek Pandey	General Manager	Yes	No
26.	Priyam Jain	Manager	Yes	Yes
27.	Prabhankar Porwal	Dy. Manager	Yes	No

Annexure-IIIA

Status of schemes recommended in 4th NCT meeting

	Sl. No	Name of the Transmission Scheme	MoP Approval	BPC
1.		Transmission system for evacuation of power from RE projects in Rajgarh (1500 MW) SEZ in Madhya Pradesh: Phase-I	MoP Gazette Notification dated 19.07.2021	RECPDCL
2.		Transmission system for evacuation of power from RE projects in Rajgarh (1000 MW) SEZ in Madhya Pradesh: Phase- II	Referred back to NCT. NCT to recommend the same to MoP as and when there is certainty of RE generation.	
3.		Transmission Scheme for Solar Energy Zone in Gadag (1000 MW), Karnataka: Phase-I.	MoP Gazette Notification dated 19.07.2021	RECPDCL
4.		Transmission Scheme for Solar Energy Zone in Gadag (1500 MW), Karnataka: Phase-II	Referred back to NCT. NCT to recommend the same to MoP as and when there is certainty of RE generation.	
5.		Transmission Scheme for Evacuation of power from RE sources in Karur/Tirrupur Wind Energy Zone (Tamil Nadu) (1000 MW)- Phase I	MoP Gazette Notification dated 19.07.2021	PFCCL
6.		Transmission Scheme for Evacuation of power from RE sources in Karur/Tirrupur Wind Energy Zone (Tamil Nadu) (1500 MW): Phase II	Referred back to NCT. NCT to recommend the same to MoP as and when there is certainty of RE generation.	
7.		Transmission system for evacuation of power from Chhatarpur SEZ (1500 MW	MoP Gazette Notification dated 19-07.2021	PFCCL
8.		ICT Augmentation at 2x315 MVA, 400/220 kV Shujalpur (PG) substation	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
9.		Transmission scheme for providing connectivity and LTA to M/s SBESS for its 325 MW Wind Project in Dhar, Madhya Pradesh to be implemented under ISTS	MoP OM dated 13.04.2021	RTM (PGCIL)
10.		Implementation of 400kV bays for RE generators at Bhadla-II PS, Fatehgarh-II.	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)

11.	Implementation of 400kV bay for RE generators at Fatehgarh-III (erstwhile Ramgarh-II) PS	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (Powergrid Ramgarh Trans. Ltd., subsidiary of PGCIL)
12.	Implementation of 220 kV bay at Shahjahanpur 400/220 substation (PGCIL)	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
13.	Implementation of 1x80 MVAR, 765kV Spare Reactor at Bhadla-II S/s	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
14.	Implementation of the 1x500 MVA, 400/220kV ICT (8th) at Bhadla Pooling Station	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
15.	Regional System Strengthening scheme to mitigate the overloading of 400 kV NP Kunta-Kolar S/C line	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
16.	Augmentation of transformation capacity at existing Hiriyur and Kochi S/stns	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
17.	Restoring of one circuit of Kudankulam – Tuticorin PS 400 kV (quad) D/c line at Tirunelveli to control loadings/un-balancing on Kudankulam – Tirunelveli 400 kV (quad) lines.	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
18.	Implementation of 1 no. of 230 kV bay at Tuticorin-II GIS PS	MoP OM No.15/3/2018-Trans - Part(1) dated 16.07. 2021	RTM (PGCIL)
19.	Transmission system for connectivity to Teesta-IV HEP (520 MW)	Referred back to NCT. The project is likely to be commissioned in 2026-27. NCT to send its recommendation to MoP at appropriate time to avoid creation of stranded asset.	
20.	System Strengthening Scheme for Eastern and North Eastern Regions: A: Eastern Region Strengthening Scheme-XXV (ERSS-XXV) B. North Eastern Region Strengthening Scheme-XV (NERSS-XV)	MoP Gazette Notification dated 19-07.2021.	RECPDCL
21.	Transmission system for evacuation of power from Pakaldul HEP in Chenab Valley HEPs - Connectivity System	MoP Gazette Notification dated 19-07.2021 modified the scope of transmission scheme.	PFFCCL

	Scheme already notified vide Gazette of India dated 25.09.2020.		
22.	Transmission system for evacuation of power from RE projects in Osmanabad area (1 GW) in Maharashtra Scheme already notified vide Gazette notification dated 24.01.2020.	MoP Gazette Notification dated 19-07.2021 modified the scope of transmission scheme.	RECTPCL
23.	Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I Scheme already notified vide Gazette Notification dated 25.09.2020.	MoP Gazette Notification dated 19-07.2021 modified the scope of transmission scheme.	PFCCL
24.	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under PhaseII-Part F Scheme already notified vide Gazette notification dated 24.01.2020.	MoP Gazette Notification dated 19-07.2021 modified the scope of transmission scheme.	PFCCL
25.	Reconductoring of ISTS lines of POWERGRID. Already notified vide MoP OM dated 25.09.2020.	MoP OM No.15/3/2018-Trans – Part (1) dated 16.07. 2021 modified the scope of transmission scheme	RTM (PGCIL)

Annexure-IIIB

Status of ISTS TBCB projects furnished by RECPDCL (as on 31.08.2021)

S.N.	Name of the project	Status
Projects under bidding		
1.	Transmission system for evacuation of power from RE projects in Osmanabad area (1 GW) in Maharashtra	Present bid deadline **23.09.2021**
2.	Transmission system for evacuation of power from RE projects in Rajgarh (2500 MW) SEZ in Madhya Pradesh	NCT in its meetings held on 20.01.2020 and 28.01.2020 recommended the phasing of transmission projects into two projects. **Subsequently, MoP issued Gazette Notification dated 19.07.2021 with modified scope.** **Present bidding process is being annulled and has been re-initiated** **SPV expected to be transferred in Q3 of FY 2021-22.**
3.	Transmission Scheme for Solar Energy Zone in Gadag (2500 MW), Karnataka - Part – A	NCT in its meetings held on 20.01.2020 and 28.01.2020 recommended the phasing of transmission projects into two projects. **Subsequently, MoP issued Gazette Notification dated 19.07.2021 with modified scope** **Present bidding process is being**

		annulled and has been re-initiated. **SPV expected to be transferred in Q3 of FY 2021-22.**
Projects on hold due to unavailability of land for setting up RE generations		
4.	Transmission Scheme for Solar Energy Zone in Bidar (2500 MW), Karnataka	**As per directions of SECI, bidding process on hold due to non-availability of land for setting up RE generations.** Present bid deadline 23.08.2021 Bid deadline may have to be extended **SPV expected to be transferred in Q4 of FY 2021-22 subject to availability of land.**
Projects whose bidding is yet to be initiated		
5.	System Strengthening Scheme for Eastern and North Eastern Regions	• MoP vide its Gazette Notification dated 19.07.2021 allocated the project to RECPDCL • **Bidding Process will be initiated upon receipt of RFP inputs from CTU** • **SPV expected to be transferred in Q4 of FY 2021-22.**
6.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A, Gujarat	**Bidding process to be initiated after submission of LTA by Developers/ Generators.**
7.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part B, Gujarat	
8.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C, Gujarat	
9.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part D, Gujarat	
10.	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda	

	P.S. under Phase-II – Part E, Gujarat	

Status of ISTS TBCB projects furnished by PFCCL (as on 31.08.2021)

S. No.	Name of ITP	Present Status
	Projects under bidding	
1.	Evacuation of Power from RE Sources in Koppal Wind Energy Zone (Karnataka) (2500 MW)	• Bid process was initiated with the issuance of RfQ documents on 21.10.2019 and RfP documents on 20.12.2019; • RfP bid submission was originally scheduled on 20.02.2020 which has been extended 18 times up to 06.09.2021 due to non-availability of LTTCs and regulatory approval; • CEA vide mail dated 30.07.2021 has forwarded the letter of CTU dated 07.07.2021, informing that M/s Renew Surya Ojas Pvt. Ltd. is identified as LTTC for the scheme; • RfP bid submission to be done as per scheduled date on 06.09.2021. However, the SPV shall be transferred only after receipt of regulatory approval.
2.	Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1GW) under Phase-II Part-G	• Single Stage bid process initiated on 06.03.2020; • RfP bid submission was originally scheduled on 08.05.2020 which has been extended 8 times up to 11.01.2021 due to non-availability of LTA application; • Bid process was kept on hold as no Connectivity/LTA applications are received; • Regulatory Approval has been received on 12.05.2020; • CTU vide letter dated 30.06.2021 has forwarded the list of LTTCs for the Scheme; • Bid process has been reinitiated with the last date of RfP bids submission scheduled on 15.09.2021.
3.	Establishment of new 220/132kV substation at Nangalbibra	• Single Stage bid process initiated on 04.02.2021; • RfP bid submission was originally scheduled on 12.04.2021 which has been extended up to 18.08.2021. • RfP bids are submitted by four (04) bidders namely Adani Transmission Ltd., Power Grid Corporation of India Ltd., Megha Engineering & Infrastructure Ltd. and Sterlite Grid 26 Ltd. on 18.08.2021 and RfP (Technical) bids are opened on the same day; • Evaluation of RfP (Technical) bids is under progress and

		SPV is likely to be transferred during September 2021.
4.	Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I	• Single Stage RfP bid process initiated on 06.05.2021; • RfP bid submission was originally scheduled on 09.07.2021 which has been extended 2 times up to 27.08.2021 due to non-availability of LTTCs and regulatory approval**;** • CTU vide mail dated 03.08.2021 has informed that Adani Renewable Energy Holding Four Limited has been identified as LTTC for the scheme; • The RfP bid submission is likely to be extended till 17.09.2021 on request of bidders seeking time for re-survey on account of clarification provided on transmission line route being fixed from PS-I to India Bridge. • RfP bid submission to be done as per scheduled date 17.09.2021. However, SPV shall be transferred only receipt of regulatory approval.
5.	Transmission system for evacuation power from Pakaldul HEP in Chenab Valley HEPs - Connectivity System	• Single Stage bid process initiated on 04.02.2021; • RfP bid submission was originally scheduled on 12.04.2021 which has been extended 3 times up to 13.09.2021 due to change in scope of the transmission scheme and lockdown imposed by Govt. for Covid-19; • During the 4th meeting of NCT held on 20.01.2021, it was decided that 400/132 kV ICT along with bays at Kishtwar PS to be added to the existing scheme; • MoP vide Gazette Notification dated 19.07.2021 has notified the revised scope of the transmission scheme; • PFCCL vide letter dated 23.07.2021 has requested CTU to provide the revised RfP inputs for the transmission scheme.
6.	Evacuation of Power from RE Sources in Karur/ Tiruppur Wind Energy Zone (Tamil Nadu) (2500 MW)	• Bid process was initiated with the issuance of RfQ documents on 21.10.2019 and RfP documents on 20.02.2020; • RfP bid submission was originally scheduled on 24.04.2020 which has been extended 7 times up to 01.12.2020; • Bid process has been kept in Abeyance as no Connectivity/ LTA applications are received; • Further, during the 4th meeting of NCT held on 20.01.2021, it was decided that the scheme may be implemented in two phases; • MoP vide Gazette Notification dated 19.07.2021 has notified the revised scope of the transmission scheme; • CTU vide letter dated 05.08.2021 has provided the revised RfP inputs for the transmission scheme to CEA for review. • The revised RfP document under single stage bidding is likely to be issued on 27.08.2021.

Projects on hold		
7.	Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1GW) under Phase-II Part-E	• Single Stage bid process initiated on 06.03.2020; • RfP bid submission was originally scheduled on 08.05.2020 which has been extended 11 times up to 12.05.2021 due to non-availability of LTA applications; • Bid process on hold as no Connectivity/LTA applications have been received; • Regulatory Approval has been received on 12.05.2020.
8.	Transmission scheme for Solar Energy Zone in Ananthpuram (Ananthapur) (2500 MW) and Kurnool (1000 MW), Andhra Pradesh	• Single Stage bid process initiated on 06.03.2020; • RfP bid submission was originally scheduled on 08.05.2020 which has been extended 6 times up to 01.12.2020; • Bid process has been kept in Abeyance as there are issues with availability of land for setting up RE generation projects and no Connectivity/LTA applications are received; • List of LTTCs and Regulatory approval is awaited.
Bidding yet to Start		
9.	Transmission system for evacuation of power from Chhatarpur SEZ (1500 MW)	• MoP vide Gazette Notification 19.07.2021 has appointed PFCCL as BPC; • PFCCL vide letter dated 23.07.2021 requested CTU to provide technical inputs for issuance of RfP documents. • Single stage RfP documents to be issued shortly on receipt of RfP inputs.

Annexure-V

Detailed scope of works of Establishment of new pooling stations in Khavda

1.0 Establishment of Khavda Pooling Station-2 (KPS2) in Khavda RE Park:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1	Establishment of 765/400 kV, 4x1500MVA, KPS2 (GIS) with 2x330 MVAR 765 kV bus reactor and 2x125 MVAR 400 kV bus reactor. Adequate space for future expansion of 5x1500 MVA 765/400 kV ICT's *Bus sectionalizer at 765kV & 400kV.* *On each bus section, there shall be 2x1500MVA 765/400kV ICTs, 1x330MVAr, 765 kV & 1x125MVAr 420kV bus reactor, space for future expansion.* *Bus sectionalizer at 765 kV level shall normally be closed and bus sectionalizer at 400 kV level shall normally be open* Future provisions: Space for 765/400 kV ICTs along with bays: 5 nos. 765kV line bays: 8 nos. 400kV line bays: 10 nos. To take care of any drawal needs of area in future: 400/220 kV ICT: 2 nos. 220 kV line bays: 4 nos.	1500MVA, 765/400kV ICT- 4 nos. (13x500 MVA including one spare unit) 765 kV ICT bays – 4 nos. 400 kV ICT bays – 4 nos. 765 kV line bays – 2 nos. 400 kV line bays – 3 nos. Actual nos. a*s per connectivity granted to RE developer (3 no. of bays considered at present, one each for NTPC, GSECL & GIPCL)* 1x330 MVAr, 765 kV bus reactor-2 (7x110 MVAr, including one spare unit) 765 kV reactor bay – 2 1x125 MVAr 400 kV bus reactor-2 400 kV reactor bay – 2 765 kV bus sectionalizer bay – 2 400 kV bus sectionalizer bay – 2
2.	LILO of one ckt. of KPS1- Bhuj PS 765 kV D/c line at KPS2	Line length – 1 km
Approximate cost (Rs.)		**789 Cr.**

Note: Implementation to be taken up only after receipt of LTA applications from RE developers at KPS2

2.0 Establishment of Khavda Pooling Station-3 (KPS3) in Khavda RE Park:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1	Establishment of 765/400 kV, 3x1500 MVA, KPS3 (GIS) with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 400 kV bus reactor. Adequate space for future expansion of 5x1500 MVA 765/400 kV ICT's Future provisions: Space for 765/400 kV ICTs along with bays: 5 nos. 765kV line bays: 4 nos. 400kV line bays: 10 nos. 765 kV Bus sectionalizer breaker: 2 nos. 400 kV Bus sectionalizer breaker: 2 nos. To take care of any drawal needs of area in future: 400/220 kV ICT: 2 nos. 220 kV line bays: 4 nos.	1500MVA, 765/400kV ICT- 3 (10x500 MVA, including one spare unit) 765 kV ICT bays – 3 400 kV ICT bays – 3 765 kV line bays – 2 nos. 400 kV line bays – 3 nos, actual nos. a*s per connectivity granted to RE developer* 1x330 MVAr, 765 kV bus reactor-1 (4x110 MVAr, including one spare unit) 765 kV reactor bay – 1 1x125 MVAr 400 kV bus reactor-1 400 kV reactor bay – 1
2.	KPS3- KPS2 765 kV D/c line	20 km
3.	2 no. of 765 kV line bays at KPS2 765 kV S/s for KPS3-KPS2 765 kV D/c line	765 kV line bays: 2 nos. at KPS2 end
Approximate cost (Rs.)		**665 Cr.**

Note:

(i) *Pooling station shall be created with bus section-I with 765/400 kV, 3x1500MVA ICTs and 1x330 MVAR 765 kV & 1x125 MVAR 400 kV bus reactors.*

(ii) *Bus section II (future) shall be created with 765/400 kV, 4x1500MVA ICTs and 1x330 MVAR 765 kV & 1x125 MVAR 400 kV bus reactors.*

(iii) *Bus sectionalizer at 765kV level shall normally be closed and bus sectionalizer at 400kV level shall normally be open*

(iv) *Developer of KPS2 765 kV S/s to provide space for 2 no. of 765 kV line bays at KPS2 765 kV S/s for termination of KPS3-KPS2 765 kV D/c line.*

(v) *Implementation to be taken up only after receipt of LTA applications from RE developers at KPS3*

Annexure-VI

Detailed Scope of works of Transmission Schemes already notified by MoP for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II- Part A & C after approved modifications.

1. **Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A**

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	KPS2 (GIS) – Lakadia 765 kV D/C line with 330 MVAr switchable line reactors at KPS2 end	159 km
2.	330 MVAR switchable line reactors at KPS2 end of KPS2 (GIS) – Lakadia 765 kV D/C line	• 330 MVAr, 765 kV switchable line reactor- 2. • Switching equipments for 765 kV line reactor- 2 • 1x110 MVAr spare bus reactor available at KPS2 (GIS) to be used as spare
3.	2 nos. of 765 kV line bays each at Lakadia PS & KPS2 (GIS) for Khavda PS2 (GIS) – Lakadia PS 765 kV D/c line	765 kV line bays (GIS) – 4
Approximate cost (Rs)		**862 Crs**

Note: (i) Transmission system for evacuation of 3 GW RE injection at Khavda is being taken up under Phase-I. Phase-II RE scheme for evacuation of 4.5 GW RE injection at Khavda needs to be taken up for evacuation requirement beyond 3 GW from Khavda RE park .

(ii) Implementation of all the transmission packages proposed for evacuation of 4.5 GW RE injection at Khavda RE park under Phase-II (Part A to Part D) needs to be taken up in similar timeframe.

2. **Transmission scheme for injection beyond 3 GW RE power at Khavda PS1 (KPS1)**

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation of Khavda PS1 by 765/400 kV transformation capacity * (max. upto 4x1500 MVA) with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 420 kV bus reactor on 2nd 765 kV and 400 kV bus section respectively	765/400 kV, 1500 MVA- 4 (13x500 MVA, including one spare unit) (Actual no. of ICTs may be decided based on LTA requirement) 765 kV ICT bays - 4 765 kV line bays - 2 400 kV ICT bays – 4 400 kV line bays – 3 nos, actual no. a*s per connectivity granted to RE developer* 1x330 MVAr, 765 kV bus reactor- 1 (4x110 MVAr, including one spare unit)

		765 kV reactor bay – 1 125 MVAr, 420 kV reactor- 1 400 kV Reactor bay- 1 765 kV bus sectionalizer- 2 400 kV bus sectionalizer- 2
2.	KPS1-Khavda PS GIS (KPS2) 765 kV D/C line (to be established with bypassing of LILO of one ckt. of KPS1-Bhuj at KPS2 and utilisation of LILO section)	Length ~ 20 km
Approximate cost (Rs.)		**780 Crs**

* Actual no. of ICTs may be decided based on LTA requirement

Note: Implementation to be taken up only after receipt of LTA applications from RE developers beyond 3 GW at KPS1

3. Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 3x1500 MVA, 765/400 kV Ahmedabad S/s with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 420 kV bus reactor. Establishment of 3X1500 MVA, 765/400 kV, Ahmedabad S/s with 1X330 MVAR 765 kV bus reactor and 1X125 MVAR 420 kV bus reactor. Future Scope: Space for 765/400 kV, ICT along with bays- 2 400/220 kV, ICT along with bays- 4 765 kV Line bays- 8 400 kV Line bays- 8 220 kV Line bays- 7 765 kV reactor along with bays- 1 400 kV reactor along with bays- 1	765/400 kV, 1500 MVA- 3 (10x500 MVA, including one spare unit) 765 kV ICT bays – 3 400 kV ICT bays - 3 765 kV lin1440e bays-4 (2 for Lakadia-Ahmedabad and 2 for Ahmedabad to South Gujarat) 400 kV line bays – 4 (for LILO of Pirana (PG) – Pirana (T) 400kV D/c line at Ahmedabad 1x330 MVAr, 765 kV bus reactor- 1 (4x110 MVAr, including one spare unit) 765 kV reactor bay – 1 125 MVAr, 420 kV reactor- 1 400 kV Reactor bay- 1
2.	Ahmedabad – South Gujarat 765 kV D/c line with 240 MVAr switchable line reactor at both ends (~line length 220 km)	220 km
3.	2 nos. of 765 kV line bays at South Gujarat end for Ahmedabad – South Gujarat 765 kV D/c line	765 kV line bays – 2
4.	240 MVAr switchable line reactor at both ends of Ahmedabad – South Gujarat 765 kV D/c line	• 1x240 MVAr, 765 kV switchable reactor- 4

		• Switching equipments for 765 kV line reactor - 4
Approximate cost (Rs.)		**1440 Crs**

Note: (i) Transmission system for evacuation of 3 GW RE injection at Khavda is being taken up under Phase-I. Phase-II RE scheme for evacuation of 4.5 GW RE injection at Khavda needs to be taken up for evacuation requirement beyond 3 GW from Khavda RE park .

(ii) Implementation of all the transmission packages proposed for evacuation of 4.5 GW RE injection at Khavda RE park under Phase-II (Part A to Part D) needs to be taken up in similar timeframe.

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली योजना एवं मूल्यांकन - I प्रभाग

Power System Planning & Appraisal - I Division

सेवा में / To

-As per enclosed list-

विषय: "ट्रांसमिशन पर राष्ट्रीय समिति" (एनसीटी) की 4th बैठक - मिनट

Subject: Corrigendum to the Minutes of the 4th Meeting of "National Committee on Transmission" (NCT)

Sir/Madam,

The two sittings of the 4th meeting of the "National Committee on Transmission" (NCT) were held on 20.01.2020 and 28.01.2020 respectively under the Chairmanship of Shri P. S. Mhaske, Chairperson, CEA. Minutes of the meeting were issued vide vide CEA letter No. CEA-PS-11-15(11)/1/2020-PSPA-I Division dated 22.03.2021.

Subsequently, CTU vide email dated 26 .03.2021 conveyed its observations on the issued minutes. The same have been examined and the Corrigendum to the Minutes of the 4th meeting of the National Committee on Transmission held on 20.01.2020 and 28.01.2020 are attached herewith

भवदीय,

(Ishan Sharan)
Chief Engineer (PSPA-I) &
Member Secretary (NCT)

Copy to:

(i) Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001.
(ii) CMD (POSOCO), B-9, Qutub, Institutional Area, Katwaria Sarai, New Delhi – 110010

List of addressees:

1.	Chairperson, Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2.	Member (Power System), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3.	Member (Economic & Commercial), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	4.	Director (Trans), Ministry of Power Shram Shakti Bhawan, New Delhi-110001.
5.	Sh. Dilip Nigam, Scientist 'G', MNRE, Block no. 14, CGO Complex, Lodhi Road, New Delhi – 110003	6.	Chief Operating Officer, Central Transmission Utility POWERGRID, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122 001.
7.	Sh. Rajnath Ram, Adviser (Energy), NITI Aayog, Parliament Street, New Delhi – 110 001.	8.	Sh. P. K. Pahwa, Ex. Member (GO&D), CEA 428 C, Pocket -2, Mayur Vihar, Phase -1, Delhi – 110091.
9.	Shri Prabhakar Singh, Ex. Director (Projects), POWERGRID D 904, Tulip Ivory, Sector-70, Gurgaon – 122 001.		

Corrigendum to the Minutes of the 4th meeting of the National Committee on Transmission held on 20.01.2020 and 28.01.2020

The Minutes of 4th meeting of the National Committee on Transmission were issued vide CEA letter No. CEA-PS-11-15(11)/1/2020-PSPA-I Division dated 22.03.2021. Following corrigendum is issued based on the observations received from CTU vide their email dated 26 .03.2021.

(A) Item No. 3.3.2: Transmission Scheme for Solar Energy Zone in Gadag (2500 MW), Karnataka – Part A:

1.1. The following Table is mentioned in para 3.3.2 of the minutes of the 4th NCT meeting:

Modification in Gadag Scheme	Agreed Phases	Transmission System	Remarks
Recent Development :			
SECI in its affidavit to CERC has submitted that implementation of transmission system for Gadag may be taken up in two phases. However there would be no change in the scope of work	Phase I-1000MW needs to be carried out after TSA signing	• Establishment of 400/220 kV, 3x500 MVA at Pachora SEZ PP • Pachora SEZ PP-Bhopal (Sterlite)400 kV D/ c line (Quad/HTLS)	The same was noted down in the meeting held on 16.10.2020 and it was agreed amongst CEA, CTU, MNRE and SECI. As there is no change in overall scope of the works involved in the scheme, the phases formulated for the scheme would be apprised in the next SRPC (TP) and NCT meeting.
	Phase II-1500MW (to be taken up for implementation after receipt of LTA beyond 1000 MW)	Pachora-Shujalpur 400 kV D/c line (Quad/HTLS) (to be taken up only after receipt of connectivity/LTA applications beyond 1000 MW)	

The above Table is being modified as given below:

Modification in Gadag Scheme	Agreed Phases	Transmission System	Remarks
Recent Development :			
SECI in its affidavit to CERC has submitted that	Phase I-1000MW needs to be carried out after TSA signing	• Establishment of 400/220 kV, 2x500 MVA Gadag Pooling Station • Gadag PS-Narendra (New) PS 400 kV	The same was noted down in the meeting held on

implementation of transmission system for Gadag may be taken up in two phases. However there would be no change in the scope of work		(high capacity equivalent to quad moose) D/C Line	16.10.2020 [illegible] was agreed amongst CEA, CTU, MNRE and SECI. As there is no change in overall scope of the works involved in the scheme, the phases formulated for the scheme would be apprised in the next SRPC (TP) and NCT meeting.
	Phase II -1500MW (to be taken up only after receipt of Connectivity/LTA applications beyond 1000 MW at Gadag or beyond 1500 MW at Koppal P.S)	• 400/220 kV, 3x500 MVA ICT Augmentation at Gadag Pooling Station • Gadag PS-Koppal PS 400 kV (high capacity equivalent to quad moose) D/c line (*to be taken up only after receipt of Connectivity/LTA applications beyond 1000 MW at Gadag or beyond 1500 MW at Koppal P.S)*	

(B) The following agenda items (part of additional agenda) were discussed in the meeting, however, the same have been inadvertently left out from being documented in the issued minutes of the 4th meeting of NCT.

- **Additional Agenda Item-1:** Reconductoring of ISTS lines of POWERGRID - North Eastern Region Strengthening Scheme-XII (NERSS-XII)
- **Additional Agenda Item-3:** Modifications in the transmission schemes approved/noted in the 3rd meeting of Reconstituted NCT

Accordingly, the following item/para is being added to the minutes of the meeting:

10. Reconductoring of ISTS lines of Powergrid - North Eastern Region Strengthening Scheme-XII (NERSS-XII)

10.1. Reconductoring of various lines in NER was agreed in the 3rd meeting of NCT held on 26th-28th May 2020. Thereafter, following reconductoring works have been assigned to POWERGRID under Regulated Tariff Mechanism (RTM) by MoP vide their OM dated 25.09.2020. These works are being taken up as NERSS-XII:

Sl. No.	Transmission line	Reconductoring with HTLS	Ampacity of Single HTLS Conductor
1	400 kV D/C Siliguri-Bongaigaon line (Twin Moose)	Twin HTLS	1596 A
2	220 kV D/C Alipurduar-Salakati line (Single Zebra)	Single HTLS	1596 A
3	220 kV D/C BTPS-Salakati line (Single Zebra)	Single HTLS	1596 A
4	132 kV S/C Dimapur-Imphal line (Single Panther)	Single HTLS	798 A
5	132 kV S/C Loktak-Jiribam line (Single Panther)	Single HTLS	798A

10.2. However, based on the technical difficulties (constraints due to design of existing towers) in achieving the approved current rating through HTLS and considering power flow requirement as

per studies, it was agreed in the meeting taken by CEA on 21.12.2020 that the ampacity of HTLS conductors for these lines in NER, as mentioned below in col (E) meets the technical requirement. Hence, in the said meeting, it was also agreed that the proposed modifications may be taken up in the forthcoming meeting of NCT/ERPC(TP)/NERPC(TP).

Sl. No.	Name of transmission line	Ampacity of existing ACSR sub-conductor (A)	Ampacity of Single HTLS Conductor as per MoP order (A)	Ampacity of single HTLS sub-conductor agreed considering technical constraints and system requirement (A)
(A)	(B)	(C)	(D)	(E)
1	400kV D/C Siliguri-Bongaigaon line (Twin ACSR Moose)	707	1596	1400
2	220kV D/C Alipurduar-Salakati line (Single ACSR Zebra)	451	1596	1100
3	220kV D/C BPTS-Salakati line (Single ACSR Zebra)	451	1596	1100
4	132kV S/C Dimapur-Imphal line (Single ACSR Panther)	93	798	450
5	132kV S/C Loktak-Jiribam line (Single ACSR Panther)	185	798	600

10.3. After deliberations, NCT noted and approved the above revised rating of HTLS conductors for reconductoring of lines under NERSS-XII. It was also agreed that the scheme would be ratified in the ERPC(TP) and NERPC(TP).

11. Modifications in the transmission schemes approved/noted in the 3rd meeting of Reconstituted NCT:

11.1. NCT in its 3rd meeting held on 26.05.2020 and 28.05.20202, had approved the Transmission scheme for evacuation of 8 GW RE injection at Khavda P.S. MoP vide its Gazette Notification dated 23.09.2020 has notified six number of packages for this scheme alongwith their scope of works and have recommended their implementation through TBCB route.

Subsequent to notification in the gazette, CTU vide letter dated 8.10.2020, pointed out the inadvertent error in the no. of 765 kV GIS line bays in the transmission package "Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I". In the scope of works for this package, the no. of 765 kV line bays at 765/400 kV Khavda (GIS) substation has been inadvertently mentioned as 1 instead of 2 nos. of bays. In addition, 3.5 GW Stage-II connectivity has been granted to M/s Adani Renewables Holding Four Ltd at Khavda. This would require 3 no of 400 kV line bays at Khavda P.S. for termination of the dedicated connectivity line. In the scope of works notified in Gazette, only 1 no of 400 kV bay has been mentioned as against current requirement of 3 no of 400 kV line bays.

11.2. Accordingly, the following corrigendum has been approved by the 4th NCT in the column no. 3 (capacity/km) of the table elucidating the scope of works of the "Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I" at Page no 10, Sl.no. 2 of Gazette Notification dated 23.09.2020:

2. Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I

Scope:

Sl No.	Scope of the transmission Scheme	Capacity /km as mentioned in Gazette Notification	Capacity /km after incorporating the corrections
1	765/400 kV ,1500 MVA ICT-3 765 kV ICT bays-3 400 kV ICT bays-3 330 MVAR 765 kV bus reactor-1 765 kV reactor bay-1 765 kV line bay-1 400 kV reactor bay-1 400 kV line bay-1 500 MVA, 765/400 kV Spare ICT-1 110 MVAR , 765 kV, 1-ph reactor (spare unit)-1	765/400 kV ,1500 MVA ICT-3 765 kV ICT bays-3 400 kV ICT bays-3 330 MVAR 765 kV bus reactor-1 765 kV reactor bay-1 765 kV line bay-1 400 kV reactor bay-1 400 kV line bay-1 500 MVA, 765/400 kV Spare ICT-1 110 MVAR , 765 kV, 1-ph reactor (spare unit)-1	765/400 kV ,1500 MVA ICT-3 765 kV ICT bays-3 400 kV ICT bays-3 330 MVAR 765 kV bus reactor-1 765 kV reactor bay-1 ***765 kV line bays-2*** 400 kV reactor bay-1 ***400 kV line bay-3**** 500 MVA, 765/400 kV Spare ICT-1 110 MVAR , 765 kV, 1-ph reactor (spare unit)-1

*For 3.5 GW Stage-II connectivity granted to M/s Adani Renewables Holding Four Ltd

11.3. NCT noted and approved the same.

Annexure-IIA

199

No.15/3/2017-Trans
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi

Dated, the 4th November, 2019

OFFICE ORDER

Subject: - Re-constitution of the "National Committee on Transmission" (NCT) - reg.

In supersession of this Ministry's Office Order of even number dated 13.4.2018, constituting the National Committee on Transmission (NCT), the undersigned is directed to state that the composition and terms of reference of existing NCT is amended as mentioned follows:

1	Chairperson, Central Electricity Authority (CEA)	Chairman
2	Member(Power System), CEA	Member
3	Member(Economic & Commercial), CEA	Member
4	Joint Secretary level officer looking after transmission in M/o New & Renewable Energy, Govt. of India @	Member
5	Director(Trans), M/o Power, Govt. of India	Member
6	Chief Operating Officer, Central Transmission Utility (POWERGRID)	Member
7	Advisor, NITI Aayog #	Member
8	Two experts from Power Sector *	Members
9	Chief Engineer (from Power System Wing), CEA #	Member Secretary

@ To be nominated by Secretary (MNRE).
# To be nominated by NITI Aayog/ CEA.
* To be nominated by the Ministry of Power, Govt. of India from time to time, for a maximum period of two years from the date of their nomination.

2. Revised Terms of Reference (ToR) of the Committee are to:

i. Evaluate the functioning of the National Grid on quarterly basis.
ii. Consider the review / recommendations of the RPCTP for system expansion/ strengthening of the transmission system to be presented before the NCT at the end of every quarter i.e. by 15th July, 15th October; 15th January and 15th April.
iii. CTU, as mandated under the Electricity Act, 2003, is to carry out periodic assessment of transmission requirement under ISTS. The CTU shall also make a comprehensive presentation before the National Committee every quarter for ensuring development of an efficient, co-ordinated and economical inter- State transmission system for smooth flow of electricity. CTU, in the process, may also take inputs from the markets to identify constraints and congestion in the transmission system
iv. After considering the recommendations of the CTU and the Regional Committees, the NCT shall assess the trend of growth in demand and generation in various regions; identify the constraints, if any, in the inter- State, inter- Region transfer system and propose construction of transmission lines, grid stations and other infrastructures in order to meet the requirements, which are likely to arise in the near term/ medium term, so that transmission does not constrain growth. The NCT will also draw up perspective plans, keeping the 10 to 15 years' time horizon in mind.

3. While making their recommendations, the NCT will keep the guidelines of the Tariff Policy in mind.

4. Since the NCT will be looking at the National Transmission System i.e. transmission across regions and across States, therefore, prior concurrence of Regional Power Committees

(Transmission Planning) (RPCTPs) will not be relevant. The views of the RPCTPs will be relevant for transmission issues within the region; but for transmission issues across region the views of RPCTPs will be inadequate because they will not have a national perspective. However, for inter-regional transmission lines crossing across States and Regions, the RPCTP of the originating location of these lines and the RPCTP of the terminating locations shall be consulted by the NCT.

5. The recommendations of the NCT shall be placed before the Ministry of Power, Government of India for decision.

6. The Empowered Committee constituted vide this Ministry's Office Order of even number dated 13.4.2018 stands dissolved.

7. This issues with the approval of the Hon'ble Minister of State (Independent Charge) for Power and New & Renewable Energy.

4/11/2019.

(Bihari Lal)
Under Secretary to the Govt. of India
Telefax: 23325242
Email: transdesk-mop@nic.in

To

1. All members of NCT.
2. Secretary, Ministry of New & Renewable Energy, Govt. of India.
3. Chairperson, CEA, New Delhi.
4. CMDs of all CPSUs under the Ministry of Power, Govt. of India.
5. Heads of all autonomous bodies under the Ministry of Power, Govt. of India.
6. Finance/ Budget Section, Ministry of Power.
7. Power/ Energy Secretaries of all States/UTs.
8. Chief Executives of all State Power Transmission Utilities.

Copy to:

(i) PS to Hon'ble MoSP(IC)/ PPS to Secretary(Power)/ SS&FA/ AS(Trans)/ all Joint Secretaries/ EA/ Directors/ Dy. Secretaries, Ministry of Power.

(ii) Technical Director, NIC, M/o Power, for publishing this order on the website of M/o Power.

Annexure-IIB

No.15/3/2018-Trans-Pt(5)
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi

Dated, the 20th May 2021

OFFICE ORDER

Subject: - National Committee on Transmission (NCT) – amendment thereof.

In continuation of this Ministry's Office order no. 15/3/2017-Trans dated 04.11.2019 regarding constitution of the National Committee on Transmission (NCT), following amendments are hereby ordered with immediate effect:

a) CMD, POSOCO will be a member of NCT.
b) The following functions would be added to the Terms of Reference of NCT:
   (i) To formulate the packages for the transmission schemes for their implementation and to recommend their mode of implementation i.e. Tariff Based Competitive Bidding (TBCB) / Regulated Tariff Mechanism (RTM), as per the existing Tariff Policy, to Ministry of Power.
   (ii) To examine the cost of the transmission schemes.
   (iii) To allocate the task of carrying out survey amongst CTU, RECTPCL and PFCCL by maintaining a roster.

2. Further, NCT, while considering the Transmission Planning shall also keep in mind the following aspects:

(i) The Regional Power Committees (Transmission Planning) can make meaningful recommendations only regarding their own Region. They cannot decide on transfers across region.

(ii) For enabling growth of Renewable Energy (RE) capacity areas which have high solar/ wind energy potential, will need to be identified and connected to bulk power evacuation systems so that capacity can come up there. This is a national mission as a part of our energy transition goal.

3. This issues with the approval of the Hon'ble Minister of State (Independent Charge) for Power and New & Renewable Energy and Minister of State for Skill Development and Entrepreneurship.

(Bihari Lal)
Under Secretary to the Govt. of India
Telefax: 23325242
Email: transdesk-mop@nic.in

To
(i) All Members of NCT.
(ii) Secretary, Ministry of New & Renewable Energy, Govt. of India.
(iii) Chairperson, CEA, New Delhi.
(iv) CMD, POSOCO, New Delhi
(v) CMDs of all CPSEs under the Ministry of Power, Govt. of India.

(vi) Heads of all autonomous bodies under the Ministry of Power, Govt. of India.
(vii) Finance/ Budget Section, Ministry of Power.
(viii) Power/ Energy Secretaries of all States/UTs.
(ix) Chief Executives of all State Power Transmission Utilities.
(x) CEO, NITI Aayog, New Delhi.

Copy to:

(i) PS to Hon'ble MoSP(IC)/ Sr PPS/ PPS/ PS to Secretary(Power)/ AS&FA/ AS(SKGR)/ AS(VKD)/ all Joint Secretaries/ Sr. Advisor/ Chief Engineer(Th)/ all Directors/ Dy. Secretaries, Ministry of Power.
(ii) Technical Director, NIC, M/o Power, for publishing this order on the website of M/o Power.

20/5/24.

Annexure-IIC

भारत सरकार

Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
पावर सिस्टम विंग
Power System Wing

सेवा में / To
As per address list

विषय/ Subject: Constitution of the Cost Committee for estimation of cost of the transmission schemes - reg.

संदर्भ/Reference: MoP OM No. 15/3/2018-Trans Pt(5) dated 20.05.2021.

Sir,

MoP vide letter under reference has issued the amendments to its OM no 15/03/2017 (Trans) dated 04.11.2019 regarding Constitution of the National Committee on Transmission (enclosed as Annexure). The amendments inter-alia includes the function of formulation of packages for the transmission schemes and examining the cost of the transmission schemes within the ToR of the NCT.

The transmission scheme to be formulated by NCT would include schemes to be implemented through TBCB route as well as RTM route. For estimation of the cost of the transmission schemes, it is proposed to formulate a Cost Committee with the following composition:

1.	Chief Engineer (PSPA-I), CEA	Chairman
2.	Director (PSPA-I), CEA	Member & Convener
3.	Director (PSE&TD), CEA	Member
4.	Director (F&CA), CEA	Member
5.	Representative from CTUIL	Member
6.	Representative from Cost Engg. Dept., PGCIL	Member
7.	Representative from PFCCL	Member
8.	Representative from RECPDCL	Member
9.	Chief Engineer from STU/SEB/Electricity Department of the concerned state in which transmission scheme lies	Member

The practice of constitution of the Cost Committee by the National Committee on Transmission (NCT) for the purpose of examination of the cost of the transmission schemes is in line with that of the procedure adopted by the erstwhile NCT.

The Cost Committee is being formulated with the approval of Chairperson, CEA & Chairman of the National Committee on Transmission (NCT).

भवदीय,

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2/06/2021
(Goutam Roy)
Member (Power System)

Address list:

1. Member(E&C), CEA (With a request to nominate one suitable officer for the cost Committee)
2. CMD, PGCIL, Saudamini, Plot no 2, Sector 29, Gurugram-with a request to nominate a suitable officer.
3. COO, CTUIL, Saudamini, Plot no 2, Sector 29, Gurugram- with a request to nominate a suitable officer.
4. CEO, PFCCL, Urjanidhi 1, Barakhamba Lane, Connaught Place, New Delhi- with a request to nominate a suitable officer.
5. CEO, RECPDCL, Plot no I-4, Sector 29, Gurugram- with a request to nominate a suitable officer.
6. CMD of STU/SEB/Electricity Department.

Copy for kind information to:

Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001

5th Meeting of National Committee on Transmission

Grid Performance – 3rd, 4th (2020-21) & 1st Quarter (2021-22)

Power System Operation Corporation Limited

National Load Despatch Center

CONTENTS

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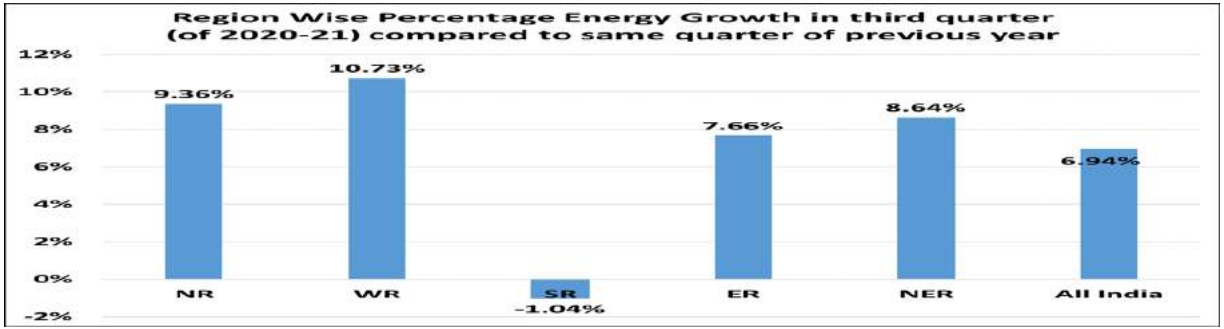
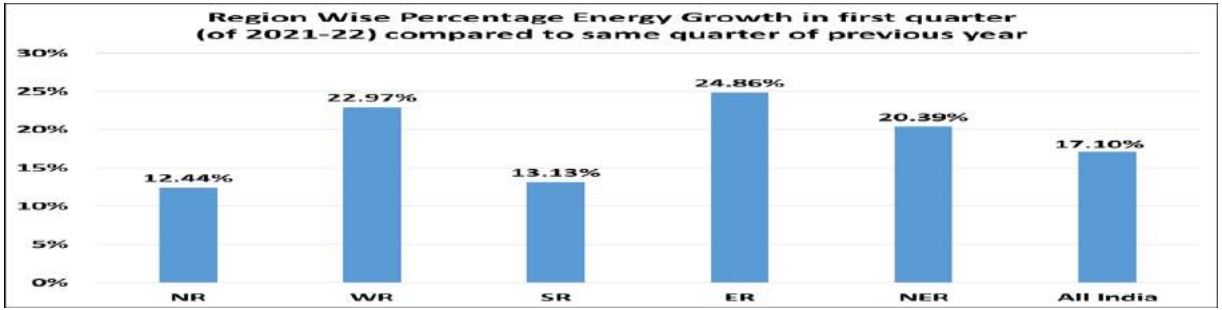
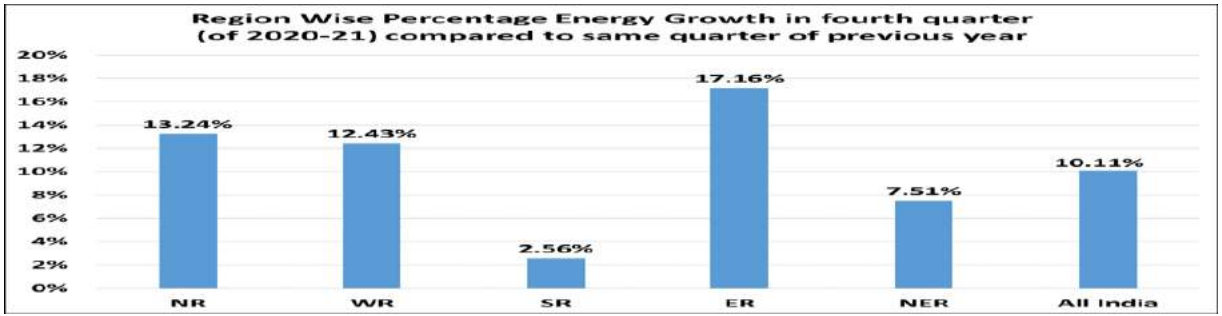
Energy Growth compared to Previous Year







Details available at: - https://posoco.in/download/nldc-operational-feedback_oct_2020_final/?wpdmdl=32657 and https://posoco.in/download/nldc-operational-feedback_jul_2020/?wpdmdl=30531

Highlights

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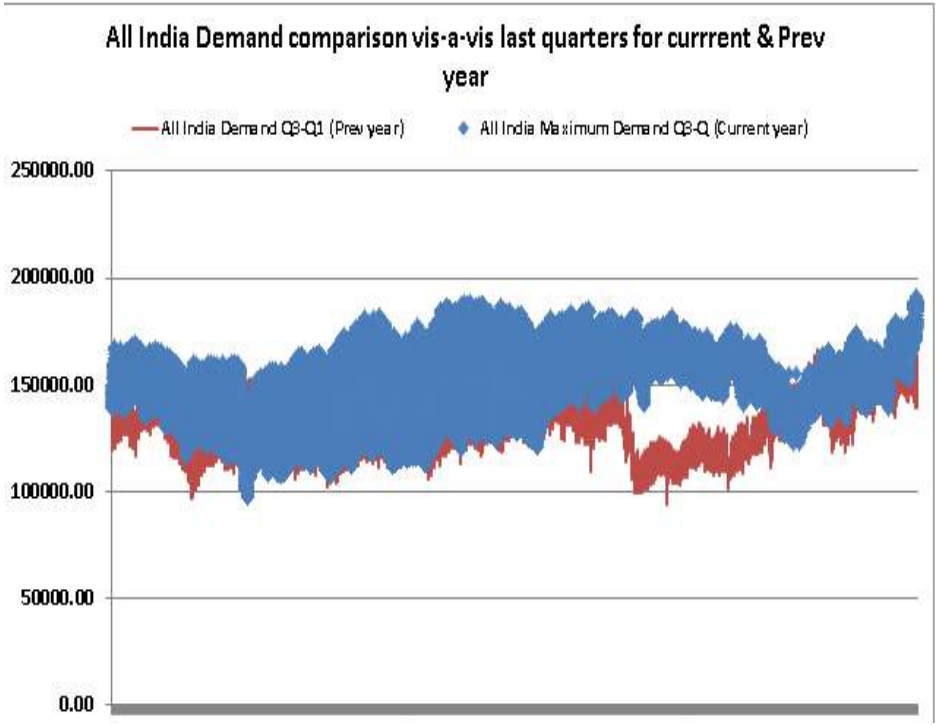
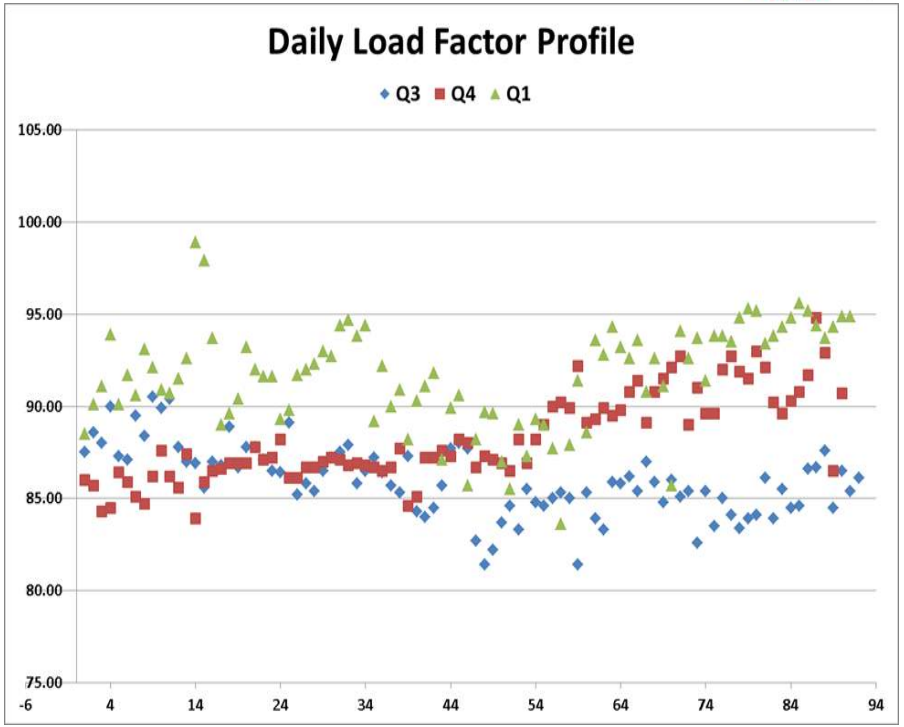
In Q3, All the regions have registered a positive growth rate except southern region for quarter 3 of 2020-21. All India demand revived to pre-Covid levels and during Q3 2020-21, all India energy consumption has even surpassed previous years' consumption for the same quarter.

In Q4, All the regions have registered a positive growth rate for quarter 4 of 2020-21.Western Region recorded its maximum demand met of 62395 MW on 22nd Jan 2021 and highest ever energy met of 1345 on 09th March 2021.

In the first quarter of 2020-21, all the regions have registered a positive growth rate. Northern region have recorded its maximum demand during the day as 72370 MW on 30th June 2021. Eastern region have recorded its maximum demand during the day as 24651 MW on 27th April 2021. Southern Region recorded its maximum demand met of 58433 MW on 02nd April ' 21 and highest ever energy met of 1255 MUs on 03rd April ' 21.

All India Demand Profile & Load Factor





In the second wave of NCOVID-19, there is no as such demand reduction was observed at All India level. All the regions have registered a positive growth rate. Load factor above 85% was observed for most of the time duration.

All Time Highest in last three quarters

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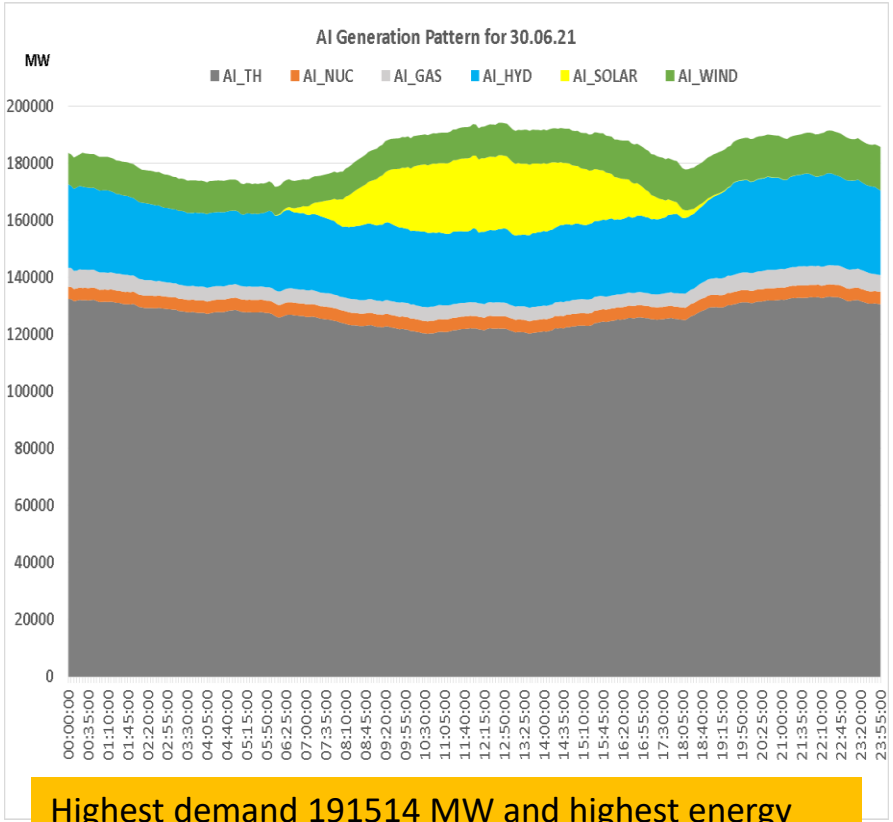
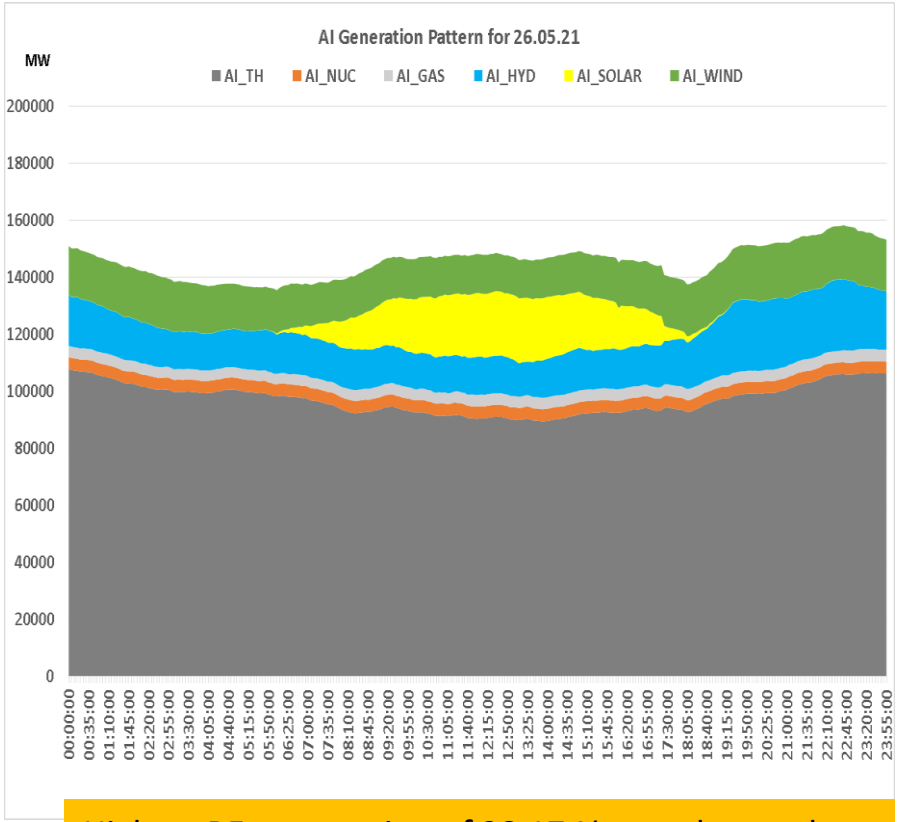
Regions	Maximum Demand Met during the day(MW)	Demand Met During Evening Peak hrs(MW)	Energy Met(MU)	Hydro Gen(MU)	Wind Gen(MU)	Solar Gen(MU)
NR	73232 02-07-2021	68018 10-07-2021	1642 07-07-2021	389 12-08-2017	71 27-07-2021	58 25-05-2021
WR	62396 22-01-2021	56711 09-03-2021	1388 08-04-2021	167 18-12-2014	268 29-07-2021	43 11-05-2021
SR	58433 02-04-2021	50436 24-02-2020	1255 03-04-2021	208 31-08-2018	246 22-07-2021	122 09-03-2021
ER	25069 19-07-2021	24422 26-07-2021	542 16-07-2021	152 18-07-2020	-	6 19-04-2021
NER	3215 16-06-2021	3067 03-08-2021	60 05-08-2021	37 03-07-2019	-	2 19-12-2020
All India	200570 07-07-2021	190660 14-08-2021	4507.9 07-07-2021	815.8 09-09-2019	541.4 27-07-2021	220.7 01-04-2021

All India Generation Stack of highest energy consumption and highest RE penetration recorded days



Highest demand 191514 MW and highest energy consumption of 4384 MU was recorded on 30th June 2021 in Q1 of FY-2021-22



Highest RE penetration of 28.17 % was observed on 26th May 2021 in Q1 of FY-2021-22

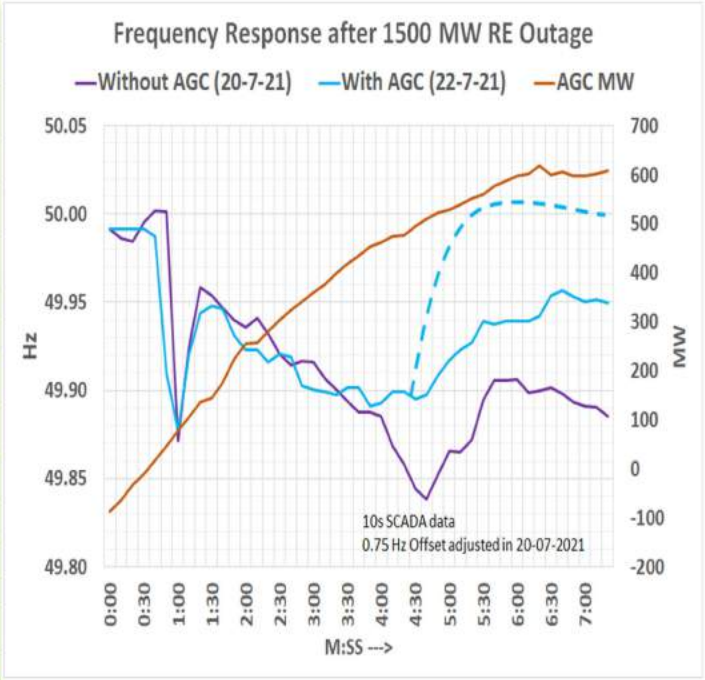
FRC for 3rd, 4th (2020-21) & 1st Quarter (2021-22)

S.No.	Date	Time	Event	NR	ER	WR	NER	SR	All INDIA
1	12-Oct-20	10:05	Total load loss was observed to be 2600MW (2200MW of Mumbai, 400MW of Khargar, Navi Mumbai, Bhiwandi and Thane). Total Generation loss was around 840MW at TATA) and 220MW at Uran.	5698	1894	2694	2993	93	15248
2	26-Dec-20	10:18	B-Phase CT of Unit-5 main bay in Wanakbori substation busted which resulted in tripping of Bus-2 at Wanakbori S/S. Generation loss of 1000MW observed (Unit-8:802MW & Unit 5-210MW).	15970	6885	21640	7866	484	43957
3	19-Feb-21	15:26	Multiple trippings occurred at Bhadla(PG) station while availing planned shutdown of 220kV Bus-II at Bhadla(PG). Total generation loss in the event was around 1300MW.	1399	2811	15059	83	8707	27660
4	10-Mar-21	19:35	400kV Rango-Kishanganj & 400kV Teesta III - Kishenganj tripped due to R-B-N Fault resulting into complete outages of Stations at 400kV(Rangpo, Teesta III, Dikchu) ,220kV (Jorethang,Tashiding,New Melli) & 132kV (Chuzachen,Gangtok) level. Generation loss of 1561 MW due to loss of evacuation path and Load loss of 54 MW occurred in Sikkim .	4959	3659	6365	3	4424	20365
5	24-Mar-21	12:16	Due to Multiple tripping at 400kV Bikaner (RS) station & 220kV side at Bhadla(PG), Solar Generation loss of 2036 MW and Load loss of around 450 MW was observed.	1237	1605	9717	69	4291	13791
6	08-Apr-21	03:29	230 kV TTPS-TTN AUTO-1 and 230 kV TTPS_STERLITE tripped at 03:29 hrs due to Y-phase conductor cut and All other 230KV evacuating lines connected from Tuticorin Thermal Power station tripped.. Generation loss of 1045 MW in all five units (5x210 MW) was observed	3205	1489	7909	86	10875	10568
7	**11-Jun-21**	**16:02**	220 kV Akal-Bhu -1&2 tripped due to snapping of B-phase jumper resulting into 1200MW wind & 300MW solar generation loss in NR	**6353**	**5007**	**9939**	**475**	**4233**	**20000**

Automatic Generation Control (AGC) Summary Q1 (2021-22)

Plants which completed closed loop testing

NR		WR		SR		ER		NER	
Koteshwar	400	Mauda-2	1320	Simhadri-2	1000	Barh-2	1320	Bongaigaon	500
Nathpa Jhakri	1500	CGPL	4150	Simhadri-1	1000	MPL	1050	Loktak	105
Chamera-3	231	Sipat-2	1000	NTECL Vallur	1500	Kahalgaon-2	1500		
Dulhasti	390	Vindhyachal-2	1000	Ramgundam-II	1500	Teesta-V	510		
Tehri	1000	Korba-1&2	2100	Ramgundam-III	500	Rangit	66		
Rihand-I	1000	Korba-3	500	NTPL	1000				
Riahnd-II	1000	Sipat-1	1980						
Rihand-III	1000	Vindhyachal-4	1000						
Anta	419.3	Vindhyachal-3	1000						
Chamera-2	300	Vindhyachal-5	500						
Chamera-1	540	Solapur	1320						
Dhauliganga	280	Gandhar	657						
Unchahar-III	210								
Unchahar-IV	500								
NR Total	8770	WR Total	16527	SR Total	6500	ER Total	4446	NER Total	605



Frequency Control with High RE

Total 36849 MW, as on 15th August 2021

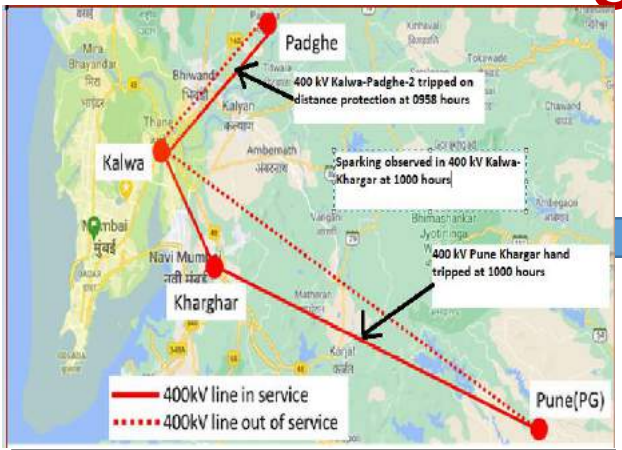
Number of Grid Incidents/Disturbances in 1st Quarter of 2021-22

213

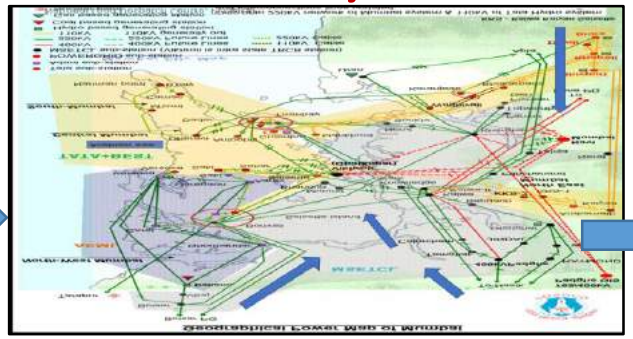
Region	Grid incidents		Grid Disturbances					Total
	GI-1	GI-2	GD-1	GD-2	GD-3	GD-4	GD-5	
NR	2	31	35	0	0	0	0	68
WR	12	9	23	0	0	0	0	44
SR	3	6	28	0	0	0	0	37
ER	0	1	28	0	0	0	0	29
NER	6	16	50	0	0	0	0	72
All India	23	63	164	0	0	0	0	250

Details available at: - https://posoco.in/download/nldc-operational-feedback_oct_2020_final/?wpdmdl=32657 and https://posoco.in/download/nldc-operational-feedback_jul_2020/?wpdmdl=30531

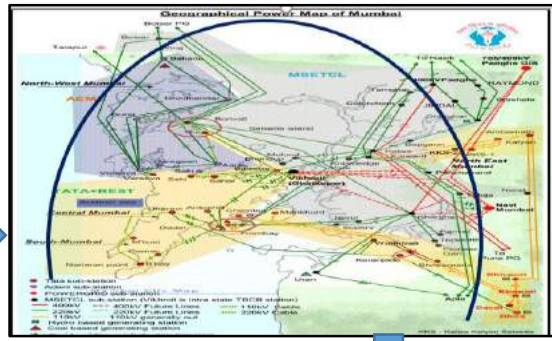
Major Events - Grid Disturbance in Mumbai on 12th Oct, 2020



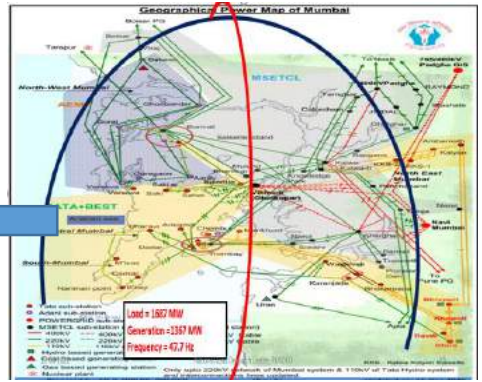
1. Around 50% load met by import
2. Prior to incident: Two out of four major infeed under outage.
3. Tripping of a hydro unit inside Mumbai increased the import
4. 09:58 hrs: 400 kV Kalwa - Phadge II tripped on fault.
5. 1000 hrs: Inadvertently, healthy circuit 400 kV Pune – Kharghar hand tripped on observance of heavy sparking on 400 kV Kharghar - Kalwa.
6. Islanding: Islands formed (AEML, TPC, MSETCL) and two collapsed

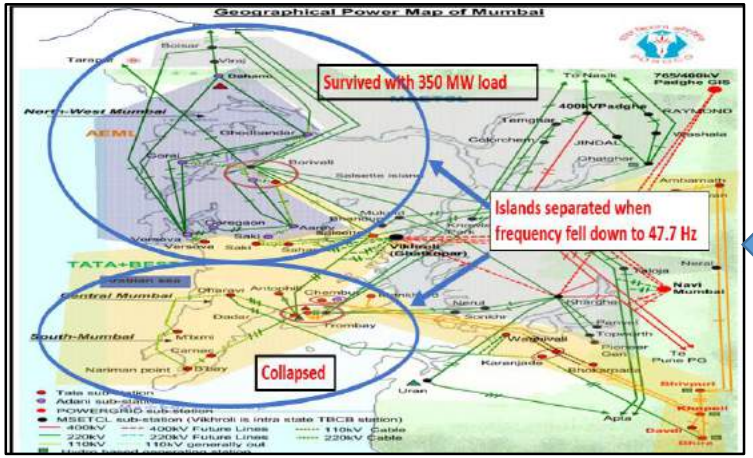


220 kV network stressed and tripped



Island Formation





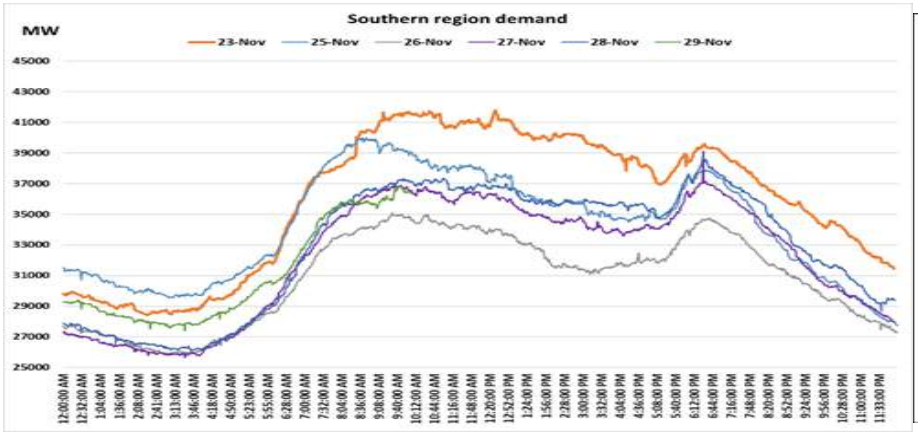
Mumbai Event Observations and Lessons Learned

215

- Importance of inherent load-generation balance for successful islanding
- Strengthening of transmission schemes and expeditious implementation of planned system
- Proper asset management of substation elements and close monitoring
- Imparting regular training to substation staff to handle contingencies
- Periodic review of Under Frequency Load shedding scheme (s)
- Prior approval of any changes in cranking path and regular mock drills
- Hydro/Gas based plants as synchronous condensers for early restoration
- Planning of Energy Storage and rooftop solar in metropolitan areas to cut down imports
- Sufficient dynamic shunt compensation devices in high load pockets
- Review of protection settings of generating units
- Communication and data visibility at control centres including PMUs

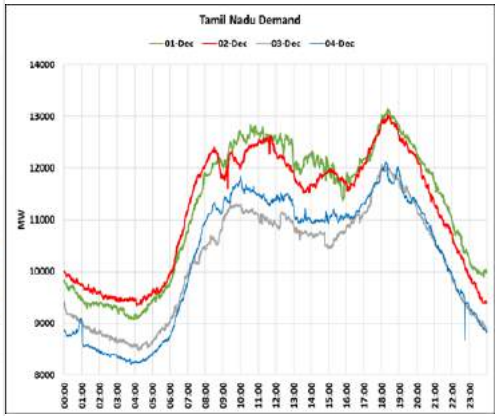
Cyclones in Q3 of FY 2020-21

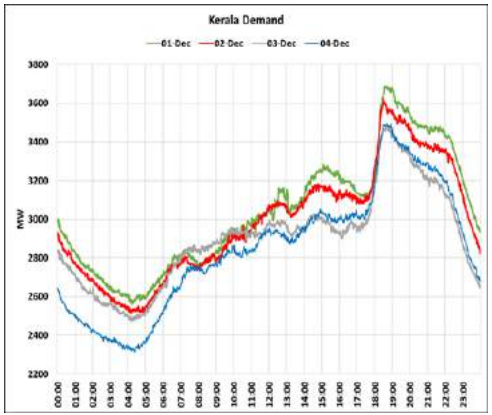
Severe Cyclonic Storm 'NIVAR' (25th & 26th Nov 2020)



- *TANTRANSCO has reported approximately 2600 MW of load outage , which was restored within 24 hours*
- *Puducherry has also reported load loss of 140 MW during the cyclone period.*
- *Generation Outage during Cyclone - 2140 MW (Vallur TPS Unit -1, Vallur TPS Unit -2, Vallur TPS Unit -3, Neyveli2 stage2 Unit-6, MAPS U#2, North Chennai TPS U#3): All generators were revived within 48 hours.*
- *Total 96 lines of state & ISTS tripped during the event.*

Cyclonic Storm 'Burevi' (3rd & 4th Dec 2020)





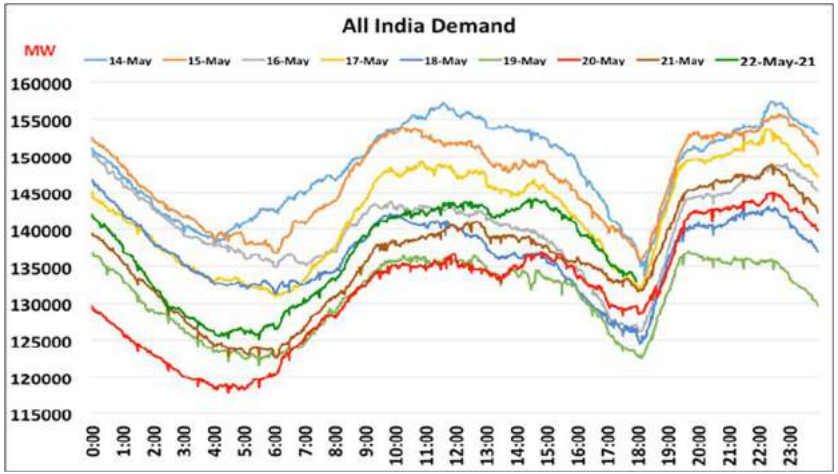
- *During the cyclone period, there was no outage of transmission element in a short time.*
- *Only demand of Tamil Nadu and Kerala for 03rd December 2020 was less by 1300 MW & 150 MW respectively in comparison to demand of 02nd December 2020*

Thunderstorms/Cyclones/Floods etc. are low probability high impact events and system resiliency needs to be enhanced to minimize the impact and quickly restore the system from these events. Learnings in this regard are highlighted in subsequent slides.

Detailed Report of cyclones is available at https://posoco.in/download/nldc-operational-feedback_jan_2021-2/?wpdmdl=34776

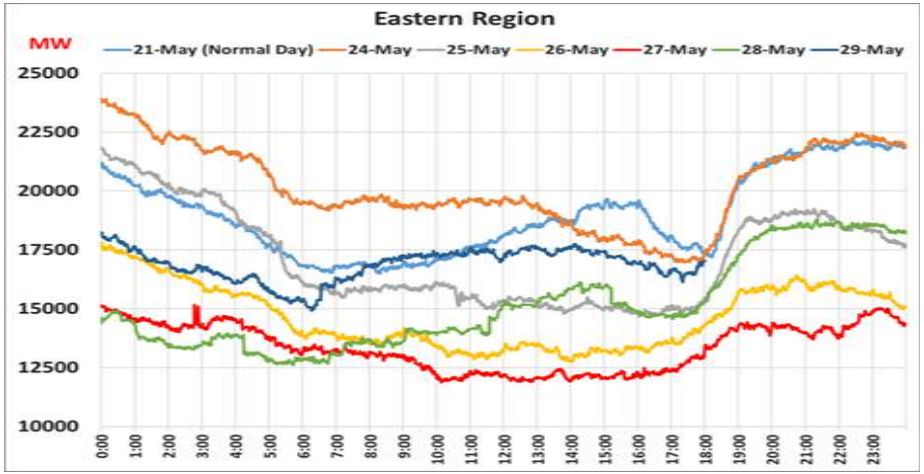
Cyclones in Q1 of FY 2021-22

Extremely Severe Cyclonic Storm 'Tauktae' (15th & 16th May 2021)



- *Demand reduction of around 7 GW was observed in SR on 16th May vis-à-vis 14th May. 07 nos. thermal generating units with a cumulative capacity of 2150 MW were taken under RSD. 12 nos. transmission lines at 220 kV and 110 kV level (all in Kerala) tripped on various faults due to heavy rainfall and lightning during 14-16 May.*
- *WR demand reduction of around 19 GW was observed on 18th May vis-à-vis 14th May. Thermal Generation with a cumulative capacity of 4800 MW were taken under RSD.*
- *Demand reduction of around 15 GW was observed in Northern region too on 19th and 20th May compared with 17th May.*

Severe Cyclonic Storm 'Yaas' (26th & 27th May 2021)



- *ER demand reduction of around 6.5 GW was observed on 26th and 27th May compared with 21st May demand.*
- *13 nos. generating units with a cumulative capacity of 4575 MW were taken out on Low demand/Reserve shutdown during 25-28 May.*
- *53 nos. (03 nos. Power supply interruption occurred on 02 nos. 220 kV (viz. Jasidih and Giridih) and 03 nos. 132 kV (viz. Saria, Jamua and Dumka) substations; all in Jharkhand (JUSNL)*
- *400 kV, 07 nos. 220 kV and 43 nos. 132 kV) transmission lines tripped on various faults during 25-27 May, including 01 no. ISTS line*

Detailed Report of cyclones is available at https://posoco.in/download/nldc-operational-feedback_july_2021/?wpdmdl=38883

Major Elements Commissioned in 3rd , 4th of (2020-21) & 1st Quarter (2021-22)

S.No.	Element	First time Charging / Synchronization Date	Remarks
1	Operation of Muzaffarpur-Dhalkebar D/C lines at rated voltage (400kV)	Line-I & II / 11.11.20	Lines were earlier charged at 220kV level.
2	400kV Imphal-New Kohima D/C	Line-I /10.11.20 Line-II /13.11.20	It will enhance reliability of power to Nagaland capital (Kohima). Owned by Kohima-Mariani Transmission Ltd. (KMTL)
3	400kV New Kohima-Mariani(PG) D/C (Ownership : Kohima-Mariani Transmission Ltd. (KMTL)	30.12.20	30.12.20 Strengthening of transmission network to Nagaland capital (Kohima) and connectivity of south NER also.
4	COD of Unit-4 at Kameng HEP	22.01.21	Ownership : NEEPCO
5	765/400kV Medinipur substation	23.01.21	Under system strengthening scheme in Eastern region. 765/400kV ICTs at Medinipur and downstream network (from Medinipur) are under implementation.
6	765kV New Ranchi-Medinipur D/C lines	Line-I/23.01.21 Line-II/24.01.21	
7	765/400kV ICTs at Medinipur	1500 MVA ICT-I/ 06.02.21 1500 MVA ICT-II/ 06.02.21	Under system strengthening scheme in Eastern region.
8	400/220kV ICT at New Mariani	500 MVA ICT-I/ 03.02.21	Under system strengthening scheme in NER. Improved connectivity at 400kV and below in East Assam.
9	400kV Silchar-Misa D/C lines	Line-I/25.02.21 Line-II/25.02.21	Under system strengthening scheme in NER. Enhanced connectivity of Southern NER with rest of the grid at 400kV level.

Major Elements Commissioned in 3rd , 4th of (2020-21) & 1st Quarter (2021-22)

S.No.	Element	First time Charging / Synchronization Date	Remarks
10	COD of Unit-II at Gadarwada	01.03.21	Super Thermal Power plant (2x800MW) of NTPC at Gadarwada (MP)
11	400kV Silchar-P K Bari D/C lines	Line-I/06.03.21 Line-II/29.03.21	Under system strengthening scheme in NER. Enhanced connectivity of Southern NER with rest of the grid at 400kV level
12	400/132kV Thoubal Substation	12.03.21	For flexible and reliable management of intra-state power supply system
13	765kV Agra(UP)-G Noida(UP) S/C	18.03.21	Under evacuation system establishment of Ghatampur(Kanpur) 3x660MW TPS
14	Reconductoring of 400kV Rangpo-Binaguri D/C	29.03.21	Power flow capacity on lines and reliability of Sikkim generation evacuation have been enhanced by this reconductoring
15	765/400kV ICT-4, ICT-3 at Bhuj Substation	ICT 4 : 01.04.21 ICT 3 : 02.05.21	Under Interstate transmission system strengthening scheme for Renewable Energy in WR-I & WR-II
16	765kV Ajmer-Phagi D/C lines	Line-I/12.04.21 Line-II/24.04.21	Ownership : POWERGRID
17	400kV Misa-New Mariani D/C	04.05.21 (both circuits)	More reliable transmission of power to Nagaland & Manipur

Major Elements Commissioned in 3rd , 4th of (2020-21) & 1st Quarter (2021-22)

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S.No.	Element	First time Charging / Synchronization Date /COD	Remarks
18	400kV Baharampur (India)-Bheramara (Bangladesh) ckt-3	14.06.21	Enhanced reliability & connectivity of India with Bangladesh.
19	400 kV Alipurduar(India)-Jigmeling (Bhutan) D/C	18.06.21 (Circuit II) 22.06.21 (Circuit I)	Enhanced connectivity from Bhutan and evacuation of Mangdechu HEP and Punatsangchu HEP(Future)
20	156 MVA, 400/30.5KV Converter Transformer at Vindhyachal HVDC BTB Station	23.06.21 (Block#1)	For the replacement of old converter transformer along with refurbishment of Block #1.
21	HVDC Raigarh – Pugalur Pole I	06.09.21	
22	HVDC Raigarh – Pugalur Pole II	09.03.21	
23	HVDC Raigarh – Pugalur Pole III	13.07.21	
24	HVDC Pugalur – Trichur Pole I	08.06.21	
25	HVDC Pugalur – Trichur Pole II	09.03.21	

Enhancement/modification in Transfer Capability Limits

221

S. No.	Corridor	Previous Transfer Capability (MW)	Enhanced/modified Transfer Capability (MW)	Delta (MW)	Reason
1	WR-SR	6950	9350	2400	TTC/ATC has been revised after commissioning of HVDC Raigarh – Pugalur Pole -1 & II
	ER-SR	5950	5750	-200	
	Import of SR	12900	15100	2200	
2	WR-NR	17850	18450	600	a) Reversal in HVDC APD-Agra power Flow direction (b) Commissioning of 765kV Ajmer-Phagi D/C and 765kV G.Noida-Fatehabad S/C
	ER-NR	5500	6850	1350	
	Import of NR	23350	25300	1950	

Transmission Line and ICT Constraints

222

S. No	Region	Element	Description of the constraints
1	Northern	400 kV Anpara-Sarnath D/C	**Remarks:** Commissioning of 765 kV Anpara D-Unnao to be expedited.
2		765 kV Anpara C-Unnao	**Remarks:** Commissioning of 765 kV Anpara D-Unnao to be expedited.
3		400 kV Anta-Kota line	
4		3x500 MVA, 400/220 kV ICTs at Bhadla (Raj) and Bhadla (PG)	During high solar generation, loading of ICTs are N-1 non-compliant for considerable duration. New ICTs need to be planned.
5		2x1500 MVA , 765/400 kV ICTs at Phagi	**Remarks:** 3rd planned ICT of 1500MVA capacity at Phagi should be expedited.
6		2X315 MVA, 400/220kV ICTs at Dipalpur, Rajpura, Nakodar, Jodhpur, Kurukshetra, Moga, Sohawal and Chhittorgarh (Raj)	Augmentation/ new ICT be explored needs to be planned at these locations..

Transmission Line and ICT Constraints

223

S. No	Region	Element	Description of the constraints
1	Western	400 kV Kudus-Kala D/C	**Remarks:** Commissioning of 400 kV Padghe (GIS) –Kharghar and Padghe (GIS)-Vikhroli line would relieve loading of Kudus-Kala D/C.
2		400 kV Padghe- Kalwa D/C	**Remarks:** Commissioning of 400 kV Ghatkopar S/S and Padghe (GIS)-Kharghar, Padghe-Navi Mumbai-Ghatkopar and Kharghar-Ghatkopar would give additional infeed to Mumbai and relieve loading of Padghe-Kalwa D/C
3		400 kV Lonikhand - Jejuri S/C	**Remarks:** 400 kV Lonikhand -Karad LILO at Jejuri was planned for commissioning by 2018 - 19. This LILO shall be done on priority basis to avoid any disturbance in Jejuri area. MSETCL informed revised schedule of Dec 2021.
4		400 kV Chandrapur-Chandrapur (II) D/C	LILO of one D/C line of 400 kV Chandrapur -I – Bhadravati 2xD/C line at Chandrapur -II is approved in 2nd WRPC (TP). To be expedited.
		400 kV Warora(MS)- Wardha(PG) S/C and Koradi-II - Wardha(PG) S/C	3rd WRPRCTP formed Committee of MSETCL & POWERGRID to have joint meeting for bypassing of outlets & bus splitting at 400 kV Wardha (PG).
5		400kV Parli(PG) - Parli(MS) D/C	Bypassing of 400 kV Koradi -II -Wardha(PG) & 400 kV Wardha(PG) -Warora(MS) at 400 kV Wardha(PG) and making 400 kV Koradi -II -Warora(MS) S/C would, in addition to controlling the fault level at Wardha(PG), would also relieve 400kV Parli(PG) –Parli (MS)
6		2x315 MVA, 400/220 kV ICTs at Astha, Bhatapara, NSPCL, Akola, Satna, Raigarh (PG) , Korba (West) , Kirnapur , Itarsi , Morena and Akola (MSETCL)	Augmentation/additional ICTs or agreed arrangement need to be expedited.
7		2x315MVA+ 1x500MVA 400/220 kV Dhule MSETCL ICTs	Augmentation work of 400/220KV ICT-II from 315 MVA to 500MVA under progress
8		400 kV Lara –Raigarh D/C	Lines are N-1 non-compliant in case of reverse power flow on HVDC Raigarh – Pugalur with high generation in Raigarh complex and low generation at Lara TPS.
9		400 kV Kolhapur (MS) – Kolhapur (PG) D/C	Lines are N-1 non-compliant during high generation at Kudgi TPS as well during high in SR.

Transmission Line and ICT Constraints

224

S. No	Region	Element	Description of the constraints
1	Southern	Constraints in Nagjheri PH evacuation	KPTCL to expedite reconductoring of emanating 220 kV lines
2		Tamilnadu 230 kV System	Several 230 kV lines in TN intra-state network are heavily loaded. (Details available at https://posoco.in/download/nldc-operational-feedback_oct_2020_final/?wpdmdl=32657)
3		Downstream network of Mysore 400/220kV SS	220 kV outlets from Mysore are heavily loaded particularly during peak demand scenario of Karnataka.
4		220 kV Bangalore Metro Network	Most of the 220 kV network in Bengaluru is radialised during peak season to prevent overloading of lines. The radialisation of lines decreases the reliability of supply & thus results in Low Voltage situation during peak period and High Voltage during Off-Peak period of the day
5		Andhra Pradesh 220kV Network	Several 220 kV lines in AP intra-state network are heavily loaded. (Details available at https://posoco.in/download/nldc-operational-feedback_oct_2020_final/?wpdmdl=32657
6		Downstream network of UPCL 400/220kV SS	220kV UPCL-Kemar D/C is heaviliy loaded during UPCL full generation and Peak demand scenario of Karnataka
7		400/220 kV ICTs at Kolar, Mysore, Cochin, Narendra, Neyveli II TPS, Hassan, Ramagundam, Somanhalli, Tiruvallam, UPCL, Allundur SS, Jindal SS	Most of the constraint observed during high demand period of SR. Some even observed for whole year. (Details available at https://posoco.in/download/nldc-operational-feedback_oct_2020_final/?wpdmdl=32657)

Transmission Line and ICT Constraints

225

S. No	Region	Element	Description of the constraints
9	Southern	400/220kV 2x500 MVA ICTs at Kaiga	
10		400/220 kV 3X500 MVA ICTs at Hoody and Nelamangla	
1	Eastern	400/132 kV 2 X 200 MVA Motihari ICT	Constraint observed particularly during peak demands of Bihar and Nepal. Third 315 MVA ICT could not be charged due to problem in Bus extension module at Motihari.
2		400/220 kV Ranchi 2 X 315 MVA ICTs	Additional ICT at 400/220 kV Ranchi has been agreed in 3rd ERPCTP. To be expedited.
3		220 kV Waria-Bidhan Nagar D/C	Operational planning and fault level planning study needs to be performed in joint coordination with DVC .
4		220 kV Patna-Sipara T/C	220 kV Patna-Sipara 1 & 2 HTLS conversion was approved during the 2nd ERPCTP meeting. To be expedited.
1	North-Eastern	220/132 kV, 160 MVA ICT at Kopili	The proposal of replacement of existing 60 MVA, 220/132kV ICTs by 1x160 MVA, 220/132 kV ICT at Kopili HEP of NEEPCO by POWERGRID was agreed in joint standing committee meeting. Kopili Substation is under outage since 07.10.19 due to flooding.
2		220 kV BTPS - Salakati I & II lines	Upgradation of the 220 kV BTPS-Salakati I & II lines with HTLS conductor to be expedited

Low Voltage Nodes Q1 (2021-22)

226

S. No	Region	Areas
1	Northern	Hindaun, Alwar, Bhadla -PG (during high solar), Bhadla-RS (during high solar), Akal
2	Western	Padghe, Lonikhand, Lonikhand(II), Jejuri (during peak load), 400kV Solapur(MH) observed in 1st quarter of 2021-22.
3	Southern	400kV Kudgi-PG, 400kV Pondicherry, 400kV SVChatram – During morning peak
4	Eastern	NIL
5	North-Eastern	NIL

High Voltage Nodes

227

S. No	Region	Areas
1	Northern	Suratgarh, Mahendragarh, Allahabad, Fatehpur, Shree Cement, Bawana, Harshvihar, Jalandhar, Makhu, Nakodar, Muktsar, Khedar, Fatheabad, Jind, Jhajjar, Maharaninagh, Bhiwani, Malerkotla, Kubulpur, Mundka
2	Western	Aurangabad(MH), 400kV Bhadrawati (PG), 400kV Chandrapur & Chandrapur(II), 400kV Dhariwal CTU, 400kV EMCO Warora, 400kV New Koyna, 400kV Nanded (MSETCL), 400kV Wardha(PG), 400kV Vadinar, 400kV Sami, 400kV Kirnapur (MPPTCL), 400kV Seoni(PG), 400kV Jagdalpur, 400kV Korba West, 400kV Raita (CSPTCL), NSPCL
3	Southern	765kV Chilkaluripeta, 765 kV Cuddapah, 765 kV Nizamanabd, 400 kV Asupaka, 400 kV Bellary TPS, 400kV Bidadi, 400kV BTPS, 400kV Chandulapur, 400kV Chilkaluripeta, 400kV Cuddapah-PG, 400kV Dharamapuri, 400kV Dichipalli, 400kV Dindi, 400kV Gajwel, 400kV Pavagada, 400kV Podili, 400kV Nirmal, 400kV Nizamabad, 400kV Raita (CSPTCL).
4	Eastern	New PPSP, New Dubri, Maithon-A, 400 kV Durgapur STPS (DSTPS), 400 kV Teesta V, Dikchu , Barh, 400 kV Maithon A
5	North-Eastern	Ranganadi, Balipara, Misa, BNC, Byrnihat

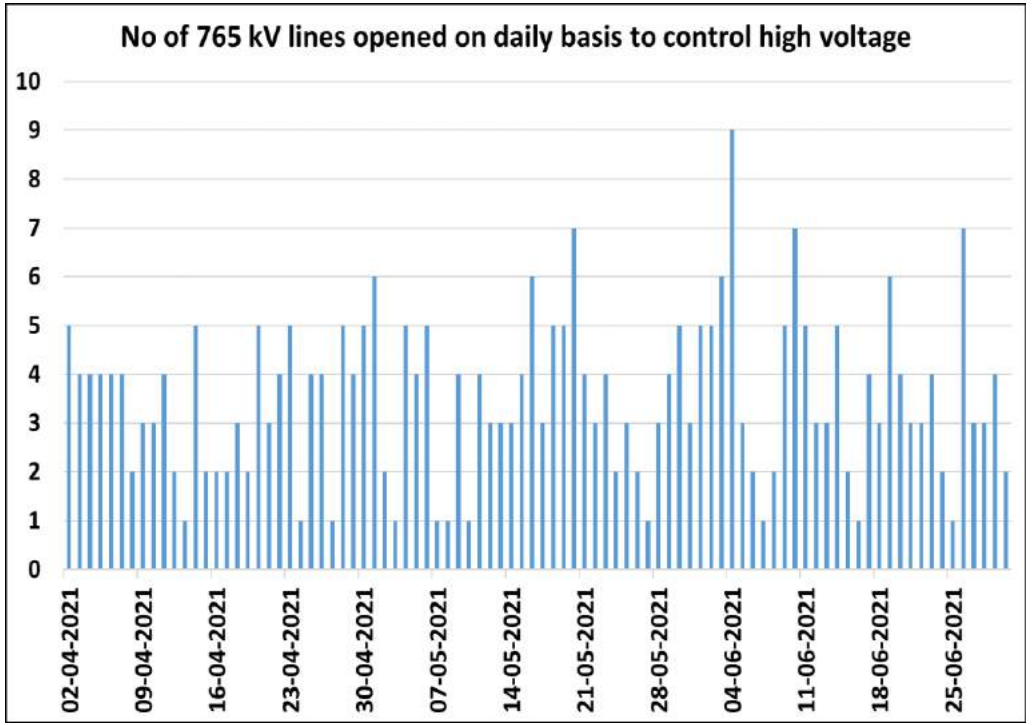
Lines Opened on High Voltage – Q1 FY 2021-22

- **765 kV Lines -** 279 no. of times opened for all openings greater than 3 of the same line

- **Lines with most switching operations:**

  - 765 kV Bikaner-Moga (PG) D/C
  - 765 kV Moga-Meerut (PG) Ckt-1
  - 765 kV Ajmer-Chittorgarh (PG) D/C
  - 765 kV Agra-Fatehpur (PG) D/C
  - 765KV-NIZAMABAD-MAHESHWARAM_PG-2
  - 765KV-RAIPUR-PS (DURG)-JHARSUGUDA-1
  - 765 kV Angul-Jharsuguda-3 & 4
  - 765KV-CUDDAPAH-THIRUVALAM-2
  - 765KV-WARDHA-AURANGABAD-3

- **Line opening considered as last resort for voltage control. L/Rs that can be taken in service as B/Rs must be utilized.**



Details available at: - https://posoco.in/download/nldc-operational-feedback_july_2021/?wpdmdl=38883

Lines Opened on High Voltage – Q1 FY 2021-22

229

- **400 kV Lines -** 924 no. of times opened for all openings greater than 3 of the same line

S. No.	Region	No. of time 400 kV Lines opened*	Frequently Opened Lines
1.	Northern	586	Bhadla-Jodhpur (RS) Ckt-1 Bhadla-Merta (RS) Ckt-1 Jodhpur-Kankani (RS) Ckt-1
2.	Western	97	400 kV Bhusawal – Aurangabad –M (Waluj)-1 400 kV Amreli – Hadala-1
3.	Southern	241	400KV-Pavagada-Tumkur-1 400KV-Pavagada - Mysore-1
4.	Eastern		
5.	North- Eastern	-	
6.	All India	**924**	

**Considering lines opened 03 times or more during the quarter*

Details available at: - https://posoco.in/download/nldc-operational-feedback_oct_2020_final/?wpdmdl=32657 and https://posoco.in/download/nldc-operational-feedback_jul_2020/?wpdmdl=30531

Major transmission elements opened in Q1 of 2021-22 to control overloading of associated elements

230

S. No.	Region	Line/ICT Opened at 400 kV level and above	Reason
1.	Western	400kV Taptitanda-Deepnagar-1, 400kV Taptitanda-Aurangabad (Waluj) S/c	To control loading of 765/400kV Ektuni ICT-1 during emergency S/d of Ektuni ICT.
2.		400kV Asoj-Kosamba S/C line & generation backing down at SSP	To control loading of 400kV SSP-Asoj S/C line. SSP generation is high, this constraint is observed.
3.		HVDC Raigarh-Pugalur Pole-1 reverse power order,HVDC Bhandrawati power order reversal	To control loading of 400kV Kolhapur-Kolhapur (MH) D/C line During high generation of Kudgi and RE in SR.
4.	Southern	400 kV Talaguppa Nelamangala S/C	To control loading of 220 kV Sharavathi - Talaguppa circuits during high generation at Sharavathy
5.	North-Eastern	132kV Nirjuli-Gohpur Line	To control loading of 132kV Pare-Lekhi Line (Commissioning of 132 kV Pare -North Lakhimpur D/ C line and LILO of one circuit of 132 kV Pare -North Lakhimpur at Nirjuli to be expedited)
6.		132 kV Umtru – Kahilipara D/C and 132 kV Umtru Sarusajai D/C	To control loading of 132 kV EPIP 2 – Umtru D/C and 132 kV New Umtru – Umtru line

Important Grid Elements under Long Outage

231

S.No.	Line	Voltage (in kV)	Owner	Outage Date	Revival Date	Remarks
1	400kV IBEUL-Jharsuguda D/C (INDBHARAT)	400kV	POWERGRID	17:30 (29.04.18)	Still out	Tower collapse at Loc. 44, 45
2	220kV Kishenpur (PG)–Ramban Ckt-1	220kV	PDD JK	16:43 (31.03.2020)	Still out	Due to heavy land slide damages occurred to 220 KV D/C KPTL at location no: -187,188 &189 and there is every apprehension of collapsing Tower Loc. No 189
3	220kV Pandiabili – Samangara D/C	220kV	POWERGRID	03.05.2019	Still out	49 Towers collapsed
4	220kV Kishenpur (PG)–Mirbazar (JK)	220kV	PDD JK	08:38 (06.1.21)	Restored on ERS tower 19:00 (14.01.21)	Tower collapsed at location no 107 near Samroli, Udhampur
5	400 KV Akal – Kankani ckt-1	400kV	POWERGRID	21:22(02.06.21)	Still out	R-N fault, Zone-1, Dist. 49.79km, Fault current 5.118kA from Akal end. (Tower Collapse in the line)

Fixed Series Compensator under Long Outage 232

S.No.	Line	Voltage (in kV)	Owner	Outage Date	Remarks
1	FSCs – 400 kV Kanpur - Ballabhghar D/C	400	POWERGRID	14-03-17 16-03-19	Ckt I FSC has been out due to B-phase Signal column blast. Ckt II FSC hand tripped due to fire in FSC-II of B-phase at Ballabhgarh.
2	FSCs – 765 kV Meerut – Koteshwar D/C	765	POWERGRID	20-02-21 15-05-21	FSCs taken out for upgradation work at 765 kV. Not taken back in service yet.
3	FSC- 400kV Aligarh-Muradnagar	400	POWERGRID	09-10-2015	FSC is out due to LILO of 400 kV Panki –Muradnagar at Aligarh.
4	FSC of Pampore-1 & Pampore-2 at Kishenpur*	400	POWERGRID	30-12-2012	FSC are out due to LILO at Mirbazar (one ckt. of Kishenpur-Mirbazar has been LILOed at Ramban)
5	FSCs – 400 kV Raipur – Wardha D/C	400	POWERGRID	01-02-18 17-11-18	Damping resistor burnt
6	FSC + TCSC - Raigarh-Raipur I, II & III	400	POWERGRID	06-07-16 08-07-16	Fire at TCSC / Main control system failure
7	FSCs- 400 kV Balipara – Bongaigaon 3 & 4	400	POWERGRID	02-09-20	Fire in B-ph capacitor bank of FSC (ckt-3)
8	FSC - 400 kV Rengali-Indravati	400	POWERGRID	23-02-2021	FSC R phase damping resistor got damage during successful autoreclose of the circuit.

Important Grid Elements under Construction 233

S. No.	Name of element	Agency	Remarks
1	765kV Anpara D- Unnao	UPPTCL	**Scheduled Commissioning: Jan 2012**. Would reduce loading of 400 kV Anpara-Sarnath D/C, Anpara-Mau, and Anpara-Obra lines.
2	765kV Bara -Mainpuri ckt-1 and 2nd 765/400 kV ICT at Mainpuri	SEUPPTCL	**Scheduled Commissioning: Jun 2017**. Would strengthen the evacuation of Bara TPS generation in case of N-1 contingency of 765kV Bara-Mainpuri ckt-2.
3	765/400 kV 1500 MVA ICT 3 at Phagi	RRVPNL	Two existing 1500 MVA ICTs of Phagi become N-1 non-compliant during winter (High Rajasthan demand time). After commissioning of ICT-3, loading on other two ICTs would reduce and ICTs would be N-1 compliant. This would be good from reliability point of view as 765kV Phagi-Gawalior connects NR-WR and plays important role in transfer capability of Rajasthan
4	400/220kV 500MVA ICT-3 at Rajpura	PSTCL	Would address the N-1 non-compliance at Rajpura ICTs during paddy season.
5	5th, 6th & 7th 400/220 kV 500 MVA ICTs at Bhadla PG	POWERGRID	Would address N-1 of ICTs at Bhadla PG during high solar generation. 4th ICT commissioned on 31st Dec 2020.

Important Grid Elements under Construction

S. No.	Name of Element	Agency	Remarks
6	400kV Lonikhand-Karad LILO at Jejuri & commissioning of Hinjewadi	MSETCL	Immediate actions are required to strengthen the infeed to Jejuri. Commissioning of these on priority basis would help in improving the voltage profile of Jejuri, Lonikhand and Pune area.
7	765kV Tamnar-Dharamjaygarh D/C	GTTPL	Would improve the reliability of power evacuation from JPL Stg-2 (4x600MW) & TRN (2x300MW) generation (Total 3000 MW generation). Presently being managed with SPS.
8	400kV Padghe PG-Kharghar, 400kV Padghe PG-Ghatkopar line along with Ghatkopar S/s 400kV Padghe-Ghatkopar LILO at Navi Mumbai, 220kV Apta-Taloja and 220kV Apta-Kalwa LILO at Navi Mumbai	Through TBCB route/MSETCL	Ccheme was finalized in 42nd SCM of WR dtd 17th Nov 2017. Commissioning of this network would relieve the constraints in Mumbai system.
9	400/220kV Xeldem Substation, 400kV Mapusa-Xeldem D/c line & 400kV Narendra-Narendra one ckt LILO at Xeldem along with downstream network at Xeldem	GTTPL	Required for in additional infeed to Goa and reliable supply to the Goa system.

Important Grid Elements under Construction

235

S. No.	Name of Element	Agency	Remarks
10	765 kV Warora – Warangal – Maheswaram – Kurnool link and 765 kV Warangal - C'peta D/C	WKTL	Will form the WR-SR & ER-SR ring and significantly enhance the import of NEW- SR. Resiliency of the system will also improve and outages of major HVDC links towards SR could be managed after commissioning of these lines.
11	400kV Kadakola SS and Associated system	KPTCL	Will relieve over loading Mysore ICTs and downstream
12	400kV Kottayam SS and Associated system	KSEBL	Will enhance the TTC/ATC of S3(KERALA)
13	400/220kV Cochin ICT-3	Powergrid	Will enhance the TTC/ATC of S3(KERALA)
14	Upgradation of 220/132 kV, 2x100 MVA ICT to 2x160 MVA at Dimapur	POWERGRID	Enhance reliability of Nagaland & Manipur power system
15	220/132 kV, 3rd 30 MVA ICT at Mokokchung (PG)	POWERGRID	Enhance transfer capability of Mokokchung Area of Nagaland Power System
16	220 kV Balipara-Sonabil line II	AEGCL	Enhance reliability and transfer capability of NER power system. As per minutes of 179th OCCM, Assam informed that LOA has been issued and will take 8 months from then

Important Grid Elements under Construction

236

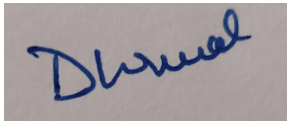
S. No.	Name of Element	Agency	Remarks
17	Bay of 220 kV Balipara – Sonabil II at Balipara	AEGCL	Enhance reliability of NER Power system. As per minutes of 179th OCCM, Assam informed that Award delayed due to MCC
18	132 kV Monarchak – Surjamaninagar D/C	TSECL	Enhance reliable evacuation of Monarchak Power Station. As per 180th OCCM, target date is Sep'21.
19	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	POWERGRID	Enhance reliability of Southern Part of NER power system
20	Reconductoring of 132 kV Imphal(PG)- Imphal II	MSPCL	Enhance transfer capability of Manipur Power System
21	Bay at Agia S/S for 132 kV Agia Nangalbibra Ckt #II	AEGCL	Enhance reliability of Assam & Meghalaya power system

Other Important Aspects for Future Transmission Planning

237

- All India Studies considering different scenarios for Renewable Generation evacuation planning
- Planning for Reactive Power Management on all India level
- Adequate Short Circuit Ratio at RE Interconnection point to be ensured
- N-1 of ICTs at RE pooling stations

Thank you !!



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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

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विद्युत मंत्रालय

अधिसूचना

नई दिल्ली , 3 दिसम्बर, 2021

का.आ. 5032(अ).—विद्युत अधिनियम, 2003 (2003 की संख्या 36) की धारा 63 के तहत परिचालित दिशानिर्देशों के पैरा 3 के उप-पैरा 3.2 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केंद्र सरकार पारेषण स्कीम के लिए निम्नलिखित बोली-प्रक्रिया समन्वयकों (बीपीसी) की नियुक्ति करती है, जैसा कि पारेषण स्कीम के नाम के आगे दर्शाया गयाहै:

क्रम सं	पारेषण स्कीम के नाम तथा कार्यक्षेत्र			बोली-प्रक्रिया समन्वयक
1.	नीमच एसईजेड से विद्युत की निकासी के लिए पारेषण प्रणाली : कार्यक्षेत्र:			
	1	नीमच में 1x125 एमवीएआर बस रिएक्टर के साथ 2x500 एमवीए, 400/220 केवी पूलिंग स्टेशन (एआईएस) की स्थापना	400/220 केवी, 500 एमवीए आईसीटी -2 400 केवी आईसीटी बे - 2 220 केवी आईसीटी बे - 2 400 केवी लाइन बे -4	आरईसीपीडीसीएल

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	भावी प्रावधान : बे सहित 400/220 केवी आईसीटी: 2 400 केवी लाइन बे: 6 220 केवी लाइन बे: 5 बे के साथ 420 केवी बस रिएक्टर:1 के लिए स्थान	(चित्तौड़गढ़ और मंदसौर लाइनों के लिए प्रत्येक 2) 220 केवी लाइन बे - आरई डेवलपर्स को दी गई कनेक्टिविटी के अनुसार (वर्तमान में 500 मेगावाट के अनुरूप 2 बे पर विचार किया जाता है) 125 एमवीएआर, 420 केवी रिएक्टर-1 420 केवी रिएक्टर बे - 1
2	नीमच पीएस - चित्तौड़गढ़ (पीजी) एस/एस 400 केवी डी/सी लाइन (न्यूनतम क्षमता 2100 एमवीए/सीकेटी नाममात्र वोल्टेज पर कंडक्टर)	**लंबाई** ~ 130 **किमी**
3	नीमच पीएस - चित्तौड़गढ़ (पीजी) एस/एस 400 केवी डी/सी लाइन के लिए चित्तौड़गढ़ (पीजी) 400 केवी एस/एस में 400 केवी लाइन बे-2 (नाममात्र वोल्टेज पर 2100 एमवीए/सीकेटी की न्यूनतम क्षमता वाला कंडक्टर)	400 केवी लाइन बे -चित्तौड़गढ़ (पीजी) में2
4	नीमच पीएस- मंदसौर सब-स्टेशन400 केवी डी/सी लाइन (नाममात्र वोल्टेज पर 2100 एमवीए/सीकेटी की न्यूनतम क्षमता वाला कंडक्टर)	**लंबाई** ~ 120 **किमी**
5	नीमच पीएस-मंदसौर एस/एसटीएन 400 केवी डी/सी लाइन के लिए मंदसौर 400 केवी एस/एस में 400 केवी लाइन बे- 2 (नाममात्र वोल्टेज पर 2100 एमवीए/सीकेटी की न्यूनतम क्षमता वाला कंडक्टर)	**मंदसौर में 400 केवी लाइन बे - 2**

टिप्पणी :

(i) नीमच पीएस-चित्तौड़गढ़ (पीजी) 400 केवी डी/सी लाइन की परिसमाप्ति के लिए चित्तौड़गढ़ (पीजी) 400 केवी एस/एस में 400 केवी 2 लाइन बे के लिए पावरग्रिड द्वारा स्थान प्रदान करना।

(ii) एमपीपीटीसीएल द्वारा नीमच पीएस-मंदसौर 400 केवी डी/सी लाइन की परिसमाप्ति के लिए मंदसौर में 400 केवी एस/एस में 400 केवी 2 लाइन बे के लिए स्थान प्रदान

करना।

(iii) एसईसीआई /आरईआईए द्वारा आरई परियोजना की पहली बोली के बाद प्रदान की जाने वाली योजना।

कार्यान्वयन की समयावधि: एसपीवी अधिग्रहण की तारीख से 18महीने

2. **खावड़ा आरई पार्क में खावड़ा पूलिंग स्टेशन -2 (केपीएस 2) की स्थापना:**

कार्यक्षेत्र

क्र.सं.	पारेषण स्कीम के कार्यक्षेत्र	क्षमता/कि मी
1	2x330 एमवीएआर 765 केवी बस रिएक्टर और 2x125 एमवीएआर 400 केवी बस रिएक्टर के साथ 765/400 केवी, 4x1500 एमवीए, केपीएस2 (जीआईएस) की स्थापना।	1500 एमवीए, 765/400 केवी आईसीटी- 4 (13x500 एमवीए, जिसमें एक अतिरिक्त इकाई शामिल है)
	5x1500 एमवीए 765/400 केवी आईसीटी के भावी विस्तार के लिए पर्याप्त स्थान	765 केवी आईसीटी बे - 4 400 केवी आईसीटी बे - 4
	765 केवी और 400 केवी पर बस सेक्शनलाइज़र	765 केवी लाइन बे - 2 400 केवी लाइन बे – 3
	प्रत्येक बस सेक्शन पर, 2x1500 एमवीए 765/400केवी आईसीटी, 1x330 एमवीएआर, 765 केवीऔर 1x125 एमवीएआर, 420 केवीबस रिएक्टर, भविष्य के विस्तार के लिए पर्याप्त स्थान।	(वर्तमान में एनटीपीसी, जीएसईसीएल और जीआईपीसीएल के लिए 3 में से एक-एक बे पर विचार किया जाता है)। बे की वास्तविक संख्या आरई डेवलपर्स को दी गई कनेक्टिविटी के अनुसार होगी।
	765 केवी स्तर पर बस सेक्शनलाइज़र सामान्य रूप से बंद रहेगा और 400 केवी स्तर पर बस सेक्शनलाइज़र सामान्य रूप से खुला रहेगा	1x330 एमवीएआर, 765 केवी बस रिएक्टर-2 (7x110 एमवीएआर, एक अतिरिक्त इकाई सहित)
	भावी प्रावधान: बे के साथ 765/400 केवी आईसीटी:5 765केवीलाइन बे: 8 400केवीलाइन बे: 10	765केवी रिएक्टर बे - 2 1x125 एमवीएआर 400 केवी बस रिएक्टर-2

आरईसीपीडीसीएल

	भावी में क्षेत्र की किसी भी निकासी की जरूरत को पूरा करने के लिए: 400/220 केवी आईसीटी: 2 220 केवी लाइन बे: 4 के लिए स्थान	400 केवी रिएक्टर बे - 2 765केवी बस सेक्शनलाइज़र बे - 2 400 केवी बस सेक्शनलाइज़र बे - 2	
2.	केपीएस1 के एक सीकेटी का एलआईएलओ- भुज पीएस 765 केवी डी/सी लाइन केपीएस2	लाइन की लंबाई - 1 किमी	

टिप्पणी: केपीएस2 में आरई प्रोजेक्ट की पहली बोली देने के बाद एसईसीआई/आरईआईए प्रदान की जाने वाली योजना।

कार्यान्वयन की समयावधि: एसपीवी अधिग्रहण की तारीख से 24 महीने

3. खावड़ा आरई पार्क में खावड़ा पूलिंग स्टेशन -3 (केपीएस 3) की स्थापना:

कार्यक्षेत्र :

क्रम सं	पारेषण स्कीम के कार्यक्षेत्र	क्षमता/कि मी	
1	1x330 एमवीएआर 765 केवी बस रिएक्टर और 1x125 एमवीएआर 400 केवी बस रिएक्टर के साथ 765/400 केवी, 3x1500 एमवीए, केपीएस3 (जीआईएस) की स्थापना। 5x1500 एमवीए 765/400 केवी आईसीटी के भावी विस्तार के लिए पर्याप्त स्थान भावी प्रावधान: बे सहित 765/400 केवी आईसीटी: 5765केवीलाइन बे: 4 400केवीलाइन बे: 10 765 केवी बस सेक्शनलाइज़र ब्रेकर:2400 केवी बस सेक्शनलाइज़र ब्रेकर:2	1500 एमवीए, 765/400 केवी आईसीटी- 3 (एक अतिरिक्त इकाई सहित 10x500 एमवीए) 765 केवी आईसीटी बे - 3 400 केवी आईसीटी बे - 3 765 केवी लाइन बे - 2 400 केवी लाइन बे - 3 वर्तमान में विचार किया गया है (आरई डेवलपर को दी गई कनेक्टिविटी के अनुसार बे की वास्तविक संख्या) 1x330 एमवीएआर, 765 केवी बस रिएक्टर-1 (4x110	आरईसीपीडीसीएल

	भविष्य में क्षेत्र की किसी भी निकासी की जरूरत को पूरा करने के लिए: 400/220 केवी आईसीटी: 2 220 केवी लाइन बे: 4 के लिए स्थान	एमवीएआर, एक अतिरिक्त इकाई सहित) 765 केवीरिएक्टर बे - 1 1x125 एमवीएआर 400 केवी बस रिएक्टर-1 400 केवी रिएक्टर बे - 1
2.	केपीएस3- केपीएस2 765 केवी डी/सी लाइन	20 किमी
3.	केपीएस2 पर 765 केवी लाइन बे - 2 केपीएस3-केपीएस2 के लिए 765 केवी एस/एस के लिए765 केवी डी/सी लाइन	केपीएस2 छोर पर 765 केवी लाइन बे: 2

टिप्पणी :

(i) पूलिंग स्टेशन 765/400 केवी, 3x1500 एमवीए आईसीटी और 1x330 एमवीएआर 765 केवी और 1x125 एमवीएआर 400 केवी बस रिएक्टर के साथ बस सेक्शन- I के साथ बनाया जाएगा।

(ii) बस सेक्शनII (भविष्य) 765/400 केवी, 4x1500 एमवीए आईसीटी और 1x330 एमवीएआर 765 केवी और 1x125 एमवीएआर 400 केवी बस रिएक्टरों के साथ बनाया जाएगा।

(iii) 765केवी स्तर पर बस सेक्शनलाइज़र सामान्य रूप से बंद रहेगा और 400 केवीस्तर पर बस सेक्शनलाइज़र सामान्य रूप से खुला रहेगा

(iv) केपीएस2 765 केवी उपलब्ध कराने के लिएएस/एस के विकासकर्ता 2 के लिए स्थान। केपीएस3-केपीएस2 765 केवी डी/सी लाइन की समाप्ति के लिए केपीएस2 765 केवी एस/एस पर 765 केवी लाइन बे।

(v) एसईसीआई//आरईआईए प्रदान करने के बाद केपीएस3 में आरई परियोजना की पहली बोली के बाद प्रदान की जाने वाली योजना

कार्यान्वयन की समयावधि: एसपीवी अधिग्रहण की तारीख से 24 महीने

4. खावड़ा पीएस1 (केपीएस1) में 3गीगावाट आरई पावर से अतिरिक्त इंजेक्शन के लिए पारेषण योजना:

कार्यक्षेत्र :

क्र.स.	पारेषण स्कीम का कार्यक्षेत्र	क्षमता/किमी	
1.	1x330 एमवीएआर 765 केवी बस रिएक्टर और 1x125 एमवीएआर 420 केवी बस रिएक्टर के साथ क्रमश दूसरे 765 केवी और 400 केवी बस सेक्शन के साथ खावड़ा पीएस1 का 765/400 केवी परिवर्तन क्षमता *(अधिकतम 4x1500 एमवीए तक) का विस्तार।	765/400 केवी, 1500 एमवीए- 4 (13x500 एमवीए, एक अतिरिक्त इकाई सहित) (निकासी की आवश्यकता के आधार पर आईसीटी की वास्तविक संख्या तय की जा सकती है) 765 केवी आईसीटी बे - 4 765 केवी लाइन बे - 2 400 केवी आईसीटी बे - 4 400 केवी लाइन बे – वर्तमान में 3 पर विचार किया गया (आरई डेवलपर्स को दी गई कनेक्टिविटी के अनुसार बे की वास्तविक संख्या) 1x330 एमवीएआर, 765 केवी बस रिएक्टर- 1 (4x110 एमवीएआर, एक अतिरिक्त इकाई सहित) 765 केवीरिएक्टर बे - 1 125 एमवीएआर, 420 केवी रिएक्टर- 1 400 केवी रिएक्टर बे-1 765 केवी बस सेक्शनलाइज़र- 2 400 केवी बस सेक्शनलाइज़र- 2	आरईसीपीडीसीएल
2.	केपीएस1-खावड़ा पीएस जीआईएस (केपीएस2) 765 केवी डी/सी लाइन (केपीएस2	लंबाई ~ 20 किमी	

		में केपीएस1-भुज के एक सीकेटी के एलआईएलओ को दरकिनार कर और एलआईएलओ सेक्शन के उपयोग के साथ स्थापित किया जाना है)		

* निकासी आवश्यकता के आधार पर आईसीटी की वास्तविक संख्या तय की जा सकती है

टिप्पणी: केपीएस1 में 3 गीगावॉट से अधिक निकासी की आवश्यकता के लिए कार्यान्वयन किया जाएगा।

कार्यान्वयन की समयावधि: एसपीवी अधिग्रहण की तारीख से 24 महीने

5 **चरण III-भाग क1 के तहत राजस्थान (20गीगावाट) में आरईजेड से विद्युत की निकासी के लिए पारेषण प्रणाली**

कार्यक्षेत्र:

क्रम सं	पारेषण योजना का कार्यक्षेत्र	क्षमता/कि मी
1.	2x125 एमवीएआर बस रिएक्टर के साथ फतेहगढ़-4 में 2x500 एमवीए, 400/220 केवी पूलिंग स्टेशन की स्थापना भावी प्रावधान: बे के साथ 400/220 केवी आईसीटी: 5 स्विच करने योग्य लाइन रिएक्टर के साथ 400 केवी लाइन बे: 6 बे के साथ 400 केवी बस रिएक्टर: 2 400 केवी सेक्शनलाइज़ेशन बे: 1 220 केवी लाइन बे: 10 220 केवी सेक्शनलाइज़ेशन बे: 2 के लिए स्थान	400/220 केवी, 500 एमवीए आईसीटी - 2 400 केवी आईसीटी बे - 2 220 केवी आईसीटी बे - 2 400 केवी लाइन बे - 2 220 केवी लाइन बे - आरई डेवलपर्स को दी गई कनेक्टिविटी के अनुसार (वर्तमान में 4 बे पर विचार किया है)। 125 एमवीएआर, 420 केवी बस रिएक्टर - 2 420 केवी रिएक्टर बे - 2
2.	फतेहगढ़-4- फतेहगढ़-3 400 केवी डी/सी ट्विन एचएलटीएस* लाइन (50 किमी)	लंबाई - 50 किमी
3.	फतेहगढ़-3 . में 400 केवी लाइन बे में से 2	400 केवी लाइन बे - 2

**नाममात्र वोल्टेज पर प्रत्येक सर्किट पर 2100 एमवीए की न्यूनतम क्षमता के साथ*

पीएफसीसीएल

टिप्पणी:

(i) शॉर्ट सर्किट स्तर को सीमित करने के लिए उपयुक्त सेक्शनलाइजेशन का प्रावधान

फतेहगढ़ -4 में 400केवीऔर 220केवी स्तर पर रखा जाएगा।

(ii) फतेहगढ़-4-फतेहगढ़-3 400 केवी डी/सी ट्विन एचएलटीएस लाइन की समाप्ति के लिए फतेहगढ़-3 एस/एस में 400 केवी लाइन बे को फतेहगढ़ -3 एस/एस (नया खंड) के विकासकर्ता स्थान उपलब्ध कराना।

(iii) ऊपर उल्लिखित लाइन की लंबाई अनुमानित है क्योंकि विस्तृत सर्वेक्षण के बाद सटीक लंबाई प्राप्त की जाएगी

(iv) फतेहगढ़ -4 पूलिंग स्टेशन पर आरई परियोजना की पहली बोली एसईसीआई// आरईआईए प्रदान करने के बाद प्रदान की जाने वाली योजना।

कार्यान्वयन की समयावधि: एसपीवी अधिग्रहण की तारीख से 18 महीने

6 **फेज-III पार्ट क3 के तहत राजस्थान में आरईजेड (20गीगावाट) से विद्युत की निकासी के लिए पारेषण प्रणाली**

कार्यक्षेत्र :

क्रम सं	पारेषण योजना का कार्यक्षेत्र	क्षमता/कि मी
1.	फतेहगढ़ 3- भादला -3 400 केवी डी/ सी लाइन (क्वाड) के साथ-साथ फतेहगढ़-3 भादला -3 400 केवी डी/ सी लाइन के दोनों छोर पर प्रत्येक सर्किट के लिए 50 एमवीएआर स्विचेबल लाइन रिएक्टर 3-	लंबाई - 200 किमी 400 केवी 50 एमवीएआर स्विचेबल लाइन रिएक्टर - 4 400 केवी 50 एमवीएआर स्विचेबल लाइन रिएक्टर के लिए स्विचिंग उपकरण - 4 400 केवी लाइन बे भादला-3 एस/एस और फतेहगढ़-3 एस/एस-4 (2+2)

टिप्पणी:

(i) फतेहगढ़ 3- भादला-3 400केवीडी/सी लाइन को फतेहगढ़-4 में 2000मेगावाट से अधिक निकासी की आवश्यकता के लिए लिया जा सकता है।

(ii) फतेहगढ़ -3 एस/एस (नया खंड) के विकासकर्ता को फतेहगढ़ -3 में स्विच करने योग्य लाइन रिएक्टरों प्रदान करने के लिए 400 केवी लाइन बे के लिए 2स्थान प्रदान करना।

(iii) भादला -3 सबस्टेशन के विकासकर्ता भादला -3 में स्विच करने योग्य लाइन रिएक्टरों के लिए स्थान के साथ 400 केवी लाइन बे में से 2 के लिए स्थान प्रदान करेंगे।

पीएफसीसीएल

कार्यान्वयन की समयावधि:एसपीवी अधिग्रहण की तारीख से 18महीने

7 **फेज-III पार्ट ख1 के तहत राजस्थान (20गीगावाट) में आरईजेड से विद्युत की निकासी के लिए पारेषण प्रणाली**

कार्यक्षेत्र :

क्र.सं.	पारेषण योजना का कार्यक्षेत्र	क्षमता/कि मी

	1.	2x330 एमवीएआर (765 केवी) बस रिएक्टर और 2x125 एमवीएआर (420 केवी) बस रिएक्टर के साथ भादला-3 में 2x1500 एमवीए, 765/400 केवी और 3x500 एमवीए, 400/220 केवी पूलिंग स्टेशन की स्थापना भावी प्रावधान: बे के साथ 765/400केवीआईसीटी: 2 स्विच करने योग्य लाइन रिएक्टर के साथ 765केवी लाइन बे: 4 765केवीलाइन बे: 4 बे सहित 765केवी बस रिएक्टर: 2 बे के साथ 400/220 केवी आईसीटी: 10 400 केवी लाइन बे: 8 स्विच करने योग्य लाइन रिएक्टर के साथ 400 केवी लाइन बे: 4 बे के साथ 400 केवी बस रिएक्टर: 2 400 केवी सेक्शनलाइज़ेशन बे: 2 220 केवी लाइन बे: 12 220 केवी सेक्शनलाइज़ेशन बे: 2 के लिए स्थान	765/400केवी 1500 एमवीए आईसीटी: 2 (7x500 एमवीए, एक अतिरिक्त इकाई सहित) 765केवीआईसीटी बे - 2 400/220 केवी, 500 एमवीए आईसीटी - 3 765kV लाइन बे - 2 400 केवी आईसीटी बे - 5 220 केवी आईसीटी बे - 3 400 केवी लाइन बे - 2 220 केवी लाइन बे: आरई डेवलपर्स को दी गई कनेक्टिविटी के अनुसार (वर्तमान में 5 बे पर विचार किया जा रहा है) 330 एमवीएआर बस रिएक्टर-2 (7x110 एमवीएआर, एक अतिरिक्त इकाई सहित) 765केवीरिएक्टर बे- 2 125 एमवीएआर, 420 केवी बस रिएक्टर - 2 420 केवी रिएक्टर बे - 2	पीएफसीसीएल
	2.	फतेहगढ़-2 - भादला-3 400 केवी डी/सी लाइन दोनों छोर पर प्रत्येक सर्किट के लिए 50 एमवीएआर स्विचेबल लाइन रिएक्टर के साथ फतेहगढ़-2-भादला-3 400 केवी डी/सी लाइन(क्वाड मूस)	लंबाई - 200 किमी 400 केवी 50 एमवीएआर स्विचेबल लाइन रिएक्टर -4 स्विचिंग उपकरण के लिए 400 केवी 50 एमवीएआर स्विचेबल लाइन रिएक्टर -4	
	3.	फतेहगढ़-2 के लिए फतेहगढ़-2 में 400 केवी लाइन बे में से 2 - भादला-3 400 केवी डी/सी लाइन	400 केवी लाइन बे - 2	

	4.	भादला-3-सीकर-II 765 केवी डी/सी लाइन के साथ-साथ भादला-3-सीकर-II 765 केवी डी/सी लाइन के प्रत्येक छोर पर प्रत्येक सर्किट के लिए 330 एमवीएआर स्विचेबल लाइन रिएक्टर	लंबाई - 380 किमी 765 केवी 330 एमवीएआर के लिए स्विचिंग उपकरण स्विच करने योग्य लाइन रिएक्टर -4 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर- 4
	5	सीकर-II में 765 केवीलाइन बे-2	765 केवी लाइन बे - 2

टिप्पणी :

(i) रामगढ़ पीएस/भादला-3 पीएस में आरई परियोजना की पहली बोली एसईसीआई//आरईआईए प्रदान करने के बाद प्रदान की जाने वाली योजना

(ii) शॉर्ट सर्किट स्तर को सीमित करने के लिए भादला -3 में 400केवीऔर 220केवी स्तर पर उपयुक्त सेक्शनलाइज़ेशन का प्रावधान रखा जाएगा।

(iii) फतेहगढ़-2 एस/एस में स्विच करने योग्य लाइन रिएक्टरों के लिए स्थान के साथ 400 केवी लाइन बे-2 के लिए पावर ग्रिड द्वारा स्थान उपलब्ध कराना।

(iv) ऊपर उल्लिखित लाइन की लंबाई अनुमानित है, क्योंकि विस्तृत सर्वेक्षण के बाद सटीक लंबाई प्राप्त की जाएगी।

(v) सीकर-II एस/एस के विकासकर्ता को सीकर-II एस/एस में 765 केवी लाइन बे में से 2 के लिए स्थान प्रदान करने के साथ-साथ स्विच करने योग्य लाइन रिएक्टरों के लिए स्थान प्रदान करना।

कार्यान्वयन की समय सीमा: एसपीवी अधिग्रहण की तारीख से 18 महीने.

8 **चरण- III भाग ग1के तहत राजस्थान (20गीगावाट) में आरईजेडसे विद्युत की निकासी के लिए पारेषण प्रणाली**

कार्यक्षेत्र:

क्रम सं	पारेषण योजना का कार्यक्षेत्र	क्षमता/कि मी
1.	2x1500 एमवीए, 765/400 केवी और 2x500 एमवीए की स्थापना,2x240 एमवीएआर (765 केवी) बस रिएक्टर और 2x125 एमवीएआर (420 केवी) बस रिएक्टर के साथ रामगढ़ में 400/220 केवी पूलिंग स्टेशन भावी प्रावधान : 765/400केवी आईसीटी बे सहित: 3 स्विच करने योग्य लाइन रिएक्टर के साथ	765/400केवी 1500 एमवीए आईसीटी: 2 (एक अतिरिक्त इकाई सहित 7x500 एमवीए) 765 केवी आईसीटी बे -2 400/220 केवी, 500 एमवीए आईसीटी - 2 400 केवी आईसीटी बे - 4 220 केवी आईसीटी बे - 2 400 केवी लाइन बे - आरई डेवलपर्स

आरईसीपीडीसीएल

	765केवीलाइन बे: 2 बे सहित 765केवीबस रिएक्टर: 2 बे सहित 400/220 केवी आईसीटी: 6 स्विच करने योग्य लाइन रिएक्टर के साथ 400 केवी लाइन बे: 4 400 केवी लाइन बे: 4 बे सहित 400केवीबस रिएक्टर: 2 400केवीसेक्शनलाइज़ेशन बे: 3 220 केवी लाइन बे: 8 220केवी सेक्शनलाइज़ेशन बे: 2	को दी गई कनेक्टिविटी के अनुसार (वर्तमान में 2 बे विचार-विमर्श किया गया) 220 केवी लाइन बे - आरई डेवलपर्स को दी गई कनेक्टिविटी के अनुसार (वर्तमान में 4 बे पर विचार किया गया) 765 केवी लाइन बे - 2 240 एमवीएआर बस रिएक्टर-2 (एक अतिरिक्त इकाई पर विचार करते हुए 7x80 एमवीएआर) 765kV रिएक्टर बे- 2 125 एमवीएआर, 420 केवी बस रिएक्टर - 2 420 केवी रिएक्टर बे - 2
2.	रामगढ़ - भादला -3 765 केवी डी / सी लाइन (180 किमी) के साथ 240 एमवीएआर स्विचेबल लाइन रिएक्टर के साथ रामगढ़ के रामगढ़ छोर पर प्रत्येक सर्किट पर - भादला -3 765 केवी डी / सी लाइन	लंबाई - 180 किमी 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर- 2 स्विचिंग उपकरण के लिए765 केवी 240 एमवीएआर स्विचेबल लाइन रिएक्टर -2
3.	भादला-3 पर 765केवीदो लाइन बे	765 केवी लाइन बे - 2

टिप्पणी :

(i) चरण III-भाग ग 1 पैकेज का कार्यान्वयन सूची चरण III-भाग ख 1 (भादला-3 पीएस की स्थापना, 765केवी भादला-3 पीएस-सीकर-2 डी/सी लाइन, 400केवी भादला-3 पीएस- फतेहगढ़-2 डी/सी लाइन)

(ii) भादला-3 एस/एस के विकासकर्ता को 2 के लिए स्थान उपलब्ध कराने के लिए रामगढ़-भादला-3 765केवीडी/सी लाइन को समाप्त करने के लिए भादला-3 एस/एस में 765 केवी लाइन बे।

(iii) ऊपर उल्लिखित लाइन की लंबाई अनुमानित है क्योंकि विस्तृत सर्वेक्षण के बाद सटीक लंबाई प्राप्त की जाएगी।

(iv) शॉर्ट सर्किट स्तर को सीमित करने के लिए रामगढ़ में 400केवीऔर 220केवी स्तर पर उपयुक्त सेक्शनलाइज़ेशन का प्रावधान रखा जाएगा।

(v) *एसईसीआई//आरईआईए प्रदान करने के बाद दी जाने वाली योजना रामगढ़ पीएस/भादला-3 पीएस में आरई परियोजना की पहली बोली.*

कार्यान्वयन की समय सीमा: एसपीवी अधिग्रहण की तारीख से 18 महीने।

9 **चरण-III भाग डी के तहत राजस्थान (20 गीगावाट)में आरईजेडसे विद्युत की निकासी के लिए पारेषण प्रणाली**

कार्यक्षेत्र:

क्रम सं	पारेषण योजना का कार्यक्षेत्र	क्षमता/कि मी
1.	सीकर-II- खेतड़ी 765 केवी डी/सी लाइन	लंबाई – 90 किमी
2	सीकर-II- नरेला 765 केवी डी/सी लाइन के साथ-साथ सीकर-II - नरेला 765 केवी डी/सी लाइन के प्रत्येक छोर पर प्रत्येक सर्किट के लिए 240 एमवीएआर स्विचेबल लाइन रिएक्टर	लंबाई - 260 किमी स्विचिंग उपकरणके लिए 765 केवी 240 एमवीएआर स्विचेबल लाइन रिएक्टर -4 240 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर- 4
3	झटिकारा - द्वारका 400केवीडी/सी लाइन (क्वाड) (20किमी)	लंबाई – 20 किमी
4	सीकर-II - खेतड़ी के लिए सीकर-II में 765 केवी लाइन बे 765 केवी डी/सी लाइन और सीकर-II -नरेला 765 केवी डी/सी लाइन	765 केवी लाइन बे - 4
5	2 खेतड़ी और नरेला दोनों में 765केवीलाइन बे	765 केवी लाइन बे - 4
6	2 झटीकारा और द्वारका दोनों में 400 केवी लाइन बे	400केवी लाइन बे - 4

आरईसीपीडीसीएल

टिप्पणी :

(i) दो स्विचबिल लाइन रिएक्टरों के लिए स्थान सहित सीकर-II सब-स्टेशन में चार 765 केवी बे लाइन के लिए सीकर-//विकासकर्ता द्वारा स्थान उपलब्ध कराना।

(ii) नरेला सब्-स्टेशन में स्विचबिल लाइन रिएक्टरों के लिए स्थान सहित दो 765 केवी बे लाइन के लिए नरेला सब-स्टेशन विकासकर्ता द्वारा स्थान उपलब्ध कराना।

	(iii) पावरग्रिड द्वारा खेतड़ी सबस्टेशन पर दो *765* केवी लाइन बे के लिए स्थान उपलब्ध कराना। (iv) क्रमशः झटिकारा और द्वारका सब-स्टेशन दोनों में पावरग्रिड और डीटीएल दो 400केवीलाइन बे के लिए स्थान उपलब्ध कराना। (v) ऊपर उल्लिखित लाइन की लंबाई अनुमानित है क्योंकि विस्तृत सर्वेक्षण के बाद सटीक लंबाई प्राप्त की जाएगी। (vi) चरण-*III* भाग सी *1* के तहत राजस्थान में आरईजेड (*20* गीगावाट) से विद्युत की निकासी के लिए पारेषण प्रणाली के मिलान समय सीमा में लागू की जाने वाली योजना **कार्यान्वयन की समय सीमा**: एसपीवी अधिग्रहण की तारीख से 18 महीने	
10	**फेज-III पार्ट एफ के तहत राजस्थान (20 गीगावाट) में आरईजेड से विद्युत की निकासी के लिए पारेषण प्रणाली** **कार्यक्षेत्र** :	आरईसीपीडीसीएल

क्रम सं	पारेषण योजना का कार्यक्षेत्र	क्षमता / किमी
1	ब्यावर के निकट उपयुक्त स्थान पर 2x1500 एमवीए, 765/400 केवी सबस्टेशन की स्थापना 2x330 एमवीएआर 765 केवी बस रिएक्टर और 420 केवी बस रिएक्टर के साथ 2x125 एमवीएआर भावी प्रावधान: बे के साथ 765/400 केवी आईसीटी:2 स्विच करने योग्य लाइन रिएक्टर के साथ 765 केवीलाइन बे: 6 बे के साथ 765 केवीबस रिएक्टर: 2 बे के साथ 400/220 केवी आईसीटी: 2 स्विच करने योग्य लाइन रिएक्टर के साथ 400 केवी लाइन बे: 4 बे के साथ 400 केवीबस रिएक्टर: 1 220 केवी लाइन बे: 4 के लिए स्थान	765/400 केवी 1500 एमवीए आईसीटी: 2 (7x500 एमवीए, एक अतिरिक्त इकाई सहित) 330 एमवीएआर, 765 केवी बस रिएक्टर-2 (7x110 एमवीएआर, एक अतिरिक्त इकाई सहित) 765 केवी आईसीटी बे- 2 400 केवी आईसीटी बे- 2 765 केवी लाइन बे - 6 400 केवी लाइन बे- 2 765 केवीरिएक्टर बे- 2 125 एमवीएआर, 420 केवी बस रिएक्टर-2420 केवी रिएक्टर बे- 2
2	ब्यावर में अजमेर-चित्तौड़गढ़ के दोनों सर्किटों का एलआईएलओ 765 केवी डी/सी	लंबाई - 45 किमी
3	ब्यावर में 400 केवी कोटा-मेर्टा लाइन का एलआईएलओ	लंबाई - 20 किमी

	4	फतेहगढ़-3- ब्यावर 765 केवी डी/सी के साथ-साथ 330 एमवीएआर स्विचेबल लाइन रिएक्टर प्रत्येक सर्किट के लिए के प्रत्येक छोर पर फतेहगढ़-3-ब्यावर 765 केवी डी/सी लाइन	लंबाई - 350 किमी स्विचिंग उपकरण के लिए 765 केवी 330 एमवीएआर स्विच करने योग्य लाइन रिएक्टर -4 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर- 4	

टिप्पणी :

(i) 765 केवी स्विचेबल लाइन रिएक्टरों के लिए स्थान सहित फतेहगढ़ सब-स्टेशन में फतेहगढ़ -3 के विकासकर्ता द्वारा दो 765 केवी लाइन बे

(ii) ऊपर उल्लिखित लाइन की लंबाई अनुमानित है क्योंकि विस्तृत सर्वेक्षण के बाद सटीक लंबाई प्राप्त की जाएगी.

(iii) फतेहगढ़-3 (नया खंड और/या फतेहगढ़-4) में आरई परियोजना की पहली बोली एसईसीआई//आरईआईए प्रदान करने के बाद प्रदान की जाने वाली योजना।

कार्यान्वयन समय सीमा: एसपीवी अधिग्रहण की तारीख से 18 महीने

11 **फेज-III पार्ट जी के तहत राजस्थान (20 गीगावाट) में आरईजेड से विद्युत की निकासी के लिए पारेषण प्रणाली**

कार्यक्षेत्र :

क्रम सं	पारेषण योजना का कार्यक्षेत्र	क्षमता / किमी	
1.	फतेहगढ़-3- ब्यावर 765 केवी डी/सी (दूसरा) के साथ-साथ 330 एमवीएआर स्विचेबल लाइन रिएक्टर के साथ प्रत्येक सर्किट के लिए प्रत्येक छोर पर फतेहगढ़-3-ब्यावर 765 केवी डी/सी लाइन	लंबाई - 350 किमी स्विचिंग उपकरण के लिए 765 केवी 330 एमवीएआर स्विचकरने योग्य लाइन रिएक्टर -4 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर-4	पीएफसीसीएल
2	ब्यावर और फतेहगढ़ दोनों में 765 केवी 2 लाइन बे - 3	765 केवी लाइन बे - 4	

टिप्पणी :

(i) फतेहगढ़ -3 पीएस (नया खंड) और फतेहगढ़ -4 पीएस में संचयी 3000 मेगावाट से अधिक निकासी की आवश्यकता के लिए कार्यान्वयन किया जाना है।

(ii) फतेहगढ़-3 एस/एस के विकासकर्ता फतेहगढ़-3 एस/एस में 765 केवी लाइन बे में से 2 के लिए स्थान प्रदान करने के साथ-साथ 765 केवी स्विचेबल लाइन रिएक्टरों के लिए

	स्थान प्रदान करेंगे। (iii) ब्यावर एस/एस के विकासकर्ता ब्यावर एस/एस में 765 केवी लाइन बे में से 2 के लिए स्थान के साथ-साथ 765 केवी स्विचेबल लाइन रिएक्टरों के लिए स्थान प्रदान करेंगे। (iv) ऊपर उल्लिखित लाइन की लंबाई अनुमानित है क्योंकि विस्तृत सर्वेक्षण के बाद सटीक लंबाई प्राप्त की जाएगी **कार्यान्वयन समय सीमा:** एसपीवी अधिग्रहण की तारीख से 18 महीने	
12	**चरण-III भाग एच के तहत राजस्थान (20 गीगावाट) में आरईजेड से विद्युत की निकासी के लिए पारेषण प्रणाली** **कार्यक्षेत्र :**	पीएफसीसीएल

क्र. सं.	पारेषण योजना का कार्यक्षेत्र	क्षमता / किमी
1.	2x330 एमवीएआर, 765 केवी बस रिएक्टर और 2x125 एमवीएआर, 420 केवी बस रिएक्टर के साथ दौसा के निकट उपयुक्त स्थान पर 2x1500 एमवीए 765/400 केवी सबस्टेशन की स्थापना भावी प्रावधान: बे के साथ 765/400 केवी आईसीटी: 2 स्विच करने योग्य लाइन रिएक्टर के साथ 765 केवी लाइन बे: 4 765 केवी बस रिएक्टर बे सहित: 2 बे के साथ 400/220 केवी आईसीटी: 2 स्विच करने योग्य लाइन रिएक्टर के साथ 400 केवी लाइन बे: 4 बे के साथ 400 केवी बस रिएक्टर: 1 220 केवी लाइन बे: 4 के लिए स्थान	765/400 केवी 1500 एमवीए आईसीटी: 2 (7x500 एमवीए, एक अतिरिक्त इकाई सहित) 330 एमवीएआर, 765 केवी बस रिएक्टर- 2 (7x110 एमवीएआर, एक अतिरिक्त इकाई सहित) 765 केवी आईसीटी बे - 2 400 केवी आईसीटी बे - 2 765 केवी लाइन बे - 6 400 केवी लाइन बे- 4 765 केवीरिएक्टर बे- 2 125 एमवीएआर, 420 केवी बस रिएक्टर - 2 420 केवी रिएक्टर बे - 2
2.	दौसा के दौसा छोर पर प्रत्येक सर्किट के लिए 240 एमवीएआर स्विचेबल लाइन रिएक्टर सहित दौसा में जयपुर (फागी)-ग्वालियर 765 केवी डी/सी के दोनों सर्किटों का एलआईएलओ 765 केवी डी/सी लाइन	लंबाई - 40 किमी स्विचिंग उपकरण के लिए 765 केवी 240 एमवीएआर स्विचेबल लाइन रिएक्टर-2 240 एमवीएआर 765 केवी स्विचेबल लाइन रिएक्टर- 2

			(एक अतिरिक्त इकाई पर विचार करते हुए 7x80 एमवीएआर) (765 केवी ब्यावर-दौसा डी/सी लाइन के लिए दौसा छोर पर स्पेयर रिएक्टर के रूप में भी इस्तेमाल किया जाएगा)
	3	दौसा के दौसा छोर पर प्रत्येक सर्किट के लिए 50 एमवीएआर स्विचेबल लाइन रिएक्टर के साथ दौसा में आगरा-जयपुर (दक्षिण) 400 केवी डी/सी के दोनों सर्किटों का एलआईएलओ 400 केवी डी/सी लाइन	लंबाई - 30 किमी स्विचिंग उपकरण के लिए 420 केवी, 50 एमवीएआर स्विचेबल लाइन रिएक्टर -2 420 केवी, 50 एमवीएआर स्विचेबल लाइन रिएक्टर-2
	4	ब्यावर-दौसा 765 केवी डी/सी लाइन (240 किमी) प्रत्येक सर्किट के लिए प्रत्येक छोर पर 240 एमवीएआर स्विचेबल लाइन रिएक्टर	लंबाई - 240 किमी स्विचिंग उपकरण के लिए 765 केवी 240 एमवीएआर स्विच करने योग्य लाइन रिएक्टर -4 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर- 4
	5	ब्यावर - दौसा 765 केवी डी/सी लाइन के लिए ब्यावर में दो 765 केवीलाइन बे	765 केवी लाइन बे - 2

टिप्पणी:

(i) फतेहगढ़ -3 पीएस (नया खंड) और फतेहगढ़ -4 पीएस में संचयी 3000 मेगावाट (लगभग) से अधिक निकासी की आवश्यकता के लिए योजना का कार्यान्वयन।

(ii) ब्यावर एस/एस के विकासकर्ता अपने सबस्टेशनों पर 765 केवी स्विचेबल लाइन रिएक्टरों के साथ-साथ दो 765 केवी लाइन बे के लिए स्थान उपलब्ध कराएंगे।

(iii) ऊपर उल्लिखित लाइन की लंबाई अनुमानित है क्योंकि विस्तृत सर्वेक्षण के बाद सटीक लंबाई प्राप्त की जाएगी।

कार्यान्वयन की समय सीमा: एसपीवी अधिग्रहण की तारीख से 18 महीने

13 **सियोट, जम्मू और कश्मीर में 400/220 केवी, 2x315 एमवीए एस/एस का निर्माण**

कार्यक्षेत्र :

क्रम सं	पारेषण योजना का कार्यक्षेत्र	क्षमता / किमी
1.	1x80 एमवीएआर (420 केवी)	315 एमवीए, 400/220 केवी आईसीटी

		बस रिएक्टरों के साथ 7x105 एमवीए, 400/220 केवी सियोट एस/एस की स्थापना भावी प्रावधान: बेके साथ 400/220 केवी आईसीटी: 2 स्विच करने योग्य लाइन रिएक्टर के साथ 400 केवी लाइन बे: 4 220 केवी लाइन बे: 4 के लिए स्थान	(7x105 एमवीए, एक अतिरिक्त सहित) 400 केवी आईसीटी बे - 2 220 केवी आईसीटी बे - 2 400 केवी लाइन बे - 4 220 केवी लाइन बे - 6 80 एमवीएआर, 420 केवी बस रिएक्टर - 1 420 केवी रिएक्टर बे - 1	पीएफसीसीएल
	2.	400 केवी डी/सी अमरगढ़ (कुंजर) का एलआईएलओ- 400/220 केवी सिओट एस/एस पर सांबा लाइन	लंबाई - 15 किमी	
	कार्यान्वयन समय सीमा: मार्च, 2024			

2. बोली-प्रक्रिया समन्वयकों की नियुक्ति दिशानिर्देशों में निर्धारित शर्तों के अधीन है।

[फा.सं. 15/3/2018- पारेषण-भाग (1)]

मृत्युंजय कुमार नारायण, संयुक्त सचिव (पारेषण)

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 3rd December, 2021

S.O. 5032(E).—In exercise of the powers conferred by sub- para 3.2 of Para 3 of the Guidelines circulated under Section 63 of the Electricity Act, 2003 (no. 36 of 2003), the Central Government hereby appoints the following Bid-Process Coordinators (BPCs) for the Transmission Schemes, as shown against the name of the Transmission Schemes:

Sl. No.	Name & Scope of the Transmission Scheme	Bid Process Coordinator
1.	**Transmission system for evacuation of power from Neemuch SEZ:** **Scope:**	

Sl. No	Scope of the Transmission Scheme	Capacity /km
1	Establishment of 2x500 MVA, 400/220 kV Pooling Station (AIS) at Neemuch with 1x125 MVAr Bus Reactor Future provisions: Space for 400/220 kV ICTs along with bays: 2	400/220 kV, 500 MVA ICT –2 nos. 400 kV ICT bays – 2 nos. 220 kV ICT bays – 2 nos. 400 kV line bays –4 (2 each for Chittorgarh & Mandsaur

	nos. 400 kV line bays: 6 nos. 220 kV line bays: 5 nos. 420kV bus reactor along with bays:1	lines) 220 kV line bays – As per connectivity granted to RE developers (2 no. of bays considered at present corresponding to 500 MW) 125 MVAr, 420 kV reactor-1 no. 420 kV reactor bay – 1 no.
2	Neemuch PS – Chhittorgarh (PG) S/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	Length ~ 130 km
3	2 nos. of 400 kV line bays at Chhittorgarh (PG) 400 kV S/s for Neemuch PS – Chhittorgarh (PG) S/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	400 kV line bays – 2 nos. at Chhittorgarh (PG)
4	Neemuch PS- Mandsaur S/stn 400 kV D/c line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	Length ~120 km
5	2 no. of 400 kV line bays at Mandsaur 400 kV S/s for Neemuch PS- Mandsaur S/stn 400 kV D/c line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)	400 kV line bays – 2 nos. at Mandsaur

Note:

i. Powergrid to provide space for 2 no. of 400 kV line bays at Chhittorgarh (PG) 400 kV S/s for termination of Neemuch PS – Chhittorgarh (PG) 400 kV D/c line.

ii. MPPTCL to provide space for 2 no. of 400 kV line bays at Mandsaur 400 kV S/s for termination of Neemuch PS – Mandsaur 400 kV D/c line.

iii. Scheme to be awarded after SECI/ /REIA awards first bid of RE project.

Implementation Time-frame: 18 months from date of SPV acquisition

RECPDCL

2. Establishment of Khavda Pooling Station-2 (KPS2) in Khavda RE Park:

Scope

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1	Establishment of 765/400 kV, 4x1500MVA, KPS2 (GIS) with 2x330 MVAR 765 kV bus reactor and 2x125 MVAR 400 kV bus reactor. Adequate space for future expansion of 5x1500 MVA	1500MVA, 765/400kV ICT- 4 nos. (13x500 MVA, including one spare unit) 765 kV ICT bays – 4 nos. 400 kV ICT bays – 4 nos. 765 kV line bays – 2 nos.

RECPDCL

			765/400 kV ICT's Bus sectionalizer at 765kV & 400kV. On each bus section, there shall be 2x1500MVA 765/400kV ICTs, 1x330MVAr, 765 kV & 1x125MVAr 420kV bus reactor, space for future expansion. Bus sectionalizer at 765 kV level shall normally be closed and bus sectionalizer at 400 kV level shall normally be open Future provisions: Space for 765/400 kV ICTs along with bays: 5 nos. 765kV line bays: 8 nos. 400kV line bays: 10 nos. To take care of any drawal needs of area in future: 400/220 kV ICT: 2 nos. 220 kV line bays: 4 nos.	400 kV line bays – 3 nos. (3 no. of bays considered at present, one each for NTPC, GSECL & GIPCL). Actual nos. of bays would be as per connectivity granted to RE developers. 1x330 MVAr, 765 kV bus reactor-2 (7x110 MVAr, including one spare unit) 765 kV reactor bay – 2 1x125 MVAr 400 kV bus reactor-2 400 kV reactor bay – 2 765 kV bus sectionalizer bay – 2 400 kV bus sectionalizer bay – 2	
		2.	LILO of one ckt. of KPS1- Bhuj PS 765 kV D/c line at KPS2	Line length – 1 km	
		Note:Scheme to be awarded after SECI/ /REIA awards first bid of RE projectat KPS2			
		Implementation Time-frame: 24 months from date of SPV acquisition.			
3.	**Establishment of Khavda Pooling Station-3 (KPS3) in Khavda RE Park:** **Scope:**				
		Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**	
		1	Establishment of 765/400 kV, 3x1500 MVA, KPS3 (GIS) with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 400 kV bus reactor. Adequate space for future expansion of 5x1500 MVA 765/400 kV ICT's Future provisions:	1500 MVA, 765/400 kV ICT- 3 (10x500 MVA, including one spare unit) 765 kV ICT bays – 3 400 kV ICT bays – 3 765 kV line bays – 2	**RECPDCL**

	Space for 765/400 kV ICTs along with bays: 5 nos. 765kV line bays: 4 nos. 400kV line bays: 10 nos. 765 kV Bus sectionalizer breaker: 2 nos. 400 kV Bus sectionalizer breaker: 2 nos. To take care of any drawal needs of area in future: 400/220 kV ICT: 2 nos. 220 kV line bays: 4 nos.	nos. 400 kV line bays – 3 nos, considered at present (Actual nos. of bays as per connectivity granted to RE developer) 1x330 MVAr, 765 kV bus reactor-1 (4x110 MVAr, including one spare unit) 765 kV reactor bay – 1 1x125 MVAr 400 kV bus reactor-1 400 kV reactor bay – 1
2.	KPS3- KPS2 765 kV D/c line	20 km
3.	2 no. of 765 kV line bays at KPS2 765 kV S/s for KPS3-KPS2 765 kV D/c line	765 kV line bays: 2 nos. at KPS2 end

Note:

i. Pooling station shall be created with bus section-I with 765/400 kV, 3x1500MVA ICTs and 1x330 MVAR 765 kV & 1x125 MVAR 400 kV bus reactors.

ii. Bus section II (future) shall be created with 765/400 kV, 4x1500MVA ICTs and 1x330 MVAR 765 kV & 1x125 MVAR 400 kV bus reactors.

iii. Bus sectionalizer at 765kV level shall normally be closed and bus sectionalizer at 400kV level shall normally be open

iv. Developer of KPS2 765 kV S/s to provide space for 2 no. of 765 kV line bays at KPS2 765 kV S/s for termination of KPS3-KPS2 765 kV D/c line.

v. *Scheme to be awarded after SECI/ /REIA awards first bid of RE project* at KPS3

Implementation Time-frame: 24 months from date of SPV acquisition

4. Transmission scheme for injection beyond 3 GW RE power at Khavda PS1 (KPS1)

Scope:

Sl. No.	Scope of the Transmission Scheme	Capacity /km	
1.	Augmentation of Khavda PS1 by 765/400 kV transformation capacity *(max. upto 4x1500 MVA) with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 420 kV bus reactor on 2nd 765 kV and 400 kV bus section respectively.	765/400 kV, 1500 MVA- 4 (13x500 MVA, including one spare unit) (Actual no. of ICTs may be decided based on evacuation requirement) 765 kV ICT bays - 4	**RECPDCL**

			765 kV line bays - 2 400 kV ICT bays – 4 400 kV line bays – 3 nos. considered at present (Actual no. of bays as per connectivity granted to RE developers) 1x330 MVAr, 765 kV bus reactor- 1 (4x110 MVAr, including one spare unit) 765 kV reactor bay – 1 125 MVAr, 420 kV reactor- 1 400 kV Reactor bay- 1 765 kV bus sectionalizer- 2 400 kV bus sectionalizer- 2	
	2.	KPS1-Khavda PS GIS (KPS2) 765 kV D/C line (to be established with bypassing of LILO of one ckt. of KPS1-Bhuj at KPS2 and utilisation of LILO section)	Length ~ 20 km	

* Actual no. of ICTs may be decided based on evacuation requirement

Note: Implementation to be taken up for evacuation requirement beyond 3 GW at KPS1

Implementation Timeframe: 24 months from date of SPV acquisition

5 Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A1

Scope

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x500 MVA, 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor Future provisions: Space for 400/220 kV ICTs along with bays: 5 nos. 400 kV line bays along with switchable line reactor: 6 nos. 400 kV Bus Reactor along with bays: 2	400/220 kV, 500 MVA ICT - 2nos. 400 kV ICT bays - 2 nos. 220 kV ICT bays - 2 nos. 400 kV line bays - 2 nos. 220 kV line bays - As per connectivity

PFCCL

		nos. 400 kV Sectionalization bay: 1 nos. 220 kV line bays: 10 nos. 220 kV sectionalization bay: 2 nos.	granted to RE developers (4 no. of bays considered at present). 125 MVAr, 420 kV bus reactor - 2 nos. 420 kV reactor bay - 2 nos.
	2.	Fatehgarh-4- Fatehgarh-3 400 kV D/c twin HLTS* line (50 km)	Length – 50 km
	3.	2 no. of 400 kV line bays at Fatehgarh-3	400 kV line bays - 2 nos.

** with minimum capacity of 2100 MVA on each circuit at nominal voltage*

Note:

i. Provision of suitable sectionalization shall be kept at Fatehgarh-4 at 400kV & 220kV level to limit short circuit level

ii. Developer of Fatehgarh-3 S/s(new section) to provide space for 2 nos. of 400 kV line bays at Fatehgarh-3 S/s for termination of Fatehgarh-4- Fatehgarh-3 400 kV D/c twin HLTS line

iii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

iv. *Scheme to be awarded after SECI/ /REIA awards first bid of RE project* at Fatehgarh-4 pooling station.

Implementation Timeframe: 18 months from date of SPV acquisition.

6 Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part A3

Scope :

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Fatehgarh 3- Bhadla-3 400kV D/c line(Quad) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 3- Bhadla-3 400kV D/c line	Length – 200 km 400 kV 50 MVAr Switchable line reactor – 4 nos. Switching equipment for 400 kV 50 MVAR switchable line reactor – 4 nos. 400 kV line bays Bhadla-3 S/s & Fatehgarh-3 S/s - 4 nos. (2+2)

Note:

i. Fatehgarh 3- Bhadla-3 400 kV D/c line may be taken up for evacuation requirement beyond 2000 MW at Fatehgarh-4.

ii. Developer of Fatehgarh-3 S/s(new section) to provide space 2 nos. of 400 kV line bays along with space for switchable line reactors at Fatehgarh-3

iii. Developer of Bhadla –3 substation to provide space for 2 nos. of 400 kV line bays along with space for switchable line reactors at Bhadla -3

Implementation Timeframe: 18 months from date of SPV acquisition.

PFCCL

7 Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1

Scope:

Sl. No.	Scope of the Transmission Scheme	Capacity /km	
1.	Establishment of 2x1500 MVA, 765/400kV & 3x500 MVA , 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus Reactor Future provisions: Space for 765/400kV ICTs along with bays: 2nos. 765kV line bay along with switchable line reactor: 4nos. 765kV line bay: 4nos. 765kV Bus Reactor along with bays: 2 nos. 400/220 kV ICTs along with bays: 10nos. 400 kV line bays: 8 nos. 400 kV line bays along with switchable line reactor:4 400 kV Bus Reactor along with bays: 2 nos. 400 kV Sectionalization bay: 2 nos. 220 kV line bays: 12 nos. 220 kV sectionalization bay: 2nos.	765/400kV 1500 MVA ICTs: 2 nos (7x500 MVA, including one spare unit) 765kV ICT bays - 2 nos. 400/220 kV, 500 MVA ICT - 3 nos. 765kV line bays - 2 nos. 400 kV ICT bays - 5 nos. 220 kV ICT bays - 3 nos. 400 kV line bays - 2 nos 220 kV line bays: As per connectivity granted to RE developers (5 no. of bays considered at present) 330 MVAr Bus Reactor-2 nos. (7x110 MVAr, including one spare unit) 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor - 2 nos. 420 kV reactor bay - 2 nos.	PFCCL
2.	Fatehgarh-2 – Bhadla-3 400 kV D/c line (Quad moose) along with 50 MVAr Switchable line reactor for each circuit at both ends of Fatehgarh 2- Bhadla-3 400 kV D/c line	Length – 200 km 400 kV 50 MVAR switchable line reactor –4 Switching equipment for 400 kV 50 MVAR switchable line reactor –4	
3.	2 nos. of 400 kV line bays at Fatehgarh-2 for Fatehgarh-2 – Bhadla-3 400kV D/c line	400 kV line bays - 2 nos.	
4.	Bhadla-3 – Sikar-II 765 kV D/c line along with 330 MVAr Switchable line reactor for each circuit at each end of Bhadla-3 – Sikar-II 765 kV D/c line	Length – 380km Switching equipment for 765 kV 330 MVAR switchable line reactor –4 765 kV, 330 MVAr Switchable line reactor- 4	
5	2 nos. of 765 kV line bays at Sikar-II	765 kV line bays - 2nos	

Note:

i. *Scheme to be awarded after SECI/ /REIA awards first bid of RE project* at Ramgarh PS/Bhadla-3 PS

ii. Provision of suitable sectionalization shall be kept at Bhadla-3 at 400kV & 220kV level to limit short circuit level

iii. Powergrid to provide space for 2 nos. of 400 kV line bays along with space for switchable line reactors at Fatehgarh-2 S/s

iv. The line lengths mentioned above are approximate, as the exact length shall be obtained after detailed survey.

v. Developer of Sikar-II S/s to provide space for 2 nos. of 765 kV line bays at Sikar-

	II S/s along with space for switchable line reactors **Implementation Timeframe**: 18 months from date of SPV acquisition.	
8	**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C1** **Scope :**	**RECPDCL**

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x1500 MVA, 765/400kV & 2x500 MVA, 400/220 kV pooling station at Ramgarh along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor Future provisions: Space for 765/400kV ICTs along with bays: 3nos. 765kV line bay along with switchable line reactor: 2nos. 765kV Bus Reactor along with bays: 2 nos. 400/220 kV ICTs along with bays: 6 nos. 400 kV line bays along with switchable line reactor: 4nos. 400 kV line bays: 4 nos. 400kV Bus Reactor along with bays: 2 nos. 400kV Sectionalization bay: 3 nos. 220 kV line bays: 8 nos. 220kV sectionalisation bay: 2 nos.	765/400kV1500 MVA ICTs:2 nos *(7x500 MVA including one spare unit)* 765kV ICT bays –2 nos. 400/220 kV, 500 MVA ICT – 2nos. 400 kV ICT bays – 4 nos. 220 kV ICT bays – 2 nos. 400 kV line bays - As per connectivity granted to RE developers (2 no. of bays considered at present) 220 kV line bays -As per connectivity granted to RE developers (4 no. of bays considered at present) 765 kV line bays – 2 nos. 240 MVAr Bus Reactor-2 nos. (7x80 MVAr considering one spare unit) 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor – 2 nos. 420 kV reactor bay – 2 nos.
2.	Ramgarh – Bhadla-3 765 kV D/c line (180 km) along with 240 MVAr switchable line reactor at each circuit at Ramgarh end of Ramgarh – Bhadla-3 765kV D/c line	Length – 180km 765 kV, 240 MVAr switchable line reactor- 2 nos Switching equipment for 765 kV 240 MVAR switchable line reactor –2 nos.
3.	2 nos. of 765kV line bays at Bhadla-3	765 kV line bays - 2nos

Note:

i. Implementation schedule of Phase III –Part C1 package is to match with package Phase III –Part B1 (establishment of Bhadla-3 PS, 765kV Bhadla-3 PS-Sikar-2 D/c line, 400kV Bhadla-3 PS-Fatehgarh-2 D/c line)

ii. Developer of Bhadla-3 S/s to provide space for 2 nos. of 765 kV line bays at Bhadla-3 S/s for termination of Ramgarh – Bhadla-3 765kV D/c line

iii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

iv. Provision of suitable sectionalization shall be kept at Ramgarh at 400kV & 220kV level to limit short circuit level

v. *Scheme to be awarded after SECI/ /REIA awards first bid of RE project* at

Ramgarh PS/Bhadla-3 PS

Implementation Timeframe: 18 months from date of SPV acquisition.

9 Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part D

Scope:

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Sikar-II – Khetri 765 kV D/c line	Length – 90 km
2	Sikar-II – Narela 765 kV D/c line along with 240 MVAr Switchable line reactor for each circuit at each end of Sikar-II – Narela 765 kV D/c line	Length – 260 km Switching equipment for 765 kV 240 MVAR switchable line reactor –4 nos. 240 MVAr, 765kV Switchable line reactor- 4 nos.
3	Jhatikara – Dwarka 400kV D/c line (Quad) (20km)	Length – 20 km
4	765kV line bays at Sikar -II for Sikar-II – Khetri 765 kV D/c line and Sikar-II – Narela 765 kV D/c line	765 kV line bays - 4nos
5	2 nos. of 765kV line bays at both Khetri and Narela S/s	765 kV line bays - 4nos
6	2 nos. of 400kV line bays at both Jhatikara and Dwaraka S/s	400 kV line bays - 4nos

Note:

i. Developer of Sikar-II S/s to provide space for 4 nos. of 765 kV line bays at Sikar-II S/s along with space for two nos. of switchable line reactors

ii. Developer of Narela S/s to provide space for 2 nos. of 765 kV line bays along with space for switchable line reactors at Narela S/s

iii. Powergrid to provide space for two nos. of 765 kV line bays at Khetri substation

iv. Powergrid and DTL to provide space for two nos. of 400kV line bays both at Jhatikara and Dwarka S/s respectively

v. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

vi. Scheme to be implemented in matching time frame of Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C1

Implementation Timeframe: 18 months from date of SPV acquisition

RECPDCL

10 Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part F

Scope :

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1	Establishment of 2x1500MVA, 765/400kV Substation at suitable location near Beawar along with 2x330 MVAr 765kV Bus Reactor & 2x125 MVAr 420kV Bus Reactor Future provisions: Space for 765/400kV ICTs along with bays:2 nos.	765/400kV 1500 MVA ICTs: 2 nos (7x500 MVA, including one spare unit) 330 MVAr, 765 kV bus reactor- 2 (7x110 MVAr, including one

	765kV line bay along with switchable line reactor: 6nos. 765kV Bus Reactor along with bays: 2 nos. 400/220 kV ICTs along with bays:2nos. 400 kV line bays along with switchable line reactor: 4 nos. 400kV Bus Reactor along with bays: 1nos. 220 kV line bays: 4nos.	spare unit) 765kV ICT bays – 2 nos. 400 kV ICT bays – 2 nos. 765 kV line bays – 6 nos 400kV line bay- 2nos. 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor – 2 nos. 420 kV reactor bay – 2 nos.	**RECPDCL**
2	LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar	Length – 45km	
3	LILO of 400kV Kota –Merta line at Beawar	Length – 20km	
4	Fatehgarh-3– Beawar 765 kV D/c along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3–Beawar 765 kV D/c line	Length – 350km Switching equipment for 765 kV 330 MVAR switchable line reactor –4 nos. 765 kV, 330 MVAr Switchable line reactor- 4 nos.	

Note:

i. Developer of Fategarh-3 S/s to provide 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765kV switchable line reactors

ii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

iii. *Scheme to be awarded after SECI/ /RElA awards first bid of RE project* at Fatehgarh-3 (new section and/or Fatehgarh-4).

Implementation Timeframe: 18 months from date of SPV acquisition

11 Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G

Scope :

Sl.No.	Scope of the Transmission Scheme	Capacity /km	
1.	Fatehgarh-3– Beawar 765 kV D/c(2^{nd}) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3–Beawar 765 kV D/c line	Length – 350km Switching equipment for 765 kV 330 MVAR switchable line reactor –4 765 kV, 330 MVAr Switchable line reactor- 4	**PFCCL**
2	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3	765 kV line bays - 4nos	

Note:

i. Implementation to be taken up for evacuation requirement beyond 3000 MW

cumulative at Fatehgarh-3 PS (new section) & Fatehgarh-4 PS).

ii. Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 kV switchable line reactors.

iii. Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors.

iv. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

Implementation Timeframe: 18 months from date of SPV acquisition

12 **Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part H**

Scope :

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr, 765 kV Bus Reactor & 2x125 MVAr, 420 kV bus Reactor Future provisions: Space for 765/400kV ICTs along with bays: 2 nos. 765kV line bay along with switchable line reactor: 4nos. 765kV Bus Reactor along with bays: 2 nos. 400/220 kV ICTs along with bays: 2 nos. 400 kV line bays along with switchable line reactor: 4 nos. 400kV Bus Reactor along with bays: 1 nos. 220 kV line bays: 4nos.	765/400kV 1500 MVA ICTs: 2 nos. (7x500 MVA, including one spare unit) 330 MVAr, 765 kV bus reactor- 2nos. (7x110 MVAr, including one spare unit) 765kV ICT bays – 2 nos 400 kV ICT bays – 2 nos. 765 kV line bays – 6 nos. 400kV line bay- 4 nos. 765kV reactor bay- 2 nos. 125 MVAr, 420kV bus reactor – 2 nos. 420 kV reactor bay – 2 nos.
2.	LILO of both circuits of Jaipur(Phagi)-Gwalior 765 kV D/c at Dausa along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765 kV D/c line	Length – 40km Switching equipment for 765 kV 240 MVAR switchable line reactor –2 240 MVAr 765 kV Switchable line reactor- 2 (7x80 MVAr considering one spare unit) (also to be used as spare reactor at Dausa end for 765kV Beawar – Dausa D/c line)
3	LILO of both circuits of Agra – Jaipur(south) 400kV D/c at Dausa along with 50 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Agra 400kV D/c line	Length – 30km Switching equipment for 420 kV, 50 MVAR switchable line reactor –2 420 kV, 50 MVAr Switchable line reactor-2 nos.

PFCCL

	4	Beawar – Dausa 765 kV D/c line (240 km) along with 240 MVAr Switchable line reactor for each circuit at each end	Length – 240km Switching equipment for 765 kV 240 MVAR switchable line reactor –4 765 kV, 240 MVAr Switchable line reactor- 4 nos.
	5	2 nos. of 765kV line bays at Beawar for Beawar – Dausa 765 kV D/c line	765 kV line bays – 2 nos

Note:

i. Implementation of the scheme to be taken up for evacuation requirement beyond 3000MW (about) cumulative at Fatehgarh-3 PS (new section) and Fatehgarh-4 PS.

ii. Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays along with space for 765kV switchable line reactors at their substations

iii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey

Implementation Timeframe: 18 months from date of SPV acquisition.

13 Creation of 400/220 kV, 2x315 MVA S/S at Siot, Jammu & Kashmir

Scope :

Sl.No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment of 7x105 MVA, 400/220kV Siot S/s with 1x80 MVAR (420 kV) bus reactors *Future provisions: Space for 400/220kV ICTs along with bays: 2 nos.* *400 kV line bays along with switchable line reactor: 4 nos.* *220 kV line bays: 4 nos.*	315 MVA, 400/220 kV ICT (*7x105 MVA, including one spare*) 400 kV ICT bays - 2 nos. 220 kV ICT bays - 2 nos. 400 kV line bays - 4 nos. 220 kV line bays - 6 nos. 80 MVAr, 420kV bus reactor - 1 nos. 420 kV reactor bay - 1 nos.
2.	LILO of 400 kV D/c Amargarh (Kunzer)- Samba line at 400/220 kV Siot S/s	Length – 15 km

Implementation Timeframe: March, 2024

PFCCL

2. The appointment of the Bid-Process Coordinators is subject to the conditions laid down in the Guidelines.

[F. No. 15/3/2018-Trans-Pt(1)]

MRITUNJAY KUMAR NARAYAN, Jt. Secy. (Trans)

अधिसूचना

नई दिल्ली , 3 दिसम्बर, 2021

का.आ. 5033(अ).—विद्युत अधिनियम, 2003 (2003 का 36) की धारा 63 के तहत परिचालित दिशा-निर्देशों के पैरा 3 के उप-पैरा 3.2 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केंद्रीय सरकार ने टैरिफ आधारित प्रतिस्पर्धी बोली(टीबीसीबी) के तहत क्रियान्वयन हेतु निम्न तालिका में उल्लिखित राजपत्र अधिसूचनाओं के द्वारा निम्नलिखित पारेषण स्कीमें अधिसूचित की हैं।

क्र.सं.	स्कीम का नाम	राजपत्र अधिसूचना जिसके द्वारा योजना अधिसूचित की गई थी
1	चरण-I के तहत खंडवा पी एस में 3 गीगावाट आरई इंजेक्षन के निकासी हेतु पारेषण स्कीम	एस ओ3313(ई). दिनांक 23.09.2020 (फा.सं15/3/2018-पारेषण-पीटी(2)
2	चरण-II, भाग क के तहत खंडवा पी एस में 4.5 गीगावाट आरई इंजेक्षन के निकासी हेतु पारेषण स्कीम	एस ओ3313(ई). दिनांक 23.09.2020 (फा.सं15/3/2018-पारेषण-पीटी(2)
3	चरण-II, भाग ग के तहत खंडवा पी एस में 4.5 गीगावाट आरई इंजेक्षन के निकासी हेतु पारेषण स्कीम	एस ओ3313(ई). दिनांक 23.09.2020 (फा.सं15/3/2018-पारेषण-पीटी(2)

2. अब केंद्रीय सरकार ने राष्ट्रीय पारेषण समिति (एनसीटी) और केंद्रीय विद्युत प्राधिकरण (सीईए) की 5वीं बैठक की सिफारिशों की जाँच करने के पश्चात् उपर्युक्त सात स्कीमों के कार्यक्षेत्र को आशोधित करने का निर्णय लिया है। उसी रूप में, उपरोक्त स्कीमों के कार्य क्षेत्र को निम्नानुसार आशोधित किया जाता है:

<table>
<tr><th>क्रम सं.</th><th>स्कीम का नाम</th><th>स्कीम के संशोधित कार्यक्षेत्र</th></tr>
<tr><td>1</td><td>चरण-I के तहत खंडवा पी एस में 3 गीगावाट आरई इंजेक्षन के निकासी हेतु पारेषण स्कीम</td><td>दिनांक 19.07.2021की भारत के राजपत्र अधिसूचना के माध्यम से टीबीसीबी मार्ग के माध्यम से कार्यान्वयन के लिए अधिसूचित "चरण -1के तहत खावड़ा पीएस में 3 जीडब्ल्यू आरई इंजेक्शन की निकासी के लिए ट्रांसमिशन योजना" के तहत खावड़ा पूलिंग स्टेशन का नाम खवड़ा पूलिंग स्टेशन 1 (केपीएस 1)"पढ़ा जाए।</td></tr>
<tr><td>2</td><td>चरण-II, भाग क के तहत खंडवा पी एस में 4.5 गीगावाट आरई इंजेक्षन के निकासी हेतु पारेषण स्कीम</td><td>चरण-II, भाग क के तहत खंडवा पी एस में 4.5 गीगावाट आरई इंजेक्षन के निकासी हेतु पारेषण स्कीम
कार्यक्षेत्र :
<table>
<tr><th>क्रम. सं.</th><th>पारेषण स्कीम का कार्यक्षेत्र</th><th>क्षमता/किमी</th></tr>
<tr><td>1.</td><td>केपीएस2 (जीआईएस)</td><td>159 कि मी</td></tr>
</table></td></tr>
</table>

		– केपीएस2 छोर में 330 एमवीएआरस्विचेबल' लाइन रिएक्टर के साथ लकाडिया 765 केवी डी/सीलाइन	
	2.	केपीएस2 (जीआईएस) के केपीएस2 छोर पर 330 एमवीएआर स्विचेबल लाइन रिएक्टर - लकाडिया 765 केवी डी/सी लाइन	• 330 एमवीएआर 765 केवी स्विचेबल लाइन रिएक्टर - 2. • 765 केवी लाइन रिएक्टर के लिए स्विचिंग उपकरण- 2 • पीकेपीएस2 (जीआईएस) पर उपलब्ध 1x110 एमवीएआर स्पेयर बस रिएक्टर को स्पेयर के रूप में इस्तेमाल किया जाएगा
	3.	खावड़ा पीएस2 (जीआईएस)-लकाडिया पीएस 765 केवी डी/सी लाइन के लिए लकाडिया पीएस और केपीएस2 (जीआईएस) में प्रत्येक में 765 केवी लाइन 2 बे -	• 765 केवी लाइन बे (जीआईएस) - 2 संख्या (केपीएस2 छोर के लिए) • 765 केवी लाइन बे (एआईएस) - 2 संख्या (लकाड़िया छोर के लिए)

टिप्पणी :

(i) पहले चरण के तहत खावड़ा में 3 गीगावाट आरई इंजेक्शन निकालने के लिए पारेषण प्रणाली शुरू की जा रही है। खावड़ा में 4.5 गीगावाट आरई इंजेक्शन की निकासी के लिए चरण- II आरई योजना को खावड़ा आरई पार्क से 3 गीगावाट से अधिक निकासी की आवश्यकता के लिए शुरू करने की आवश्यकता है।

(ii) चरण- II (भाग ए से भाग डी) के तहत खावड़ा आरई पार्क में 4.5 जीडब्ल्यू आरई इंजेक्शन की निकासी के लिए प्रस्तावित सभी ट्रांसमिशन पैकेजों का कार्यान्वयन समान समय सीमा में लागू की जाएगी।

कार्यान्वयन की समयावधि: एसपीवी अधिग्रहण की तारीख से 24 महीने

3 चरण-II, भाग ग के तहत खंडवा पी एस में 4.5 गीगावाट आरई इंजेक्शन के निकासी हेतु पारेषण स्कीम

चरण-II, भाग ग के तहत खंडवा पी एस में 4.5 गीगावाट आरई इंजेक्शन के निकासी हेतु पारेषण स्कीम

कार्यक्षेत्र :

क्र. सं.	पारेषण स्कीम का कार्यक्षेत्र	क्षमता/कि मी
1.	1x330 एमवीएआर 765 केवी बस रिएक्टर तथा 1x125 एमवीएआर 420	765/400 केवी, 1500 एमवीए - 3

		केवी बस रिएक्टर सहित अहमदाबाद सब स्टेशन में 3x1500 एमवीए, 765/400 केवी की संस्थापना। 1x330 एमवीएआर 765 केवी बस रिएक्टर तथा 1x125 एमवीएआर 420 केवी बस रिएक्टर सहित अहमदाबाद सब स्टेशन में 3x1500 एमवीए, 765/400 केवी की संस्थापना। भावी प्रावधान : 765/400केवी, आईसीटी के साथ-साथ बे- 2 400/220केवी, आईसीटी के साथ-साथ बे- 4 765 केवी लाइन बे- 8 400 केवी लाइन बे - 8 220 केवी लाइन बे - 7 बे के साथ 765 केवी रिएक्टर - 1 बे के साथ 400 केवी रिएक्टर – 1 के लिए स्थान	(एक स्पेयर इकाई सहित 10x500 एमवीए) 765 केवी आईसीटी बे– 3 400 केवी आईसीटी बे- 3 765केवी लाइन बे - 4 (लकड़िया-अहमदाबाद के लिए 2और अहमदाबाद से दक्षिण गुजरात के लिए 2) 400केवी लाइन बे – 4 (पिराना (पीजी) के एलआईएलओ के लिए - अहमदाबाद में पिराना (टी) 400केवीडी/सी लाइन 1x330 एमवीएआर, 765 केवी बस रिएक्टर - 1 (एक स्पेयर इकाई सहित 4x110 एमवीएआर,) 765 केवी रिएक्टर बे – 1 125 एमवीएआर, 420 केवी रिएक्टर - 1 400 केवी रिएक्टर बे - 1
	2.	अहमदाबाद-दक्षिण गुजरात/नवसारी (नई) 765 केवी डी/सी लाइन के साथ दोनोंछोर पर 240 एमवीएआर स्विचेबल लाइन रिएक्टर	लाइन की लंबाई ~ 220 किमी
	3.	अहमदाबाद-दक्षिण गुजरात/नवसारी (नई) 765 केवी डी/सी लाइन के लिए दक्षिण गुजरात/नवसारी (नया) छोर पर 765 केवी लाइन बे -2	765 केवी लाइन बे – 2
	4.	अहमदाबाद-दक्षिण गुजरात/नवसारी (नई) 765 केवी डी/सी लाइन के दोनों छोर पर 240 एमवीएआर स्विचेबल लाइन रिएक्टर	• 1x240एमवीएआर, 765 केवी स्विचेबल रिएक्टर - 4

				• 765 केवी लाइन रिएक्टर के लिए स्विचिंग उपकरण- 4

टिप्पणी :

(i) पहले चरण के तहत खावड़ा में 3 गीगावाट आरई इंजेक्शन निकालने के लिए पारेषण प्रणाली शुरू की जा रही है। खावड़ा में 4.5 गीगावाट आरई इंजेक्शन की निकासी के लिए चरण- II आरई योजना को खावड़ा आरई पार्क से 3 गीगावाट से अधिक निकासी की आवश्यकता के लिए शुरू करने की आवश्यकता है।

(ii) चरण- II (भाग क से भाग घ) के तहत खावड़ा आरई पार्क में 4.5 जीडब्ल्यू आरई इंजेक्शन की निकासी के लिए प्रस्तावित सभी ट्रांसमिशन पैकेजों का कार्यान्वयन समान समय सीमा में लागू की जाएगी।

कार्यान्वयन की समयावधि: एसपीवी अधिग्रहण की तारीख से 24 महीने

3. इन स्कीमों के लिए बोली प्रक्रिया समन्वयक मूल अधिसूचनाओं के अनुसार अपरिवर्तित रहेगा।

[फा.सं. 15/3/2018- पारेषण-भाग(1)]

मृत्युंजय कुमार नारायण, संयुक्त सचिव (पारेषण)

NOTIFICATION

New Delhi, the 3rd December, 2021

S.O. 5033(E).—In exercise of the powers conferred by sub- para 3.2 of Para 3 of the Guidelines circulated under Section 63 of the Electricity Act, 2003 (no. 36 of 2003), the Central Government had notified following transmission schemes for implementation under Tariff Based Competitive Bidding (TBCB) vide Gazette Notifications mentioned in below table:

Sl. No.	Name of the Scheme	Gazette Notification by which Scheme was notified
1	Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I	S.O. 3313(E). Dated 23.09.2020 (F.No.15/3/2018-Trans-Pt (2)
2	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A	S.O. 3313(E). Dated 23.09.2020 (F.No.15/3/2018-Trans-Pt (2)
3	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C	S.O. 3313(E). Dated 23.09.2020 (F.No.15/3/2018-Trans-Pt (2)

2. Now, the Central Government has decided to modify the scope of above mentioned three schemes after examining the recommendations of the 5th meeting of National Committee on Transmission (NCT) and Central Electricity Authority (CEA). As such, the scopes of above schemes are hereby modified as mentioned below:

Sl. No.	Name of the Scheme	Modified Scope of the scheme
1	Transmission scheme for	**The name of the Khavda Pooling station under the " Transmission scheme for**

<table>
<tr><td></td><td>evacuation of 3 GW RE injection at Khavda P.S. under Phase-I</td><td>evacuation of 3 GW RE injection at Khavda PS under Phase-I" notified for implementation through TBCB route vide Gazette of India Notification dated 19.07.2021 may be read as Khavda Pooling Station 1 (KPS 1)"</td></tr>
<tr><td>2</td><td>Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A</td><td>Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A

Scope:
<table>
<tr><th>Sl. No.</th><th>Scope of the Transmission Scheme</th><th>Capacity /km</th></tr>
<tr><td>1.</td><td>KPS2 (GIS) – Lakadia 765 kV D/C line with 330 MVAr switchable line reactors at KPS2 end</td><td>159 km</td></tr>
<tr><td>2.</td><td>330 MVAR switchable line reactors at KPS2 end of KPS2 (GIS) – Lakadia 765 kV D/C line</td><td>• 330 MVAr, 765 kV switchable line reactor- 2.
• Switching equipments for 765 kV line reactor- 2
• 1x110 MVAr spare bus reactor available at KPS2 (GIS) to be used as spare</td></tr>
<tr><td>3.</td><td>2 nos. of 765 kV line bays each at Lakadia PS & KPS2 (GIS) for Khavda PS2 (GIS) – Lakadia PS 765 kV D/c line</td><td>• 765 kV line bays (GIS) – 2 Nos. (for KPS2 end)
• 765 kV line bays (AIS) – 2 Nos. (for Lakadia end)</td></tr>
</table>
Note:
(i) Transmission system for evacuation of 3 GW RE injection at Khavda is being taken up under Phase-I. Phase-II RE scheme for evacuation of 4.5 GW RE injection at Khavda needs to be taken up for evacuation requirement beyond 3 GW from Khavda RE park.
(ii) Implementation of all the transmission packages proposed for evacuation of 4.5 GW RE injection at Khavda RE park under Phase-II (Part A to Part D) needs to be taken up in similar timeframe.
Implementation Timeframe: 24 months from date of SPV acquisition</td></tr>
<tr><td>3</td><td>Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C</td><td>Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C
Scope:
<table>
<tr><th>Sl. No.</th><th>Scope of the Transmission Scheme</th><th>Capacity /km</th></tr>
<tr><td>1.</td><td>Establishment of 3x1500 MVA, 765/400 kV Ahmedabad S/s with 1x330 MVAR 765 kV bus reactor and 1x125 MVAR 420</td><td>765/400 kV, 1500 MVA- 3
(10x500 MVA, including one spare</td></tr>
</table></td></tr>
</table>

	kV bus reactor. Establishment of 3X1500 MVA, 765/400 kV, Ahmedabad S/s with 1X330 MVAR 765 kV bus reactor and 1X125 MVAR 420 kV bus reactor. Future Scope: Space for 765/400 kV, ICT along with bays- 2 400/220 kV, ICT along with bays- 4 765 kV Line bays- 8 400 kV Line bays- 8 220 kV Line bays- 7 765 kV reactor along with bays- 1 400 kV reactor along with bays- 1	unit) 765 kV ICT bays – 3 400 kV ICT bays - 3 765 kV line bays- 4 (2 for Lakadia-Ahmedabad and 2 for Ahmedabad to South Gujarat) 400 kV line bays – 4 (for LILO of Pirana (PG) – Pirana (T) 400kV D/c line at Ahmedabad 1x330 MVAr, 765 kV bus reactor- 1 (4x110 MVAr, including one spare unit) 765 kV reactor bay – 1 125 MVAr, 420 kV reactor- 1 400 kV Reactor bay- 1
2.	Ahmedabad – South Gujarat/Navsari(new) 765 kV D/c line with 240 MVAr switchable line reactor at both ends	Line length ~ 220 km
3.	2 nos. of 765 kV line bays at South Gujarat/Navsari(new) end for Ahmedabad – South Gujarat/ Navsari (new) 765 kV D/c line	765 kV line bays – 2
4.	240 MVAr switchable line reactor at both ends of Ahmedabad – South Gujarat / Navsari (new) 765 kV D/c line	• 1x240 MVAr, 765 kV switchable reactor- 4 • Switching equipments for 765 kV line reactor - 4

Note:

(i) Transmission system for evacuation of 3 GW RE injection at Khavda is being taken up under Phase-I. Phase-II RE scheme for evacuation of 4.5 GW RE injection at Khavda needs to be taken up for evacuation requirement beyond 3 GW from Khavda RE park.

(ii) Implementation of all the transmission packages proposed for evacuation of 4.5 GW RE injection at Khavda RE park under Phase-II (Part A to Part D) needs to be taken up in similar timeframe.

Implementation Timeframe: 24 months from date of SPV acquisition

3. Bid Process Co-ordinators for these schemes will remain unchanged as per original notifications

[F. No. 15/3/2018-Trans-Pt(1)]

MRITUNJAY KUMAR NARAYAN, Jt. Secy. (Trans)

अधिसूचना

नई दिल्ली , 3 दिसम्बर, 2021

का.आ. 5034(अ).—टैरिफ आधारित प्रतिस्पर्धी बोली (टीबीसीबी) के तहत क्रियान्वयन हेतु निम्न तालिका में उल्लिखित राजपत्र अधिसूचनाओं के द्वारा निम्नलिखित पारेषण स्कीमें/पैकेजें अधिसूचित की हैं:

क्रम सं.	स्कीम का नाम	राजपत्र अधिसूचना जिसके द्वारा योजना अधिसूचित की गई थी
1	चरण-II, भाग ड के तहत खंडवा पी एस में 4.5 गीगावाट आरई इंजेक्शन के निकासी हेतु पारेषण स्कीम	एस ओ 3313(ई). दिनांक 23.09.2020 (फा.सं15/3/2018-पारेषण-पीटी(2)

2. 25.09.2021 और 1.10.2021 को आयोजित राष्ट्रीय पारेषण समिति (एनसीटी) की 5वीं बैठक में उपर्युक्त योजनाओं की अधिसूचना रद्द करने की सिफारिश की गई थी। इस प्रकार, उनके कार्यक्षेत्र सहित उपरोक्त योजनाओं की अधिसूचना रद्द किया जाता है।

[फा. सं. 15/3/2018- पारेषण-भाग (1)]

मृत्युंजय कुमार नारायण, संयुक्त सचिव (पारेषण)

NOTIFICATION

New Delhi, the 3rd December, 2021

S.O. 5034(E).—The following transmission schemes/packages were notified for implementation under Tariff Based Competitive Bidding (TBCB) vide Gazette Notification as mentioned in below table:

Sl. No.	Name of the Scheme	Gazette Notification by which Scheme was notified
1	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part E	S.O. 3313(E). Dated 23.09.2020 (F.No.15/3/2018-Trans-Pt(2)

2. Above mentioned schemes were recommended for de-notification in the 5th meetings of National Committee on Transmission (NCT) held on 25.09.2021 and 1.10.2021. As such, above schemes, including their scope are hereby de-notified.

[F. No. 15/3/2018-Trans-Pt(1)]

MRITUNJAY KUMAR NARAYAN, Jt. Secy. (Trans)

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and Published by the Controller of Publications, Delhi-110054.

सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS
Central Registration Centre

Certificate of Incorporation

[Pursuant to sub-section (2) of section 7 and sub-section (1) of section 8 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014]

I hereby certify that FATEHGARH III BEAWAR TRANSMISSION LIMITED is incorporated on this Fifth day of May Two thousand twenty-two under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares

The Corporate Identity Number of the company is U40106DL2022GOI397791.

The Permanent Account Number (PAN) of the company is AAFCF0386A *

The Tax Deduction and Collection Account Number (TAN) of the company is DELF10399E *

Given under my hand at Manesar this Fifth day of May Two thousand twenty-two .

DS MINISTRY OF CORPORATE AFFAIRS 10

Digital Signature Certificate
SHIVARAJ C RANJERI
ASST. REGISTRAR OF COMPANIES
For and on behalf of the Jurisdictional Registrar of Companies
Registrar of Companies
Central Registration Centre

Disclaimer: This certificate only evidences incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a license nor permission to conduct business or solicit deposits or funds from public. Permission of sector regulator is necessary wherever required. Registration status and other details of the company can be verified on www.mca.gov.in

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Mailing Address as per record available in Registrar of Companies office:

FATEHGARH III BEAWAR TRANSMISSION LIMITED
FIRST FLOOR,URJANIDHI, 1 BARAKHAMBA LANE, CANNAUGHT PLACE, NEW DELHI, DELHI, Central Delhi, Delhi, India, 110001

* as issued by the Income Tax Department

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[Pursuant to Schedule I (see sections 4 and 5) to the Companies Act, 2013] FORM NO. INC-33

SPICe+MOA

(e-Memorandum of Association)

* Table applicable to company as notified under schedule I of the companies Act, 2013 | A

Table A- MEMORANDUM OF ASSOCIATION OF A COMPANY LIMITED BY SHARES

1. The Name of the Company is | FATEHGARH III BEAWAR TRANSMISSION LIMITED

2.The Registered office of the company will be situated in the state of | Delhi-DL

3.(a)The objects to be pursued by the company on its incorporation are

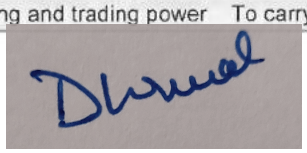
1. To develop Power System Network To plan, promote and develop an integrated and efficient power transmission system network in all its aspects including planning, investigation, research, design and engineering, preparation of preliminary, feasibility and definite project reports, construction, operation and maintenance of transmission lines, sub-stations, load dispatch stations and communication facilities and appurtenant works, coordination of integrated operation of state, regional and national grid system, execution of turn-key jobs for other utilities/organizations and wheeling of power in accordance with the policies, guidelines and objectives laid down by the Central Government from time to time.
2. To study, investigate, collect information and data To study, investigate, collect information and data, review operation, plan, research, design and prepare Report, diagnose operational difficulties and weaknesses and advise on the remedial measures to improve, undertake development of new and innovative product connected with business of the Company as well as modernize existing EHV, HV lines and Sub-Stations.
3. To act as Consultants/ Technical Advisers of public/ private sector enterprises etc. To act as consultants, technical advisors, surveyors and providers of technical and other services to Public or Private Sector enterprises engaged in the planning, investigation, research, design and preparations of preliminary, feasibility and definite project reports, manufacture of power plant and equipment, construction, generation, operation and maintenance of power transmission system from power generating stations and projects, transmission, distribution and sale of power.

3.(b)Matters which are necessary for furtherance of the objects specified in clause 3(a) are

1. To obtain authority etc. to carry out its objects To obtain license, approvals and authorization from Governmental Statutory and Regulatory Authorities, as may be necessary to carry out and achieve the Objects of the Company and connected matters which may seem expedient to develop the business interests of the Company in India and abroad.
2. To obtain charters, concession etc.
To enter into any arrangement with the Government of India or with any State Government or with other authorities/ commissions, local bodies or public sector or private sector undertakings, Power Utilities, Financial Institutions, Banks, International Funding Agencies and obtain such charters, subsidies, loans, advances or other money, grants, contracts, rights, sanctions, privileges, licenses or concessions whatsoever (whether statutory or otherwise) which the Company may think it desirable to obtain for carrying its activities in furthering the interests of the Company or its members.
3.

To enter into Implementation/ Construction Agreement

To enter into any agreement, contract or any arrangement for the implementation of the power generation, evacuation, transmission and distribution system and network with Power/Transmission Utilities, State Electricity Boards, Vidyut Boards, Transmission Companies, Generation Companies, Licensees, Statutory bodies, other organizations (whether in Private, Public or Joint Sector Undertaking) and bulk consumers of power etc.
4. To carry on the business or purchasing, importing, exporting and trading power To carry on the business or purchasing,



True Copy

importing exporting and trading of power subject to the provisions of Electricity Act, 2003 and to supply electric power generated by the plants to distribution companies, trading companies, other generation companies and other Persons, and in this regard execute agreements with Central and State generating authorities, departments or companies, Independent Power Producers and other Persons.

5. To enter into Agreements; etc. To secure the payments of money, receivables on transmission and distribution of electricity and sale of fuel, as the case may be, to the State Electricity Boards, Vidyut Boards, Transmission Utilities, Generating Companies, Transmission Companies, Distribution Companies, State Governments, Licensees, statutory bodies, other organizations (whether in Private, Public or Joint Sector Undertaking) and bulk consumers of power etc. through Letter of Credits/ESCROW and other security documents.

6. To execute transmission service AgreementsTo execute Transmission Service Agreements or other agreements for transmission of power to distribution, trading, and other companies, State Electricity Boards, State Utilities and any other organization and Persons.

7. To co-ordinate with Central Transmission Utility To coordinate with the Central Transmission Utility for transmission of electricity under the provisions of Electricity Act 2003.

8. To borrow money Subject to provisions of Sections 73, 179, 180 and other applicable provisions of the Companies Act, 2013 and subject to other laws or directives, if any, of SEBI/RBI, to borrow money in Indian rupees or foreign currencies and obtain foreign lines of credits/ grants/aids etc. or to receive money or deposits from public for the purpose of the Company's business in such manner and on such terms and with such rights, privileges and obligations as the Company may think fit. The Company may issue bonds/ debentures whether secured or unsecured; bills of exchange, promissory notes or other securities, mortgage or charge on all or any of the immovable and movable properties, present or future and all or any of the uncalled capital for the time being of the Company as the Company may deem fit and to repay, redeem or pay off any such securities or charges.

9. To lend money To lend money on property or on mortgage of immovable properties or against Bank guarantee and to make advances of money against future supply of goods and services on such terms as the Directors may consider necessary and to invest money of the Company in such manner as the Directors may think fit and to sell, transfer or to deal with the same.

10.

To acquire, own, lease or dispose off the property

To own, possess, acquire by purchase, lease or otherwise rights, title and interests in and to, exchange or hire real estate, equipment, Transmission lines, lands, buildings, apartments, plants, equipment, machinery, fuel blocks and hereditaments of any tenure or descriptions situated in India or abroad or any estate or interest therein and any right over or connected with land so situated and turn the same to account in any manner as may seem necessary or convenient for the purpose of business of the Company and to hold, improve, exploit, re-organize, manage, lease, sell, exchange or otherwise dispose of the whole or any part thereof.

11. To deal in Scrips/Govt. Securities Subject to applicable provisions of law, to subscribe for, underwrite, or otherwise acquire, hold, dispose of and deal with the shares, stocks, debentures or other securities and titles of indebtedness or the right to participate in profits or other similar documents issued by any Government authority, Corporation or body or by any company or body of persons and any option or right in respect thereof.

12. To create funds and appropriate profits To create any depreciation fund, reserve fund, sinking fund, insurance fund, gratuity, provident fund or any other fund, for depreciation or for repairing, improving extending or maintaining any of the properties of the Company or for any other purposes whatsoever conducive to the interests of the Company.

13. To purchase or otherwise acquire companiesTo acquire shares, stocks, debentures or securities of any company carrying on any business which this Company is entitled to carry on or acquisition of undertaking itself which may seem likely or calculated to promote or advance the interests of the Company and to sell or dispose of or transfer any such shares, stocks or securities and the acquired undertaking.

14.

To enter into partnership Agreement or Merge /amalgamate

To enter into partnership or into any agreement for joint working, sharing or pooling profits, joint venture, amalgamation, union of interests, co-operation, reciprocal concessions or otherwise or amalgamate with any person or company carrying on or engaged in or about to carry on or engaged in any business or transaction in India or abroad which the Company is authorized to carry on or engage in any business undertaking having objects identical or similar to, as are being carried on by this Company.

15. To have agencies and branch offices in India and abroad To establish and maintain agencies, branch offices and local agencies, to procure business in any part of India and world and to take such steps as may be necessary to give the Company such rights and privileges in any part of the world as deemed proper in the interest of the Company.

16. To promote institutions or other companies To promote and undertake the formation of any institution or Company or subsidiary company or for any aforesaid objects intended to benefit the Company directly or indirectly and to coordinate, control and guide their activities.

17(a) To acquire know how and import-export of machinery and tools etc. To negotiate and enter into agreements and contracts with domestic and foreign companies, persons or other organizations, banks and financial institutions, in relation to the business of the Company including that of technical know-how, import, export, purchase or sale of plant, machinery, equipment, tools, accessories and consumables, financial assistance and for carrying out all or any of the objects of the Company.

17(b)

To negotiate and enter into agreements etc. To negotiate and enter into agreements and contracts for execution of turnkey jobs, works, supplies and export of plant, machinery, tools and accessories etc.

18. To enter into contracts/arrangements in connection with issue of shares/securities. Upon and for the purpose of any issue of shares, debentures or any other securities of the Company, to enter into agreement with intermediaries including brokers, managers of issue/commission agents and underwriters and to provide for the remuneration of such persons for their services by way of payment in cash or issue of shares, debentures or other securities of the Company or by granting options to take the same or in any other manner as permissible under the law.

19. To enter into contracts of indemnity and/or guarantee To enter into contracts of indemnity and get guarantee and allocations for the business of the Company.

20. To arrange for Training and Development To make arrangements for training of all categories of employees and to employ or otherwise engage experts, advisors, consultants etc. in the interest of achieving the Company's objects.

21. To promote conservation, protect environment, theft etc. To promote conservation and protection of electricity from theft, safety of life and to protect environments including air, land and water etc.

22.

To provide for welfare of employees

To pay and provide for the remuneration, amelioration and welfare of persons employed or formerly employed by the Company and their families providing for pension, allowances, bonuses, other payments or by creating for the purpose from time to time the Provident Fund, Gratuity and other Funds or Trusts. Further to undertake building or contributing to the building or houses, dwellings or chawls by grants of money, or by helping persons employed by the Company to effect or maintain insurance on their lives by contributing to the payment of premium or otherwise and by providing or subscribing or contributing towards educational institutions, recreation, hospitals and dispensaries, medical and other assistance as the Company may deem fit.

23.

To take Insurance To ensure any rights, properties, undertakings, contracts, guarantees or obligations or profits of the Company of every nature and kind in any manner with any person, firm, association, institution or company.

24. To share the profits pay, dividends and provide bonus etc To distribute among members of the Company dividend including bonus shares out of profits, accumulated profits or funds and resources of the Company in any manner permissible under law.

25. To institute and defend the legal proceedings To institute, conduct, defend, compound or abandon any legal proceedings by or against the Company or its officers or otherwise concerning the affairs of the Company and also to compound and to allow time for payment or satisfaction of any debts or recovery due, claims or demands by or against the Company and to refer any claims or demands by or against the Company or any differences arising in execution of contracts to conciliation and arbitration and to observe, comply with and/or challenge any awards preliminary, interim or final made in any such arbitration.

26. To pay and subsequently write off preliminary expenses To pay out of the funds of the Company all costs, charges, expenses and preliminary and incidental to the promotion, formation, establishment and registration of the Company or other expenses incurred in this regard.

27. To contribute and make donations Subject to provisions of Companies Act, 2013 to contribute money or otherwise assist to charitable, benevolent, religious, scientific national, defense, public or other institutions or objects or purposes.

28.

To open accounts in Banks To open an account or accounts with any individual, firm or company or with any bank bankers or shrofs and to pay into and withdraw money from such account or accounts.

29. To accept gifts, donations etc. To accept gifts, bequests, devises and donations from members and others and to make gifts to members and others of money, assets and properties of any kind.

30. To pursue the objects of the Company as principal, agents, trustee or in any other capacity To carry out all or any of the objects of the company and do all or any of the above things in any part of the world and either as principal, agent, contractor or trustee or otherwise and either alone or in conjunction with others.

31. To enter into Contracts To negotiate and/or enter into agreement and contract with individuals, companies, corporations, foreign or Indian, for obtaining or providing technical, financial or any other assistance for carrying on all or any of the objects of the Company and also for the purpose of activating, research, development of projects on the basis of know-how and/or financial participation and for technical collaboration, and to acquire or provide necessary formulate and patent rights for furthering the objects of the company.

32. To contribute towards promotion of trade and industry To aid pecuniary or otherwise, any association, body or movement having for its object the solution, settlement or surmounting of industrial or labour problems or trouble or the promotion of industry or trade.

33. To take all necessary steps for winding up of the company Subject to the provisions of Companies Act, 2013 or any amendment or re-enactment thereof in the event of winding up to distribute among the members in specie any property of the Company or any proceeds of sale on disposal of any property in accordance with the provisions of the Act.

34.

To do and perform all coincidental and ancillary acts for the attainment of its objects

To do all such other things as may be deemed incidental or conducive to the attainment of the above Objects or any of them and to carry on any business which may seem to the Company capable of being conveniently carried in connection with any of the Company's Objects or calculated directly or indirectly to enhance the value of or render profitable any of the Company's property or rights.

35. To take up studies and research experiments. To establish, provide, maintain and conduct or otherwise subsidies research laboratories and experimental workshops for scientific, technical or researches, experiments and to undertake and carry on directly or in collaboration with other agencies scientific and technical research experiments and tests of all kinds and to process, improve and invent new products and their techniques of manufacture and to promote, encourage, reward in every manner studies and research, scientific and technical investigations and inventions of any kind that may be considered likely to assist, encourage and promote rapid advances in technology, economies, import substitution or any business which the Company is authorized to carry on.

36. To evolve scheme for restructuring or arrangement. Subject to provisions of the Companies Act,2013, to evolve scheme for restructuring or arrangement, to amalgamate or merge or to enter into partnership or into any consortium or arrangement for sharing of profits, union of interests, co-operation, joint venture with any Person or Persons, partnership firm/firms, or company or companies carrying on or engaged in any operation capable of being conducted so conveniently in co-operation with the business of the Company or to benefit the Company or to the activities for which the Company has been established.

37. To apply for purchase, or otherwise acquire. To apply for purchase, or otherwise acquire any trademarks, patents, brevets, inventions, licenses, concessions and the like, conferring any exclusive or nonexclusive or limited rights to use, or any secret or other information as to any invention which may be capable of being used for any of the purposes of the Company, or the acquisition of which may benefit the Company and to use, exercise, develop or grant licenses in respect of or otherwise turn to account the property, rights or information so acquired.

38. To sell, dispose or hive off an undertaking of the Company To sell, dispose or hive off an undertaking of the Company or any part thereof for such consideration as the Company may think fit and in particular for shares, debentures or securities of any other association, corporation or company.

39. To sell, improve, manage, develop To sell, improve, manage, develop, exchange, loan, lease or let, under-lease, sub - let, mortgage, dispose of, deal with in any manner, turn to account or otherwise deal with any rights or property of the Company.

40. To outsource parts of its activities To outsource parts of its activities to achieve higher efficiencies and throughputs in the achievement of its business goals.

4.The liability of the member(s) is limited and this liability is limited to the amount unpaid, if any, on the shares held by them.

5.The share capital of the company is 100,000.00 rupees, divided into,

10,000.00	Equity	shares of	10.00	rupees each	,and

6 ☒ We, the several persons, whose names and addresses are subscribed, are desirous of being formed into a company in pursuance of this memorandum of association, and we respectively agree to take the number of shares in the capital of the company set against our respective names:

☐ I, whose name and address is given below, am desirous of forming a company in pursuance of this memorandum of association and agree to take all the shares in the capital of the company (Applicable in case of one person company):

S.No.	Subscriber Details					
	Name, Address, Description and Occupation	DIN/PAN/Passport Number	No. of shares taken		DSC	Dated
	Total Shares taken		10,000.0	Equity		
				Preference		

Signed before Me					
Name		Address, Description and Occupation	DIN/PAN/Passport Number/ Membership Number	DSC	Dated
FCS	AMIT AGRAWAL	Company Secretaries S/o Late Sh. M. L. Agrawal FCS 5311, C.P. No. 3647 H-63, Vijay Chowk , Laxmi Nagar Delhi-110092	5311	AMIT AGRAWAL Digitally signed by AMIT AGRAWAL Date: 2022.05.02 17:35:47 +05'30'	02/05/22

Modify Check Form

[Pursuant to Schedule I (see Sections 4 and 5) to the Companies Act, 2013)] FORM NO. INC-34

SPICe + AOA

(e-Articles of Association)

*Table F as notified under schedule I of the companies Act, 2013 is applicable to the company

FATEHGARH III BEAWAR TRANSMISSION LIMITED

A COMPANY LIMITED BY SHARES

Check if not applicable	Check if altered	Article No	Description
			Interpretation
☐	☒		1. Interpretation clause In the interpretation of these Articles, unless repugnant to the subject or context:- "Act" The Act means "The Companies Act, 2013 as amended from time to time and includes any statutory modification or re-enactment thereof for the time being in force. "Articles of the Company" "Articles" means the articles of association of a company as originally framed or as altered from time to time or applied in pursuance of any previous company law or of this Act. "Auditor(s") "Auditor(s") mean and include persons appointed as such for the time being by the Comptroller & Auditor General of India. "Board" or Board of Directors "Board" or "Board of Directors", in relation to a company, means the collective body of the directors of the company. "Books of Account" "Books of account" includes records maintained in respect of? (i) all sums of money received and expended by a company and matters in relation to which the receipts and expenditure take place; (ii) all sales and purchases of goods and services by the company; (iii) the assets and liabilities of the company; and (iv) the items of cost as may be prescribed under section 148 in the case of a company which belongs to any class of companies specified under that section. "Capital" "Capital" means the share capital for the time being raised or authorized to be raised for the purpose of the Company. "Company" Shall means "FATEHGARH III BEAWAR TRANSMISSION LIMITED" "Debenture" "Debenture" includes debenture stock, bonds or any other instrument of a company evidencing a debt, whether constituting a charge on the assets of the company or not. "Director(s") "Director" means a director appointed to the Board of a company under Section 2(34) of the Act. "Dividend" "Dividend" includes any interim dividend. "Financial Institution" "Financial Institution" includes a scheduled bank, and any other financial institution defined or notified under the Reserve Bank of India Act, 1934. "Gender" Words importing the masculine gender also include the feminine gender. "Generation Company" Generation Company shall mean any entity engaged in the business of generation of electricity. "In Writing" and "Written" "In writing" and "Written" include printing, lithography and other modes of representing or reproducing words in a visible form. "key managerial personnel" "key managerial personnel", in relation to a company, means- (i) the Chief Executive Officer or the managing director or the manager; (ii) the company secretary; (iii) the whole-time director; (iv) the Chief Financial Officer; and (v) such other officer as may be prescribed.

"Meeting" or "General Meeting"

"Meeting" means "Annual General Meeting" or "Extraordinary General Meeting" of Members duly called and constituted including an adjourned meeting. In the context of Board of Directors, it shall mean the meeting of the Directors including an adjourned meeting.

"Member"

"Member", in relation to a company, means"

(i) the subscriber to the memorandum of the company who shall be deemed to have agreed to become member of the company, and on its registration, shall be entered as member in its register of members;

(ii) every other person who agrees in writing to become a member of the company and whose name is entered in the register of members of the company;

(iii) every person holding shares of the company and whose name is entered as a beneficial owner in the records of a depository.

"Month"

"Month" means a calendar month.

"Office"

"Office" means the Registered Office of the company for the time being.

"paid-up share capital" or "share capital paid-up" means

such aggregate amount of money credited as paid-up as is equivalent to the amount received as paid up in respect of shares issued and also includes any amount credited as paid-up in respect of shares of the company, but does not include any other amount received in respect of such shares, by whatever name called;

"Persons"

"Persons" include Corporations and firms as well as individuals.

"Power/Transmission Utility"

Power / Transmission Utility shall mean any entity engaged in the business of power / transmission.

"Proxy"

"Proxy" includes Attorney duly constituted under a valid Power of Attorney.

"Project-In-Charge"

A Director of the Company designated as Project In-charge for administrating day to day activities of the Company.

"Public Company" "Public Company" means a company which-

a. is not a private company and

b. has a minimum paid-up share capital as may be prescribed

Provided that a company which is a subsidiary of a company, not being a private company, shall be deemed to be public company for the purposes of this Act even where such subsidiary company continues to be a private company in its articles ;

"Registrar"

"Registrar" means a Registrar, an Additional Registrar, a Joint Registrar, a Deputy Registrar or an Assistant Registrar, having the duty of registering companies and discharging various functions under this Act.

"Register of Members"

"Register of Members" means the Register of Members to be kept pursuant to the Act.

"Related Party"

Section 2(76) of the Act describes "related party", with reference to a company, which means?

(i) a director or his relative;

(ii) a key managerial personnel or his relative;

(iii) a firm, in which a director, manager or his relative is a partner;

(iv) a private company in which a director or manager is a member or director;

(v) a public company in which a director or manager is a director or holds along with his relatives, more than two per cent. of its paid-up share capital;

(vi) any body corporate whose Board of Directors, managing director or manager is accustomed to act in accordance with the advice, directions or instructions of a director or manager;

(vii) any person on whose advice, directions or instructions a director or manager is accustomed to act: Provided that nothing in sub-clauses (vi) and (vii) shall apply to the advice, directions or instructions given in a professional capacity;

(viii) any company which is-

(A) a holding, subsidiary or an associate company of such company; or

(B) a subsidiary of a holding company to which it is also a subsidiary;

(ix) such other person as may be prescribed.

"Seal"

Means the common seal of the company for the time being.

			"Securities Exchange Board" "Securities and Exchange Board" means the Securities and Exchange Board of India established under section 3 of the Securities & Exchange Board of India Act, 1992. "Securities" "Securities" means the securities as defined in clause (h) of section 2 of the Securities Contracts (Regulation) Act, 1956. "Share" Means a share in the share capital of a company and includes stock. "Share Capital" "Share Capital" means the total equity share capital of the Company agreed to be issued and called the "Authorized Capital" of the Company, as mentioned in the Memorandum of Association of the Company. "Singular Number" Words importing the singular number include, where the context admits the plural number and vice-versa. "State Electricity Board" "State Electricity Board" means the Electricity Board or Vidyut Board or any other body by whatever name called, set up by the State Governments under Electricity (Supply) Act 1948, as amended, which expression shall include its successors, administrators, authorized representatives and permitted assigns. "Transmission Company" Transmission Company shall mean any entity engaged in the business of transmission of electricity. "Year" or "Financial Year" Meaning of Words "Year" means English calendar year and "Financial Year" shall have the meaning assigned thereto by Section 2(41) of the Act. Unless the context otherwise requires, words or expressions contained in these regulations shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these regulations become binding on the company. Marginal Notes Marginal Notes are for ease of reference only and shall not affect the construction and interpretation of these Articles. Other Expressions Other words or expressions contained in these Articles shall bear the same meaning as are assigned to them in the Act or any statutory modifications thereof. 2. Table "F" not to Apply The regulations contained in Table F in the First Schedule to the Companies Act, 2013, shall not apply except to the extent that the same are repeated or contained or expressly made applicable by these Articles or by the Act but the regulations for the management of the Company and for the observance of the members thereof and their representatives shall, subject to any exercise of the statutory powers of the Company with reference to the repeal or alteration of, or addition to its regulations by Special Resolution, as prescribed by the said Companies Act, 2013 be such as contained in these Articles. BUSINESS PURPOSE 3 Business Purpose The Company shall be engaged in the business of Transmission of Electricity, including construction, operation, maintenance and other related activities.
			Share capital and variation of rights
☐	☒		4 Share Capital / Increase of capital by the Company and how carried into effect The Authorized Share Capital of the Company is as mentioned in clause V of the Memorandum of Association of the Company. The Company in General Meeting may from time to time, by resolution, increase its authorized share capital by creation of new shares, such increase to be of such aggregate amount and to be divided into shares of such respective amounts as may be determined by the General Meeting subject to

		II 1	the provisions of the Act. 5 New Capital same as existing capital Any capital raised by the creation of new shares shall be considered as part of the original capital, and shall be subject to the same provisions herein contained, with reference to the payment of calls and installments, forfeiture, lien, surrender, transfer and transmission, voting and otherwise. 6 Reduction of Capital The Company may, from time to time, by special resolution reduce its capital, which may be paid off either with or without extinguishing or reducing liability on shares, which is in excess of the wants of the company or canceling such share capital which has been lost or is unrepresented by available assets.
☐	☒	2	7 Subdivision and consolidation of shares The Company in general meeting may, from time to time, sub-divide or consolidate its shares or any of them and exercise any of the other powers conferred by Section 61 of the Act and shall file with the Registrar such notice of exercise of any such powers as may be required by the Act. 8 Register and Index of Members/ Beneficial owners The Company shall cause to be kept a Register and also an Index of Members and Debenture-holders in accordance with Sections 88 of the Act. Further, as permissible under Section 88 of the Act, the register and Index of beneficial owners maintained by a ?Depository? shall be deemed to be the corresponding Register and Index for the purpose of this Act.
☐	☒	3	9 Foreign Register of members The Company shall be entitled to keep in any country outside India a Foreign Register of members resident in that country, subject to compliance with the provisions of Section 88 of the Act. 10 Shares to be numbered distinctively The shares in the capital held otherwise than in the depository mode shall be numbered progressively in sequence and given distinctive number, Except and in the manner herein mentioned, no share shall be forfeited or surrendered and shall continue to bear the number which it had originally borne.
☐	☒	4	11 Share Application Money The Company shall ensure that the share application money paid is held by it in an account with a Scheduled Commercial Bank (in the name of the Company) 12 Further Issue of Capital (a)Where at any time the Company wishes to raise its subscribed share capital by issue of further shares, it shall first offer such shares to its existing shareholders in proportion to their existing shareholdings on the date of such issue. Such offer to the existing shareholders shall be in accordance with the provisions of Section 62 of the Act. (b) The Company shall subject to applicable provisions of the Act and Articles of Association, make uniform calls from time to time upon all the Shareholders in respect of the moneys remaining unpaid on the issued share capital within 30 days or such time, as the Board may deem fit and appropriate. 13 Shares under control of Directors Subject to the provisions of these Articles and of the Act, the shares including any shares forming part of any increased capital of the Company shall be under the control of the Directors, who may allot or otherwise dispose off the shares to such persons in such proportion, on such terms and conditions and at such times as the Directors may think fit and subject to the sanction of the Company in General Meeting, subject to the provisions of Sections 52 and section 54 of the Act at a premium or par and such option being exercisable for such time and for such consideration as the Directors think fit. The Board shall cause to be filed the returns as to allotment provided for in Section 39(4) of the Act.
☐	☒	5	14 Issue of shares for consideration other than cash Subject to these Articles and the provisions of the Act, if any, the Board may issue and allot shares in the capital of the Company as payment or in consideration or as part payment or in part consideration of the purchase or acquisition of any property or for services, rendered to the Company in the conduct of its business and shares which may be so issued or allotted shall be credited or deemed to be credited as fully paid up or partly paid up shares. 15 Power of Company to Issue Shares The Company in General Meeting may subject to the provisions of Section 42 & 62 of the Act provide that any shares (whether forming part of the original capital or of any increased capital of the Company) shall be offered to such persons (whether a Member or not), in such proportion and on such terms and conditions of the Act) at a premium or at par or at a discount, as such General Meeting shall determine and with full power

			to give any person (whether a Member or not) the option to call for or be allotted shares of any class of the Company either subject to compliance with the provisions of Sections 52 and 54 of the Act at a premium or at par or at discount, such option being exercisable at such times and for such consideration as may be directed by such General Meeting or the Company in General Meeting may make any other provisions whatsoever for the issue, allotment or disposal of any shares.
☐	☒	6	16 Acceptance of shares Any person applying for shares in the Company followed by an allotment of any shares and subscribers to the Memorandum, shall be a shareholder within the meaning of these Articles, and every person whose name is on the Register of Members shall, for the purposes of these Articles, be a Member of the Company. 17 Deposit & call to be a debt payable Immediately The Money, (if any), which the Board shall, on the application for allotment of any shares being made by them, require or direct to be paid by way of deposit, call or otherwise, in respect of any shares allotted by them, shall immediately on the insertion of the name of the allottee in the Register of Members as the name of the holder of such shares, become a debt due to and recoverable by the Company from the allottee thereof, and shall be paid by him accordingly.
☐	☒	7	18 Liability of Members Every Member, or his heirs, executors or administrators, shall pay to the Company the portion of the capital and premium, if any, represented by or payable on, his share or shares which may, for the time being, remain unpaid thereon, in such amounts, at such time or times and in such manner as the Board shall, from time to time, in accordance with the Company?s regulations, require or fix for the payment thereof. 19 Share Certificates A certificate, issued under the common seal of the company, specifying the shares held by any person, shall be prima facie evidence of the title of the person to such shares. (a) Every Member or allottee of shares who is holding such shares in the physical form shall be entitled, without payment, to receive certificate specifying the name of the person in whose favour it is issued, the shares to which it relates and the amount paid-up thereof. Such certificates shall be issued only in pursuance of a resolution passed by the Board and on surrender to the Company of the letter of allotment or the fractional coupons of requisite value, save in case of issues against letters of acceptance or of renunciation or in cases of issue of bonus shares. Every such certificate shall be issued under the seal of the Company, which shall be affixed in the presence of two Directors and the Secretary or some other person appointed by the Board for the purpose, and the two directors and the Secretary or other persons as authorized by the Board shall sign the share certificate. Provided, if the composition of the Board permits of it, at least one of the aforesaid two directors shall be a person other than a Managing or a Whole Time Director. Particulars of every share certificate issued shall be entered in the Register of Members against the name of the person, to whom it has been issued, indicating the date of issue. For issue of any further duplicate certificate, the Board shall be entitled to charge such amount which shall not exceed fifty Rupees per Certificate. (b) A Director may sign a share certificate by affixing his signature thereon by means of any machine, equipment or other mechanical means such as engraving in metal or lithography, but not by means of a rubber stamp. PROVIDED that the Director shall be personally responsible for the safe custody of such machine equipment or other material used for the purpose.
☐	☒		20 Renewal of Share Certificates (a) No certificate of any share or shares shall be issued either in exchange for those which are sub-divided or consolidated or in replacement of those which are defaced, mutilated, torn or old, decrepit, destroyed or where the pages on the reverse for recording transfers have been duly utilized, unless the certificate in lieu of which it is issued is surrendered to the Company and for issuing such share certificate the company may charge such fee as the Board thinks fit, not exceeding twenty rupees per certificate. (b) When a new share certificate has been issued in pursuance of clause (a) of this Article, it shall state on the face of it and against the stub or counterfoil to the effect that it is ?Issued in lieu of share certificate No _____ sub-divided/replaced/on consolidation.? (c) If a share certificate is lost or destroyed a new certificate in lieu thereof shall be issued only with the prior consent of the Board and on such reasonable terms, such as furnishing supporting evidence and indemnity and the payment of out-of-pocket expenses incurred by the Company in investigating evidence produced, as the Board thinks fit. (d) When a new share certificate has been issued in pursuance of clause (c) of this Article, it shall state on the face of it and against the stub or counterfoil to the effect that it is "duplicate issued in lieu of share certificate

			No._____" and the word "duplicate" shall be stamped or printed prominently on the face of the share certificate. (e) Where a new share certificate has been issued in pursuance of clause (a) and/ or clause (c) of this Article, particulars of every such share certificate shall be entered in a Register of Renewed and Duplicate Share Certificates indicating against the name(s) of the person(s) to whom the certificate is issued, the number and date of issue of the share certificate in lieu of which the new certificate is issued and the necessary changes indicated in the Register of Members by suitable cross reference in the "Remarks" column. (f) All blank forms to be used for issue of share certificates shall be printed and the printing shall be done only on the authority of a resolution of the Board and the blank forms shall be consecutively machine-numbered and the forms and the blocks, engravings, facsimiles relating to the printing of such forms shall be kept in the custody of the Secretary or of such other person as the Board may appoint for the purpose; and the Secretary or the other person aforesaid shall be responsible for rendering an account of these forms to the Board. (g) The Committee of the Board, Company Secretary of the Company or a Director specifically authorized by the Board for such purpose shall be responsible for the maintenance, preservation and safe custody of all books and documents relating to the issue of share certificates including the blank forms of share certificates referred to in clause (f).
		8	(h) All books referred to in clause (g) shall be preserved in good order for not less than thirty years and in disputed cases shall be preserved permanently. 21 Joint holders (a) Where two or more persons are registered as the holders of any share, they shall be treated as a single shareholder and shall be deemed to hold the same as joint holders with benefits of survivorship subject to the following and other provisions contained in these Articles. (b) The Company shall be entitled to decline to register more than four persons as the holders of any share. (c) The Joint holders of any share shall be liable, severally as well as jointly, for and in respect of all calls and other payments which ought to be made in respect of such shares. (d) On the death of any such joint holder, the survivor or survivors shall be the only person or persons recognized by the Company as having any title to the share, but the Directors may require such evidence of death as they may deem fit and nothing herein contained shall be taken to release the estate of the deceased joint holder from any liability on shares held by him jointly with any other person. (e) Delivery of share certificate to any one of such joint holders shall be deemed to be delivery to all of them and any one of such joint holders may give effectual discharge and receipts for any dividends or other moneys payable in respect of such shares and/or in respect of any other obligation of the Company towards them. (f) Only the person whose name stands in the Register of Members as the first of the joint holders of any shares shall be entitled to delivery of the certificate relating to such share or to receive notices from the Company, and any notice given to such person shall be deemed proper notice to all joint holders. (g) Any one of two or more joint holders may vote at any meeting either personally or by proxy in respect of such share as if he were solely entitled thereto, and if more than one of such joint holders be present at any meeting personally or by proxy, the holder whose name stands first or higher (as the case may be) on the Register of Members in respect of such share shall alone be entitled to vote in respect thereof. PROVIDED always that a member present at any meeting personally shall be entitled to vote in preference to a person present by proxy although the name of such person present by proxy stands first on the Register of Members in respect of such shares. 22 Terms and Conditions of Preference Shares Subject to the provisions of section 55, any preference shares may, with the sanction of an ordinary resolution, be issued on the terms that they are to be redeemed on such terms and in such manner as the company before the issue of the shares may, by special resolution, determine.
			Lien
☐	☒		23 Company to have lien on shares The Company shall have a first and paramount lien upon all shares (other than fully paid up shares) registered in the name of each member (whether solely or jointly with others) and upon the sale proceeds

		9	thereof, for all moneys (whether presently payable or not) called or payable at a fixed time in respect of all such shares (not being fully paid up) for all moneys presently payable by him or his estate to the Company. Any such lien shall extend to all dividends payable and bonuses declared from time to time declared in respect of such shares.
☐	☒	10	24 Enforcing lien by sale For the purpose of enforcing such lien, the Board may sell the shares subject thereto in such manner as they shall think fit, and for that purpose it may cause to be issued a duplicate certificate in respect of such shares and may authorize one of their Directors to execute a transfer thereof on behalf of and in the name of the Board. No sale shall be made until notice period for making call as aforesaid have expired and until notice in writing of the intention to sell shall have been made known to the shareholder for default in payment and default has been made by him in the payment of money called in respect of such shares for thirty days after the date of such notice. Upon issue of a duplicate certificate or certificates in lieu of the original share, the certificate or certificates originally issued shall stand cancelled and become null and void and the same shall have no effect.
☐	☒	11	25 Application of proceeds of sale The net proceeds of any such sale shall be received by the Company and applied in or towards payment of such part of the amount as is presently payable and the residue, if any, shall (subject to a like lien for sums not presently payable as existed upon the shares before sale) be paid to the person entitled to the shares, at the date of the sale.
☐	☒	12	
			Calls on shares
☐	☒	13	26 Directors may make calls The Board may, from time to time, subject to the terms on which any shares may have been issued and subject to the conditions of allotment, by a resolution passed at a meeting of the Board (and not by resolution by circulation) make such call as it thinks fit upon the Members in respect of all moneys unpaid on the shares held by them respectively and each member shall pay the amount of every call so made on him to the person or persons and at the times and places appointed by the board. A call may be made payable by installments.
☐	☒	14	27 Notice of calls Not less than thirty days? notice in writing of any call shall be given by the Company specifying the time and place of payment, and the person or persons to whom such call shall be paid. 28 When call made A call shall be deemed to have been made at the time when the resolution of the Board authorizing such call was passed at a meeting of the Board and demand notice is issued. 29 Calls may be revoked or postponed A call may be revoked or postponed at the discretion of the Board.
☐	☒	15	
☐	☒	16	(i) If a sum called in respect of a share is not paid before or on the day appointed for payment thereof, the person from whom the sum is due shall pay interest thereon from the day appointed for payment thereof to the time of actual payment at ten per cent per annum or at such lower rate, if any, as the Board may determine. (ii) The Board shall be at liberty to waive payment of any such interest wholly or in part.
☐	☒		30 Directors may extend time The Board may, from time to time at its discretion, extend the time fixed for the payment of any call, and may extend such time as to all or any of the Members for reasons which the Board may consider satisfactory, but no Member shall be entitled to such extension save as a matter of grace. 31 Calls to carry interest If any Member fails to pay any call due from him on the day appointed for payment thereof, or any such extension thereof as aforesaid, he shall be liable to pay interest on the same from the day appointed for the payment thereof to the time of actual payment at rate not exceeding 10 per cent per annum as maybe decided by the Board, but the Board may in its absolute discretion and in special circumstances waive or reduce the levy of interest as deemed appropriate. 32 Sums deemed to be call Any sum, which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall, for the purposes of these

		17	Articles be deemed to be a call duly made and payable on the date on which by the terms of issue the same becomes payable, and in case of non-payment all the relevant provisions of these Articles as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified. 33 Partial payment not to preclude Forfeiture Neither the receipt by the Company of a portion of any money which shall from time to time be due from any Member to the Company in respect of his shares, either by way of principal or interest nor any indulgence granted by the Company in respect of the payment of any such money, shall preclude the Company from thereafter proceeding to enforce a forfeiture of such shares as hereinafter provided. 34 Payment in anticipation of calls may carry interest The Board may, if it thinks fit, agree to and in anticipation receive from any Member willing to advance the same, all of calls money or any part of the amounts of his respective shares beyond the sums actually called up, and upon the moneys so paid in advance, or upon so much thereof, from time to time, and at any time thereafter as exceeds the amount of the calls then made upon and due in respect of the shares on account of which such advances are made, the Board may pay or allow interest, at such rate as the Member paying the sum in advance and the Board agree upon. The Board may agree to repay at any time any amount so advanced or may at any time repay the same upon giving to the Member three months? notice in writing. PROVIDED that moneys paid in advance of calls on any shares may carry interest but shall not confer a right to dividend or to participate in profits. (b) No Member paying any such sum in advance shall be entitled to voting rights in respect of the moneys so paid by him until the same would but for such payment become presently payable.
☐	☒	18	
			Transfer of shares
☐	☒	19	35 Register of Transfers The Company shall maintain a Register of Transfers and therein shall be fairly and distinctively enter the particulars of every transfer or transmission of any share in the physical form. 36 Form of transferThe instrument of transfer shall be in writing and in such form as prescribed under the Act. All the provisions of Section 56 of the Act shall be duly complied with in respect of all transfers and of the registration thereof. The Company shall not charge any fee for registration of a transfer of shares or debentures.
☐	☒	20	37 Instrument of Transfer to be completed and presented to the Company The Instrument of Transfer duly stamped and executed by the transferor and the transferee shall be delivered to the Company in accordance with the provisions of the Act. The instrument of transfer shall be accompanied by the Share Certificate or such evidences the Board may require to prove the title of transferor and his right to transfer the shares and every registered Instrument of Transfer shall remain in the custody of the Company until destroyed by order of the Board. Any instrument of transfer which the Directors may decline to register shall be returned to the person depositing the same. 38 Transferor deemed to be holder The transferor shall be deemed to be the holder of such shares until the name of the transferee shall have entered in the Register of Members in respect thereof. Before the registration of a transfer, the certificate or certificates of the shares must be delivered to the Company along with Transfer Deed. 39 No transfer to insolvent etc. No transfer shall be made to a person of unsound mind or to an insolvent. 40 Closure of Register of Members/Debenture holders The Directors shall have power, on giving not less than seven days? previous notice as required by Section 91 of the Act, to close the Register of Transfer, Register of Members or Register of Debenture holders or the register of other security holders of the Company for any period or periods not exceeding in the aggregate forty-five days in each year (but not exceeding thirty days at any one time) as they may determine.
☐	☒		41 Nomination by shareholder Every share-holder or debenture holder may at any time, nominate in the prescribed manner, a person to whom his shares or debenture shall vest in the event of his death, as provided in Section 72 of the Act. 42

		21	Title to shares of deceased holder In the event there is no nomination, the executors or administrators of a deceased Member or the holder of a Succession Certificate in respect of the shares of a deceased Member (not being one of two or more joint holders) shall be the only persons whom the Company will be bound to recognize as having any title to the shares registered in the name of such Member, and the Company shall not be bound to recognize such executors or administrators or holders unless such executors, administrators or holders shall have first obtained probate or Letters of Administration or Succession Certificate as the case may be, from a duly constituted Court in India. PROVIDED that the Directors may, at their absolute discretion dispense with production of Probate, Letters of Administration or Succession Certificate upon such terms as to indemnity or otherwise as they think fit and may enter the name of the person who claims to be absolutely entitled to the shares standing in the name of a deceased Member, as a Member
☐	☒	22	
			Transmission of shares
☐	☒	23	Transmission of Shares Subject to the provisions of the Act, any person becoming entitled to any share in consequence of the death, lunacy or insolvency of any Member or by any lawful means other than by a transfer in accordance with these Articles, may, with the consent of the Directors (which they shall be under no obligation to give) and upon producing such evidence that he sustains the character in respect of which he proposes to act under this Article or of his title as the Directors may require, and upon such indemnity as the Directors may require, either be registered as a Member in respect of such shares or elect to have some person nominated by him and approved by the Directors registered as a Member in respect of such shares. PROVIDED that if such persons shall elect to have his nominee registered, he shall testify his election by executing in favor of his nominee an instrument of transfer in accordance with these Articles, and until he does so he shall not be freed from any liability in respect of such shares.
☐	☒	24	44 Right of Board to decline or suspend registration (i) Any person becoming entitled to a share in consequence of the death or insolvency of a member may, upon such evidence being produced as may from time to time properly be required by the Board and subject as hereinafter provided, elect, either -- (a) to be registered himself as holder of the share; or (b) to make such transfer of the share as the deceased or insolvent member could have made. (ii) The Board shall, in either case, have the same right to decline or suspend registration as it would have had, if the deceased or insolvent member had transferred the share before his death or insolvency. 45 The Company not liable for disregard of notice prohibiting registration of transfer The Company shall incur no liability or responsibility whatever in consequence of its registering or giving effect to any transfer of shares made or purported to be made by any apparent legal owner thereof (as

			shown or appearing in register of Members) to the prejudice of persons having or claiming any [illegible]ght, title or interest to or in the same shares, notwithstanding that the Company may have had notice of such equitable right, title or interest or notice prohibiting registration of such transfer, and may have entered such notice or referred to it in any book, or attended or given effect to any notice which may have been given to it of any equitable right, title or interest or be under any liability whatsoever for refusing or neglecting so to do though it may have been entered or referred to in some book of the Company, but the Company shall nevertheless be at liberty to regard and attend to any such notice and give effect thereto, if the Directors shall so think fit.
☐	☒	25	46 Rights of successors A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would have been entitled if he were the registered holder of the shares, except that he shall not, before being registered as a Member in respect of the shares, be entitled to exercise any right conferred by membership in relation to meetings of the Company. PROVIDED that the Directors shall, at any time, give notice requiring any such person to elect to be registered himself or to transfer the shares, and if the notice is not complied within ninety days from the date of issue of the notice, the Directors may thereafter withhold payment of all dividends, bonuses or other moneys payable in respect of the shares until the requirements of the notice have been complied with.
☐	☒	26	
			Forfeiture of shares
☐	☒	27	47 If money payable on shares not paid notice to be given to members If any Member fails to pay any call, or installment of a call, on or before the day appointed for the payment of the same or any such extension thereof as aforesaid, the Board may, at any time thereafter, during such time as any part of the call or installment remains unpaid, serve a notice on him requiring him to pay the same together with any interest which may have accrued and all expenses that may have been incurred by the Company by reason of such non-payment. 48 Contents of Notice The notice shall name a further day (not being less than fourteen days from the date of the service of notice) and a place or places on and at which such call or installment and such interest thereon at such rate as the Directors shall determine from the day on which such call or installment ought to have been paid and expenses as aforesaid are to be paid. The notice shall also state that in the event of the non-payment on or before the day, at or before the time and at the place appointed, the shares in respect of which the call was made or installment is payable, shall be liable to be forfeited.
☐	☒	28	49 In default of payment, shares to be Forfeited If the requirement of any such notice as aforesaid are not complied with, every or any share in respect of which such notice has been given may, at any time thereafter, but before payment of all calls or installments, interest and expenses due in respect thereof, be forfeited by a resolution of the Board to that effect. Such forfeiture shall include all dividends declared or any other moneys payable in respect of the aforesaid share and not actually paid before the forfeiture.In default of payment, shares to be Forfeited 50 Notice of forfeiture to a Member When any share shall have been so forfeited, notice of the forfeiture shall be given to the Member in whose name it stood immediately prior to the forfeiture, and an entry of the forfeiture, with the date thereof, shall forthwith be made in the Register of Members, but no forfeiture shall be in any manner invalid by any omission or neglect to make any such entry as aforesaid in the Register.
☐	☒	29	51 Forfeited share to be property of the Company and may be sold etc. Any share so forfeited shall be deemed to be the property of the Company, and may be sold, re-allotted, or otherwise disposed of, either to the original holder thereof or to any person, upon such terms and in such manner as the Board shall think fit. 52 Member still liable to pay calls owing at the time of forfeiture and interest Any members whose shares have been forfeited shall notwithstanding the forfeiture be liable to pay and shall forthwith pay to the Company, on demand, all calls, installment, interest and expenses owing upon or in respect of such shares at the time of the forfeiture together with interest accrued thereon at the time of the forfeiture at such rate as the Board may determine, and the Board may enforce the payment thereof, if it thinks fit.
☐	☒	30	53 Effect of forfeiture The forfeiture of a share shall involve extinction, at the time of the forfeiture, of all interest in and all claims and demands against the Company, in respect of the share and all other rights incidental to the share, except only such of those rights as by these Articles are expressly saved. 54 Evidence of forfeiture A declaration in writing by Chairman or Managing Director of the Company or by any person duly authorised in this regard that certain shares in the Company have been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the shares and such declaration, and the receipt of the Company for the consideration, if any, given for the shares on the sale or disposition thereof shall constitute a good title to such

			shares and the person to whom the shares are sold shall be registered as the holder of such shares and shall not be bound to see as to the application of the purchase money nor shall his title to such shares be affected by any irregularity or invalidity in the proceedings in reference to such forfeiture, sale or disposition.
☐	☒	31	55 Validity of sale under Articles of forfeited shares Upon any sale after forfeiture or for enforcing a lien in purported exercise of the powers herein before given, the board may appoint some person to execute an instrument of transfer of the shares sold and cause the purchaser?s name to be entered in the Register of Members in respect of the shares sold, and the purchaser shall not be bound to see the regularity of the proceedings, or to the application of the purchase money, and after his name has been entered in the Register in respect of such shares the validity of the sale shall not be impeached by any person and the remedy of any person aggrieved by the sale shall be in damages only and against the Company exclusively. 56 Cancellation of Share Certificates in respect of forfeited shares Upon any sale, re-allotment or other disposal under the provisions of the preceding Articles, the certificate or certificates originally issued in respect of the relative shares shall (unless the same shall on demand by the Company have been (previously) surrendered to it by the defaulting member) stand cancelled and become null and void and of no effect, and the Directors shall be entitled to issue a duplicate certificate or certificates in respect of the said shares to the person or persons entitled thereto.
☐	☒	32	57 Power to annul forfeiture The Board may at any time before any share so forfeited, shall have been sold, re-allotted or otherwise disposed of, annul the forfeiture thereof upon such terms and conditions as it thinks fit.
☐	☒	33	
			Alteration of capital
☐	☒	34	58 Alteration of Share Capital The company may, from time to time, by ordinary resolution increase the share capital by such sum, to be divided into shares of such amount, as may be specified in the resolution. Subject to the provisions of section 61, the company may, by ordinary resolution, the Company may from time to time:-- (a) consolidate and divide all or any of its share capital into shares of larger amount than its existing shares; (b) convert all or any of its fully paid-up shares into stock, and reconvert that stock into fully paid-up shares of any denomination; (c) Sub-divide its shares, or any of them into shares of smaller amount than is fixed by the memorandum, so, however, that in the sub-division the proportion between the amount paid and the amount, if any, unpaid on each reduced share shall be the same as it was in the case of the share from which the reduced share is derived.; (d) Cancel any shares which as the date of the passing of the resolution, have not been taken or agreed to be taken by any person and diminish the amount of its share capital by the amount of the shares so cancelled. The resolution whereby any share is sub-divided may determine that, as between the holders of the shares resulting from such sub-division, one or more of such shares shall have some preference or special advantage as regards dividend, capital, voting or otherwise over or as compared with the others or other, subject, to the provisions of the Act. Subject to the provisions of Sections 66 of the Act, the Board may accept from any member the surrender on such terms and conditions as shall be agreed of all or any of his shares. The company may, by special resolution, reduce in any manner and with, and subject to, any incident authorised and consent required by law, -- (a) its share capital; (b) any capital redemption reserve account; or (c) any share premium account.
☐	☒	35	
☐	☒	36	

☐	☒	37	
			Capitalisation of profits
☐	☒	38	59 Capitalization of Profits (1) Any General Meeting of the Company may resolve that any amounts standing to the credit of the Free Reserve or Share Premium Account or the Capital Redemption Reserve Account or any moneys, investment or other assets forming part of the undivided profits including profits or surplus moneys arising from the realization and (when permitted by the law) from the appreciation in value of any capital assets of the Company standing to the credit of the General Reserve or any other Reserve or Reserve Fund or any other Fund of the Company or in the hands of the Company and available for dividend be capitalized:- (a) by the issue and distribution of shares, as fully paid-up, and to the extent permitted by the Act, debentures, debenture stock, bonds or other obligations of the Company ; or (b) by crediting share of the Company, which may have been issued and are not fully paid-up, with the whole or any part of the sum remaining unpaid thereon; PROVIDED that any amounts standing to the credit of the Share Premium Account or the Capital Redemption Reserve Account shall be applied only in crediting the payment of capital on shares to be issued to Members as fully paid bonus shares (Further capitalization of reserve created by the revaluation of assets are not to be used for issuance of Bonus Shares as per section 63 of the Act). (2) Such issue and distribution under sub-clause (1) (a) of this Article and payment to the credit of unpaid share capital under sub-clause (1) (b) of this Article shall be made among and in favour of the Members or any class of them or any of them entitled thereto and in accordance with their respective rights and interests and in proportion to the amount of capital paid-up on the shares held by them respectively in respect of which such distribution or payment shall be made, on the footing that such Members become entitled thereto as capital. (3) The Directors shall give effect to any such resolution and for the said purpose the Board may settle any difficulty which may arise in regard to distribution as it thinks expedient including in regard to fractional entitlements, and shall apply such profits, General Reserve, other Reserve or any other Fund or account as aforesaid as may be required for the purpose of making payment in full on the shares, or other obligations of the Company so distributed under sub clause (1) (a) of this Article or (as the case may be) for the purpose of paying, in whole or in part, the amount remaining unpaid on the shares which may have been issued and are not fully paid-up under sub-clause (1)(b) above. PROVIDED that no such distribution or payment shall be made unless recommended by the Directors, and, if so recommended, such distribution and payment shall be accepted by such Members as aforesaid in full satisfaction of their interest in the said capitalized fund. (4) For the purpose of giving effect to any such resolution, the Directors may settle any difficulty which may arise in regard to the distribution or payment as aforesaid as they think expedient, and, in particular, they may issue fractional certificates and may fix the value for distribution of any specific asset and may determine that any cash payment be made to any Members on the footing of the value so fixed and may vest any such cash, shares, debentures stock, bonds or other obligations in trustees upon such trusts for the persons entitled thereto as may seem expedient to the directors, and generally may make arrangement for the acceptance, allotment and sale of such shares, debentures, debentures stock, bonds or other obligations and fractional certificates or otherwise as they may think fit. (5) When deemed requisite, a proper contract shall be filed in accordance with the Act and the Board may appoint any person to sign such contract on behalf of the Members entitled as aforesaid. Subject to the provisions of the Act and these Articles, in cases where some of the shares of the Company are fully paid and others are partly paid, such capitalization may be effected by the distribution of further shares in respect of the fully paid shares and by crediting the partly paid shares with the whole or part of the unpaid liability thereon, but so that as between the holders of the fully paid shares and the partly paid shares, the sums so applied in the payment of such further shares and in the extinguishment or diminution of the liability on the partly paid shares shall be applied pro rata in proportion to the amount then already paid or credited as paid on the existing fully paid and partly paid shares respectively.

☐	☒	39	
			Buy-back of shares
☐	☒	40	60 Buy Back of Shares Notwithstanding anything contained in these articles but subject to the provisions of sections 68 to 70 and any other applicable provision of the Act or any other law for the time being in force, the company may purchase its own shares or other specified securities.
			General meetings
☐	☒	41	61 Annual General MeetingThe Company shall in each year hold a General Meeting as its Annual General Meeting in addition to any other meeting in that year. All General Meetings other than Annual General Meetings shall be called Extraordinary General Meetings. If for any reason beyond the control of the Board, the general meeting (including an Annual General meeting) cannot be held on the appointed day, the Board shall have power to postpone the General meeting of which a notice should be given to the members. Every member of the Company shall be entitled to attend either in person or by proxy and the Auditor of the Company shall have the right to attend and to be heard at any General Meeting which he attends on any part of the business which concerns him as Auditor. 62 Extraordinary General Meeting The Board may, whenever it thinks fit, call an Extraordinary General Meeting of the Company. The Board shall at the requisition in writing by a Member or Members holding in the aggregate not less than one-tenth of such of the paid-up capital of the company on that date and carries the right of voting in regard to the matter in respect of which the requisition has been made. 63 Requisition of Members to state object of Meeting Any valid requisition so made by Members must state the object or objects of the meeting proposed to be called, and must be signed by the requisitionists and deposited at the registered office of the company. PROVIDED that such requisition may consist of several documents in like form, each signed by one or more requisitionists.
☐	☒	42	65 On receipt of requisition Directors to call meeting and in default requisitionists may do so Upon the receipt of any such requisition, the Board shall forthwith call an Extraordinary General Meeting, and if they do not proceed within twenty-one days from the date of the requisition being deposited at the Registered Office to cause a meeting to be called on a day not later than forty-five days from the date of deposit of the requisition, the requisitionists, or such of their number as represent either a majority in value of the paid-up share capital held by all of them or one-tenth of such of the paid-up share capital of the Company as is referred to in Section 100(2) of the Act, whichever is less, may themselves call the meeting, but in either case, any meeting so called shall be held within three months from the date of the deposit of the requisition, as aforesaid. 66 Meeting called by requisitionists Any meeting called under the foregoing Articles by the requisitionists shall be called in the same manner, as nearly as possible, as that in which meetings are to be called by the Board. 67 Twenty-one days? notice of meeting to be given A general meeting of a Company may be called by giving not less than clear twenty-one days? notice either in writing or through electronic mode in such a manner as may be prescribed, Every notice of a meeting shall specify the place, date, day and the hour of meeting, and shall contain statement of the business to be transacted at such meeting. And, The notice of every meeting shall be given to every member of the Company, Legal Representative of any deceased member or the assignee of an insolvent member, auditor or auditors of the Company and every director of the Company and all such persons as are under these Articles entitled to receive notice from the Company "Provided that a general meeting may be called after giving shorter notice than that specified in this sub-section if consent, in writing or by electronic mode, is accorded thereto ? (i) in the case of an annual general meeting, by not less than ninty-five per cent. of the members entitled to vote thereat; and (ii) in the case of any other general meeting, by members of the company? (a) holding, if the company has a share capital, majority in number of members entitled to vote and who represent not less than ninety-five per cent. of such part of the paid-up share capital of the company as gives a right to vote at the meeting; or (b) having, if the company has no share capital, not less than ninty-five per cent. of the total voting power exercisable at that meeting: Provided further that where any member of a company is entitled to vote only on some resolution or resolutions to be moved at a meeting and not on the others, those members shall be taken into account for the purposes of this sub-section in respect of the former resolution or resolutions and not in respect of the latter.".

			Proceedings at general meetings
☐	☒	43	68 Business to be transacted at the General Meeting and nature thereof In the case of an Annual General Meeting, all business to be transacted thereat shall be deemed special, other than (i) the consideration of the financial statements and the reports of the Board of Directors and Auditors; (ii) the declaration of any dividend; (iii) the appointment of Directors in place of those retiring; (iv) the appointment of, and the fixing of the remuneration of, the Auditors, and in the case of any other meeting, all business shall be deemed to be Special Business, and there shall be annexed to the notice of the Meeting an Explanatory statement setting out all material facts concerning each such item of special business, including in particular the nature of the concern or interest, financial or otherwise, if any, therein of (i) every Director, and the Manager (if any); (ii) every other key managerial personnel; and relatives of the persons mentioned in sub clauses (i) and (ii). Where any such item of Special Business relates to, or affects any other company, the extent of shareholding interest in such other company of every promoter, director and the manager, if any, and of every other key managerial personnel of the Company shall also be set out in the statement if the extent of such shareholding interest is not less than two per cent of the paid-up share capital of that other company and where any item of business consists of the according of approval to any documents by the meeting, the time and place where the document can be inspected shall be specified in the statement aforesaid. The annual general meeting shall be called during business hours on any day that is not a National Holiday and it is to be held either at the registered office of the company or at some other place within the city in which the registered office of the company is situate.
☐	☒	44	69 Omission to give notice not to invalidate a resolution passed The accidental omission to give any such notice as aforesaid to any of the Members, or the non-receipt thereof, shall not invalidate any resolution passed at any such meeting. 70 Meeting not to transact business not mentioned in notice No General Meeting, Annual or Extraordinary, shall be competent to enter upon, discuss or transact any business which has not been mentioned in the notice or notices, upon which it was convened. 71 Body Corporate deemed to be personally present A body corporate being a Member shall be deemed to be personally present if it is represented in accordance with Section 113 of the Act. 72 Quorum at General Meeting No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business. Save as otherwise provided herein, the quorum for the general meetings shall be as provided in section 103 of the Companies Act, 2013
☐	☒	45	73 If quorum not present meeting to be dissolved or adjourned If, at the expiration of half an hour from the time appointed for holding a general meeting of the Company, a quorum is not present, the meeting, if convened by or upon the requisition of Members, shall stand dissolved, but in any other case, the meeting shall stand adjourned to the same day in the next week or, if that day is a public holiday, until the next succeeding day which is not a public holiday, at the same time and place, or to such other day and at such other time & place as the Board may determine, and if at such adjourned meeting a quorum is not present at the expiration of half an hour from the time appointed for holding the meeting, the Members present shall form the quorum, and may transact the business for which the meeting was called. 74 Chairman of General Meeting The Chairman of the Board shall be entitled to take the Chair at every General Meeting whether Annual or Extraordinary. If at any meeting the Chairman is not present within fifteen minutes of the time appointed for holding such meeting or he has informed that he shall be unable or unwilling to take the Chair then any one of directors with mutual consent shall so preside at the meeting. If no Director be present or if all the Directors present decline to take the Chair, then the Members present shall elect one of the members to be the Chairman of the Meeting
☐	☒		75 No Business whilst chair vacant No business shall be discussed at any General Meeting except the election of a Chairman, whilst the Chair is vacant. 76 Chairman with consent may adjourn meeting The Chairman, with the consent of the Members, may adjourn any meeting from time to time and from place to place within the city, town or village in which the Registered Office of the Company is situated, but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. Notwithstanding, the provision as above in the event of disorder at a validly convened meeting the Chairman may adjourn the meeting provided that such an adjournment shall not be a longer period than the Chairman considers necessary to being order at the meeting and Chairman communicates his decision to those present in so far as it is possible. 77 Questions at General Meeting how Decided Every question submitted to a meeting shall be decided in the first instance unless a poll is demanded, on a show of hands. Before or on the declaration of the result of the voting on any resolution on a show of hands, a poll may be ordered to be taken by the Chairman of the meeting on his own motion and shall be ordered to be taken by him on a demand made in that behalf by any member or members present in person or by proxy, and holding shares in the Company, which confer a power to vote on the resolution not being less than one-tenth of the total voting power in respect of the Resolution or on which an aggregate sum of not less than five lakh rupees has been paid up. The demand for

		46	a poll may be withdrawn at any time by the person or persons making the demand. Unless a poll is so demanded, a declaration by the Chairman that a resolution has, on show of hands, been carried through unanimously or by a particular majority or lost and an entry to that effect in the Minutes Book of the Company shall be conclusive evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against the resolution. 78 Chairman?s Casting Vote In the case of an equality of votes, the Chairman shall have a casting vote in addition to the vote or votes to which he may be entitled otherwise. 79 Poll to be taken, if demanded If a poll is demanded as aforesaid, the same shall be taken at such time (not later than forty-eight hours from the time when the demand was made) and place in the city or town in which the Registered office of the Company is for the time being situated, as the Chairman shall direct, either at once or after an interval or adjournment and the result of the poll shall be deemed to be the resolution of the meeting. 80 In which case poll taken without Adjournment Any poll duly demanded on the election of the Chairman of a meeting or on any question of adjournment shall be taken at the meeting forthwith. 81 Demand for poll not to prevent transaction of other business The demand for a poll except on the questions of the election of the Chairman and of an adjournment shall not prevent the continuance of a meeting for the transaction of any business other than the question on which the poll has been demanded. 82 Minutes of General Meetings (a) The Company shall cause minutes of the proceedings of every General Meeting or every resolution passed by postal ballot to be kept by making within thirty days of the conclusion of every such meeting concerned, record thereof kept with Minute Book for that purpose with their pages consecutively numbered. (b) Each page of every such book shall be initialed or signed and the last page of the record of proceedings of each meeting in such book shall be dated and signed by the Chairman of the same meeting within the aforesaid period of thirty days or in the event of the death or inability of that Chairman within that period, by a Director duly authorised by the Board for the purpose. (c) In no case the minutes of proceedings of a meeting shall be attached to any such book as aforesaid by pasting or otherwise. (d) The minutes of each meeting shall contain a fair and correct summary of the proceedings thereat. (e) All decisions taken and appointments of officers made at any meeting aforesaid shall be included in the minutes of the meeting. (f) Nothing herein contained shall require or be deemed to require the inclusion in any such minutes of any matter which in the opinion of the Chairman of the meeting (a) is or could reasonably be regarded as defamatory of any person, or (b) is irrelevant or immaterial to the proceedings, or (c) is detrimental to the interests of the Company. The Chairman of the meeting shall exercise an absolute discretion in regard to the inclusion or non-inclusion of any matter in the minutes on the aforesaid grounds. (g) Any such minutes shall be evidence of the proceedings recorded therein. Where the minutes have been kept in accordance with section then, until the contrary is proved, the meeting shall be deemed to have been duly called and held, all appointments of directors, key managerial personnel, auditors or company secretary in practice, shall be deemed to be valid. No document purporting to be a report of the proceedings of any general meeting of a company shall be circulated or advertised at the expense of the company, unless it includes the matters required to be contained in the minutes of the proceedings of such meeting. The company shall observe secretarial standards with respect to general and Board meetings specified by the Institute of Company Secretaries of India constituted under section 3 of the Company Secretaries Act, 1980, and approved as such by the Central Government. (h) The book containing the minutes of the proceedings of any general meeting of the Company or of a resolution passed by postal ballot, shall be kept at the registered office of the Company and shall be open, during business hours, to the inspection by any member without any charge, for such period not being less than two hours in each business day are allowed for inspection.
			Adjournment of meeting
☐	☒		83 Adjournment of Meeting (i) The Chairperson may, with the consent of any meeting at which a quorum is present, and shall, if so directed by the meeting, adjourn the meeting from time to time and from place to place. (ii) No business shall be transacted at any adjourned meeting other than the business left unfinished at the

		47	meeting from which the adjournment took place. (iii) When a meeting is adjourned for thirty days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. (iv) Save as aforesaid, and as provided in section 103 of the Act, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.
			Voting rights
☐	☒	48	84 Members in arrears not to vote No member shall be entitled to vote either personally or by proxy at any General Meeting or Meeting of a class of shareholders either upon a show of hands or upon a poll in respect of any shares registered in his name on which any calls or other sums presently payable by him have not been paid or in regard to which the Company has exercised any right of lien. 85 Number of votes to which Member Entitled Subject to the provisions of these Articles and without prejudice to any special privileges or restrictions as to voting for the time being attached to any class of shares for the time being forming part of the capital of the Company, every Member shall be entitled to be present, and to speak and vote at such meeting by show of hand for which the Member present in person shall have one vote. On a poll taken at a meeting of a company, a member entitled to more than one vote, or his proxy, need not to use all his votes or cast in the same way all the votes he uses.
☐	☒	49	86 Votes by a Member entitled to more than one vote On a poll taken at a meeting of the Company, a Member entitled to more than one vote by virtue of his share-holding or his proxy or other person entitled to vote for him, as the case may be, need not, if he votes, use all his votes or cast in the same way all the votes he uses and he may vote in different manner as he deems fit. 87 Vote of Member who is a minor If any shareholder be a minor, the vote in respect of his share or shares shall be by his guardian, or any one of his guardians, if more than one, to be selected in case of dispute by the Chairman of the meeting. 88 Votes of Joint Members If there be joint registered holders of any shares, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders. For this purpose, seniority shall be determined by the order in which the names stand in the register of members.
☐	☒	50	89 Voting in person or by proxy or Representative Subject to the provisions of these Articles, votes may be given either personally or by proxy. A body corporate being a Member may vote either by proxy or by a representative duly authorised in accordance with Section 113 of the Act and such representative shall be entitled to exercise the same rights and powers (including the right to vote by proxy) and by postal ballot, on behalf of the body corporate which he represents as that body could exercise if it were an individual Member of the Company.
☐	☒	51	90 Votes in respect of shares of Deceased Any person entitled under the Transmission Clause to transfer any shares may vote at any General Meeting in respect thereof in the same manner as if he were the registered holder of such shares. PROVIDED that forty-eight hours at least before the time of holding the meeting or adjourned meeting, as the case may be, at which he proposes to vote he shall satisfy the Chairman of his right to transfer such shares and give such indemnity (if any) as the Chairman may require or the Chairman shall have previously admitted his right to vote at such meeting in respect thereof.
☐	☒	52	91 Time for objection to vote No objection shall be made to the validity of any vote, except at the meeting or poll at which such vote was tendered, and every vote whether given personally or by proxy, not disallowed at such meeting or poll, shall be deemed valid for purposes of such meeting or poll whatsoever.
☐	☒	53	92 Chairman of the meeting to be the judge of the validity of any Vote The Chairman of any meeting shall be the sole judge of the validity of every vote tendered at such meeting. The Chairman present at the taking of a poll shall be the sole judge of the validity of every vote tendered at such poll.
☐	☒	54	
			Proxy
☐	☒		93 Appointment of proxy A person can act as proxy on behalf of members not exceeding fifty and holding in the aggregate not more than ten percent of the total share capital of the company carrying voting rights: Provided that a member holding more than ten percent of the total share capital of the Company carrying

		55	voting rights may appoint a single person as proxy and such person shall not act as proxy for any other person or shareholder. Every proxy shall be appointed in writing under the hand of the Member or if such Member is a body corporate under the common seal of such corporation, or be signed by an appointer or his attorney duly authorised in writing. The proxy so appointed shall not have any right to speak at the meetings.
☐	☒	56	94 Deposit of instrument of Proxy etc. The instrument appointing a proxy and the power of attorney or other authority (if any), under which it is signed or a notarized copy of that power or authority, shall be deposited at the Registered Office of the Company not later than forty-eight hours before the time for holding the meeting at which the person named in the instrument proposes to vote, and in default, the instrument of proxy shall not be treated as valid. No instrument appointing a proxy shall be valid after the expiration of twelve months from the date of its execution. 95 Form of proxy An instrument appointing a proxy shall be in the form No. MGT-11 as prescribed in the rules made under section 105 of the Companies Act, 2013 96 Proxy either for specified meeting or for a period An instrument of proxy may appoint a proxy either for the purpose of a particular meeting specified in the instrument and any adjournment thereof or it may appoint for the purpose of every meeting of the Company, or of every meeting to be held before a date specified in the instrument and every adjournment of any such meeting.
☐	☒	57	97 Validity of votes given by proxy notwithstanding death of MemberA vote given in accordance with the terms of an instrument of proxy shall be valid, notwithstanding the previous death or insanity of the principal or the revocation of the proxy or of the authority under which the proxy was executed, or the transfer of the shares in respect of which the proxy is given. Provided that no intimation in writing of such death, insanity, revocation or transfer shall have been received by the company at its office before the commencement of the meeting or adjourned meeting at which the proxy is used.
			Board of Directors
☐	☒	58	98 Management of Affairs The day to day management of the business and affairs of the Company shall be vested with Project-in-charge under the supervision, direction & control of the Board. The Board, may exercise all such powers of the Company and do all such acts, deeds and things as are not prohibited by the Act or any other statute or by the Memorandum of Association of the Company and without prejudice to the foregoing, shall be responsible for all policy matters and the supervision, direction and control of the conduct of the business, affairs & operations of the Company.
☐	☒		99 First Directors Shri Milind M. Dafade, Shri Prashant Moundekar and Shri Sanjay Nayak shall be the First Directors of the Company. 100 Number and appointment of Directors The Board of Directors of the Company shall consist of not less than 3 but not more than 15 Directors. A Director shall not be required to hold any qualification shares in the Company. Notwithstanding anything to the contrary contained in these Articles, so long as any moneys remain owing by the Company to a Financial Institution or any other person by the Company or the Company has entered into any agreement or undertaking or arrangement (hereinafter refer as ?agreement?) with Bodies (like State Electricity Board/Nigam) or the Board of Directors have decided to seek nomination on the Board from the beneficiary state or any Financial Institution or PFC Consulting Limited or person holds Debentures in the Company by direct subscription or private placement, the Company may agree to grant to such Financial Institution, PFC Consulting Limited, person or other Bodies as a condition of such loan or subscription to Debenture or any other agreement or to a Debenture Trustee, the right to appoint from time to time any person or persons as Director or Directors of the Company, (which director or directors is /are hereinafter referred to as ?Nominee Director/s?), retiring or non-retiring, subject to and on such terms and conditions as the Company may agree with such Financial Institutions, PFC Consulting Limited, Person, other Bodies and/or Debenture Trustee. The Company shall have a right to remove from office Nominee Director(s) at the option of the Company in consultation with Financial Institutions, PFC Consulting Limited, Bodies, persons or Debenture Trustee. Such Nominee Director(s) shall not be required to hold any Share qualification in the Company. Also at the option of the Company such Nominee Director(s) shall not be liable to retirement by rotation of the Directors. Subject as aforesaid, the Nominee Director(s) shall be entitled to the same rights and privileges and be subject to the same obligations as any other Director of the Company. The Nominee Director(s) so appointed shall hold the said office only so long as moneys remain owing by the Company to the Financial Institution or so long as the Debenture Trustee hold debenture in the Company or

		59	operation of agreement and the Nominee Director/s so appointed in the exercise of the said person shall ipso facto vacate such office immediately the money owing by the Company to the Financial Institution, or on the Debenture Trustee ceasing to hold Debentures/ Shares on the satisfaction of liability of the Company arising out of any Guarantee furnished by the Financial Institutions or satisfactory completion of term of agreement with Bodies. The Nominee Director(s) appointed under this article shall be entitled to receive all notice of and attend all General meeting, Board Meeting and of the meetings of the Committee of which the Nominee Director(s) is/are member(s) as also the minutes of meetings. The financial institutions/Debenture Trustee/persons/bodies shall also be entitled to receive all such notice and minutes. The Company shall pay to the Nominee Director(s) sitting fees and expenses which other Director of the Company are entitled, but if any other fees, commission, remuneration in any form is payable to the Director of the Company the fees, commission, money and remuneration in relation to such Nominee Director(s) shall accrued to Debenture Trustee and same shall accordingly be paid by the Company directly to the debenture trustee. Any expenses that may incurred by the financial institution or such Nominee Director(s) in connection with their appointment or Directorship shall also be paid or reimbursed by the Company to the financial Institution or as the case may be to such Nominee Director(s). Provided that if any such Nominee Director(s) is/are an officer of the Financial Institution, the sitting fees in relation to such Nominee Director(s) shall also accrue to the Financial Institute and the same shall accordingly be paid by the Company directly to that Financial Institution. Provided further that if such Nominee Director(s) is/are an official of any of the Reserve Bank of India, the sitting fees in relation to such Nominee Director(s) shall also accrue to Financial Institution to whom he represents as Nominee Director from Reserve Bank of India and the same shall accordingly be paid by the Company directly to that Financial Institution. Provided also that in the event of the Nominee Director(s) being appointed as Whole Time Director(s) such Nominee Director(s) shall exercise such powers and duties as may be approved by the Lenders or Bodies in consultation with Board and have such rights as are usually exercised or available to a Whole Time Director, in management of the Borrower or Bodies and such Nominee Director(s) shall be entitled to receive such remuneration fees commission and moneys as may be approved by the Lenders or Bodies in consultation with Board.
☐	☒	60	101 Company may increase the number of Directors Subject to Section 149 of the Act, the Company may subject to special resolution in General Meeting increase the maximum number of Directors. Further the Company may, subject to the provisions of Section 169 of the Act, by passing the ordinary resolution in the General Meeting of the members, may remove any Director before the expiration of his period of office and appoint another person in the place of director so removed.
☐	☒	61	102 Appointment of Alternate Directors In accordance with Section 161 and other applicable provisions (if any) of the Act, the Board shall have power at any time and from time to time, to, appoint a person, not being a person holding any alternate directorship for any other Director in the Company, to act as an alternate director for a director (hereinafter called ?the original Director?) during his absence for a period of not less than three months from India. 103 Directors? power to fill up casual Vacancies Casual vacancies among Directors may be filled by the Board of Directors at their meeting and any person so appointed shall hold the office as per the provision of section 161. 104 Appointment of Additional Director Subject to the provisions of Section 161 and other applicable provisions (if any) of the Act, the Board shall have power at any time and from time to time, to appoint a person as an Additional Director but so that the total number of Directors shall not at any time exceed the maximum number fixed by these Articles. The Additional Director so appointed shall retire from Office at next following Annual General Meeting but shall be eligible for election by the company at that meeting as a Director.
☐	☒		105 Directors may act notwithstanding any vacancy The continuing Directors may act notwithstanding any vacancy in their body, but if, and so long as their number is reduced below the minimum number fixed by Article 100 thereof, the continuing Directors may act for the purpose of increasing the number of Directors to that number, or of summoning a General Meeting for that purpose. 106 Remuneration of Directors Subject to the provisions of the Act, the Chairman or Managing Director or any other functional Directors who is/are in the whole-time employment of the Company may be paid remuneration either by way of a monthly payment or at a specified percentage of the net profit of the Company or partly by one way and partly by the other, keeping in view the limiting provisions governing the Managerial remuneration under the provisions of the Act.

		62	Subject to the provisions of the Act, a Director, who is neither in the whole-time employment nor a Chairman cum Managing Director of the Company may be paid remuneration either:- (a) by way of monthly, quarterly or annual payment with the approval of the Central Government, or (b) by way of commission if the Company by a special resolution authorizes such payment; and The sitting fee payable to a Director (excluding Whole-time Director) for attending a meeting of the Board or Committee thereof shall be such sum as may be fixed by the Board provided that the same shall not exceed Rs. 1,00,000/- or such other sum as prescribed in the Act as amended from time to time. Travelling expenses incurred by Director going out on Company?s Business The Board may allow and pay to any Director who is not a bona-fide resident of the place where the Registered Office of the Company or where the meetings of the Board are actually held and who has to come to such place for the purpose of attending any meeting, such sum as the Board may consider fair compensation for travelling, boarding, lodging and other actual incidental expenses, in addition to his fee for attending such meeting as specified above. If any Director be called upon to go or reside out of the bonafide place of his residence on the Company?s business, he shall be entitled to be paid and reimbursed any travelling or other actual expenses incurred by him in connection with the business of the Company.
☐	☒	63	107 When office of Directors to become Vacant Subject to Section 167 of the Act, the office of a Director shall become vacant if:- (a) he incurs any of the disqualifications specified in section 164 under the act; (b) he absents himself from all the meetings of the Board of Directors held during a period of twelve months with or without seeking leave of absence of the Board; (c) he acts in contravention of the provisions of entering into contracts or arrangements in which he is directly or indirectly interested; (d) he fails to disclose his interest in any contract or arrangement in which he is directly or indirectly interested; (e) he becomes disqualified by an order of a court or the Tribunal; (f) he is convicted by a court of any offence, whether involving moral turpitude or otherwise and sentenced in respect thereof to imprisonment for not less than six months: Provided that the office shall be vacated by the director even if he has filed an appeal against the order of such court; (g) he is removed in pursuance of the provisions of this Act; (h) he, having been appointed a director by virtue of his holding any office or other employment in the holding, subsidiary or associate company, ceases to hold such office or other employment in that company.
☐	☒		108 Directors may contract with Company Except with the consent of the Board of Directors given by a resolution at a meeting of the Board and subject to such conditions, the company shall not enter into any contract or arrangement with a related party with respect to? (a) sale, purchase or supply of any goods or materials; (b) selling or otherwise disposing of, or buying, property of any kind; (c) leasing of property of any kind; (d) availing or rendering of any services; (e) appointment of any agent for purchase or sale of goods, materials, services or property; (f) such related party's appointment to any office or place of profit in the company, its subsidiary company or associate company; (g) underwriting the subscription of any securities or derivatives thereof, of the company. Every contract or arrangement entered as related party transaction shall be referred in the Board?s report to the shareholders along with the justification for entering into such contract or arrangement. 109 Disclosure of interest by Directors 1) Every Director of the Company, who is in any way, whether directly or indirectly, concerned or interested in a contract or arrangement, or proposed by Directors interested in a contract or arrangement, or proposed contract or arrangement entered into or to be entered into, by or on behalf of the Company, shall disclose the nature of his concern or interest at every financial year or whenever there is change in the disclosure of interest. (2) Nothing in sub-clause (1) of this Article shall apply to any contract or arrangement entered into or to be entered into between the Company and any other company, where any of the Directors of the Company or two or more of the Directors together holds or hold not more than two per cent of the paid-up share capital in the other company 110 Interested Directors not to participate or vote in Board?s proceedings An interested director, who is in any way, whether by himself or through any of his relatives or firm, body corporate or other association of individuals in which he or any of his relatives is a partner, director or a member, interested in a contract or

		64	arrangement, or proposed contract or arrangement, entered into or to be entered into by or on behalf of company, shall, take any part in the discussion of, or vote on any contract or arrangement entered into, or to be entered into, by or on behalf of the Company, if he is in any way, whether directly or indirectly, concerned or interested in such contract or arrangement, nor shall his presence count for the purpose of forming a quorum at the time of any such discussion or vote, and if he does vote, his vote shall be void. A contract or arrangement entered into by the company without disclosure or with participation by a director who is concerned or interested in any way, directly or indirectly, in the contract or arrangement, shall be voidable at the option of the company. 111 Register of Contracts in which Directors are interested The company shall keep registers in accordance with Section 189(1) giving separately the particulars of all contracts or arrangements to which to matter of disclosure of interest by directors and related party transaction applies, in such manner and containing such particulars as may be prescribed and after entering the particulars, such registers shall be placed before the next meeting of the Board and signed by all the directors present at the meeting and shall within thirty days of appointment make such disclosure as are necessary for the purpose of same. The Register shall be kept at the Registered office of the Company and shall be open to inspection at such office shall be open for inspection at such office during business hours and extracts may be taken there from, and copies thereof as may be required by any member of the company shall be furnished by the company to such extent, in such manner, and on payment of same fee as in the case of the Register of Members of the Company. 112 Director may be Director of companies promoted by the Company A Director may become a Director of any other company promoted by the Company, or in which it may be interested as a vendor, shareholder, or otherwise and no such Director shall be accountable for any benefits received as Director or shareholder of such a company except in so far as Section 188 of the Act may be applicable. 113 Register of Directors and key managerial personnel and their Shareholding The Company shall keep at its registered office a Register containing such particulars of its Directors and key managerial personnel, Manager as may be prescribed under Section 170 of the Act and shall comply with the provisions of the said Section in all respects. The register shall include the details of securities held by each of them in the company or its holding, subsidiary, subsidiary of company?s holding company or associate companies.
			Proceedings of the Board
☐	☒	65	114 Meetings of Directors The Directors may meet together as a Board for the dispatch of business from time to time, so that at least four such meetings shall be held in every year in such a manner that not more than one hundred and twenty days shall intervene between two consecutive meetings of the Board. The Directors may adjourn and regulate their meetings as they think fit. 115 Board may appoint Chairman All meetings of the Directors shall be presided over by the Chairman, if present, but if at any meeting of the Directors, the Chairman is not present at the time appointed for holding the same then in that case the Directors shall choose one of the Directors present to preside over the meeting.
☐	☒	66	116 Certain persons not to be appointed Chairman & Managing Directors & Functional Director The Company shall not appoint a person as its Chairman, Managing Director or Whole-time Director who:- (a) is an undischarged insolvent, or had at any time been adjudged an insolvent; (b) is or has at any time been, convicted by a Court of an offence involving moral turpitude. 117 Notice of Director?s Meeting A meeting of the Board shall be called by giving not less than seven days? notice in writing to every director at his address registered with the company and such notice shall be sent by hand delivery or by post or by electronic means. Board may be called at shorter notice to transact urgent business where at least one independent director, if any, shall be present. Every notice convening a meeting of the Board of Directors shall set out the agenda of the business to be transacted thereat in sufficient detail provided however that the meeting may consider any other business with the permission of the chair.
☐	☒	67	118 When meeting to be convened The Company Secretary or any director of the Company may, as and when directed by the Chairman to do so, convene a meeting of the Board by giving a notice in writing to every Director. 119 Quorum at Board Meeting No business shall be transacted at any Board meeting unless a quorum of Board of Director is present at the time when the meeting proceeds to business. Save as otherwise provided herein, the quorum for the Board meetings shall be as provided in section 174.

☐	☒	68	120 120. Questions at Board meetings how to be decided All questions arising at a Meeting of the Board or any committee thereof shall be decided by majority of votes of directors present and in case of equality of votes, the Chairperson shall have a second and casting vote.
☐	☒	69	121 Committee of Board Subject to the restrictions contained in Section 179, 180 and other applicable provisions of the Act and preceding Articles, the Board may delegate any of its powers to Committees of the Board consisting of such member or members of its body as it may think fit. PROVIDED that the Board may, from time to time, revoke, modify and discharge any such Committee of the Board either wholly or in part. Every Committee of the Board so formed shall in the exercise of the powers so delegated conform to any Policy/regulations that may, from time to time, be laid down by the Board. All acts done by any such Committee of the Board in conformity with such regulations and in fulfillment of the purposes of their appointment shall have the like force and effect as if done by the Board.
☐	☒	70	122 Meeting of Committee how to be Governed The meetings and proceedings of any such Committee of the Board consisting of two or more members shall be governed by the provisions of the act and guidelines laid down for regulating the meetings and proceedings of the Directors, so far as the same are applicable thereto and are not superseded by any regulations made by Directors under the last preceding Article.
☐	☒	71	123 Resolution by circulation No resolution on matters shall be deemed to have been duly passed by the Board or by a Committee thereof by circulation, unless the resolution has been circulated in draft, together with the necessary papers, if any, to all the Directors, or members of the Committee, as the case may be, at their addresses registered with the company in India by hand delivery or by post or by courier, or through such electronic means as may be prescribed and has been approved by a majority of the directors or members, who are entitled to vote on the resolution. Resolution passed in such circulation shall be made part of the minutes of such meeting. Provided that, where not less than one-third of the total number of directors of the company for the time being require that any resolution under circulation must be decided at a meeting, the chairperson shall put the resolution to be decided at a meeting of the Board. 124 Defects in appointment of Directors not to invalidate actions taken All acts done by any meeting of the Board, or by a Committee of the Board, or by any person acting as a Director shall notwithstanding that it was subsequently noticed that there was some defect in the appointment of such Director or persons acting as aforesaid, or that they, or any of them, were disqualified or had vacated office or that the appointment of any of them had been terminated by virtue of any provisions contained in the Act or these Articles, be as valid as if every such person had been duly appointed and was qualified to be a Director and had not vacated his office or his appointment had not been terminated. PROVIDED that nothing in this Article shall be deemed to give validity to acts done by a Director after his appointment had been noticed by the Company to be invalid or to have terminated.
☐	☒	72	125 Minutes of proceedings of meetings of the Board (a) The Company shall cause minutes of all proceedings of every meeting of the Board and committee thereof to be kept by making within thirty days of the conclusion of every such meeting record thereof in Minute Book kept for that purpose with their pages consecutively numbered. (b) Each page of every such book shall be initialed or signed and the last page of the record of proceedings of each meeting in such book shall be dated and signed by the Chairman of the said meeting or the Chairman of the next succeeding meeting. The minute books of the Board and committee meetings shall be preserved permanently and kept in the custody of the company secretary of the company or any director duly authorized by the Board for the purpose and shall be kept in the registered office or such place as Board may decide. The minutes shall also contain:- (i) the names of the Directors present at the meeting; And (ii) in the case of each resolution passed at the meeting, the names of the Directors, if any, dissenting from, or not concurring with the resolution. Nothing deemed to require the inclusion in any such minutes of any matter which, in the opinion of the Chairman of the meeting ?

			(i) is, or could reasonably be regarded as, defamatory of any person. (ii) is irrelevant or immaterial to the proceedings, or (iii) is detrimental to the interests of the Company. The Chairman shall exercise an absolute discretion in regard to the inclusion or non-inclusion of any matter in the minutes on the grounds specified in this sub-clause. (c) Minutes of meetings kept in accordance with the aforesaid provisions shall be evidence of the proceedings recorded therein.
☐	☒		126 Powers of Board The Board may exercise all such powers of the Company and do all such acts and things as it is entitled to do under section 179 of the Act and rules made thereunder, or by the Memorandum or Articles of the Company but shall not decide matters required to be exercised or done by the Company in General Meeting, Subject to these Articles no regulation made by the Company in General Meeting shall invalidate any prior act of the Board which would have been valid if that regulation had not been so made. Certain powers of the Board Without prejudice to the general powers conferred by the Act and preceding Article and so as not in any way to limit or restrict those powers, and without prejudice to the other powers conferred by these Articles and by General Body, it is hereby declared that the Directors shall have the following powers, that is to say, power:- (1) to pay and charge to the capital account of the Company any commission or interest lawfully payable there out under the provisions of Sections 40 of the Act; (2) Subject to Sections 179 and 180 of the Act, to purchase or otherwise acquire for the Company any property, rights or privileges which the Company is authorised to acquire, at or for such price or consideration and generally on such terms and conditions as they may think fit, and in any such purchase or other acquisition to accept such title as the Directors may believe or may be advised to be reasonably satisfactory; (3) At their discretion and subject to the provisions of the Act, to pay for any property, rights or privileges acquired by, or services rendered to, the Company either wholly or partially, in cash or in shares, bonds, debentures, mortgages, or other securities of the Company, and any such shares may be issued either as fully paid-up or with such amount credited as paid-up thereon as may be agreed upon, and any such bonds, debentures, mortgages or other securities may be either specially charged upon all or any part of the property of the Company and its uncalled capital or not so charged; (4) To secure the fulfillment of any contract or engagement entered into by the Company in the normal course of business, by mortgage or charge any of the property of the Company and its uncalled capital for the time being or in such manner as they may think fit; (5) To accept from any Member, as far as may be permissible by law, a surrender of his shares or any part thereof, on such terms and conditions as shall be agreed upon; (6) To appoint any person to accept and hold in trust for the Company any property belonging to the Company, in which it is interested, or for any other purposes and to execute and do all such deeds and things as may be required in relation to any such trust, and to provide for the remuneration of such trust or trustees; (7) To institute, conduct, defend, compound, or abandon any legal proceedings by or against the Company or its officers, or otherwise concerning the affairs of the Company, and also to compound and allow time for payment or satisfaction of any debts due and of any claim or demand by or against the Company and to refer any differences to arbitration, and observe and execute any awards made thereon; (8) To act on behalf of the Company in all matters relating to bankruptcy and insolvency; (9) To make and give receipts, releases, and other discharges for moneys payable to the Company and for the claims and demands of the Company; (10) Subject to applicable provisions of the Act, to invest and deal with any moneys of the Company not immediately required for the purposes thereof upon such security (not being shares of this Company), or without security and in such manner as they may think fit, and from time to time to vary or realise such investments. Save as provided in Section 187 of the Act, all investments shall be made and held in the Company?s own name; (11) To execute, in the name and on behalf of the Company, in favour of any Director or other person who may incur or going to incur any personal liability whether as principal or surety, for the benefit of the Company, such

			mortgages of the Company?s property (present and future) as they think fit, and any such mortgage may contain a power of sale and such other powers, provisions covenants as shall be agreed upon; (12) To open account with any bank or banks and to determine from time to time who shall be entitled to sign, on the Company?s behalf bills, notes, receipts, acceptances, endorsements, cheques dividend warrants, releases, contracts and documents and to issue the necessary authority for such purpose; (13) To distribute by way of bonus or commission amongst the staff of the Company on the profits of any particular business or transaction, and to charge such bonus or commission as part of the working expense of the Company; (14) To provide for the welfare of employees or ex-employees of the Company and their families or connections of such persons, by building or contributing to the building of houses, dwellings or chawls, or by grants of money, pension, gratuities, allowances, bonus or other payments, or by creating, and from time to time subscribing or contributing to provident and other funds, associations, institutions or trusts and by providing or subscribing or contributing towards places of instrument and recreation, hospitals and dispensaries, medical and other attendance and other assistance as the Board shall think fit; and to subscribe or contribute or otherwise to assist or to guarantee money to charitable, benevolent, religious, scientific, national or other institutions or objects which shall have any moral or other claim to support or aid by the
		73	Company either by reason of locality of operation, or of public and general utility or otherwise; (15) Before recommending any dividend, to set aside out of the profits of the Company such sums as they may think proper for depreciation or to a Depreciation Fund, or to an Insurance Fund, or as a Reserve Fund or Sinking Fund or any Special Fund to meet contingencies or to repay debentures or debenture stock; or for special dividends or for equalizing dividends or for repairing, improving, extending and maintaining any of the property of the Company and for such other purposes (including the purposes referred to in the preceding clause), as the Board may, in their absolute discretion, think conducive to the interest of the Company, and subject to Section 179 of the Act, to invest the several sums so set aside or so much thereof as required to be invested, upon such investments (other than shares of the Company) as they may think fit, and from time to time to deal with and vary such investments and dispose of and apply and expend all or any part thereof for the benefit of the Company, in such manner and for such purposes as the Board, in their absolute discretion, think conducive to the interest of the Company notwithstanding that the matters to which the Board apply or upon which they expend the same or any part thereof, may be matters to or upon which the capital moneys of the Company might rightly be applied or expended, and to divide the Reserve Fund or division or a reserve Fund to another Reserve Fund or division of a Reserve Fund and with full power to employ the assets constituting all or any of the above funds, including the Depreciation Fund, in the business of the Company or in the purchase or repayment of Debentures or debenture stock, and without being bound to keep the same separate from the other assets, and without being bound to pay interest on the same with power however to the Board at their discretion to pay or allow to the credit of such funds interest at such rate as the Board may think proper; (16) To appoint and at their discretion remove or suspend such officers such as Executive Director, general managers, managers, secretaries, assistants, supervisors, clerks, agents and servants etc. for permanent, temporary or special services as they may from time to time think fit, and to determine their powers and duties and fix their salaries or emoluments or remunerations and to require security in such instances and to such amounts as they may think fit. And also from time to time to provide for the management and transaction of the affairs of the Company in any specified locality in India or abroad in such manner as they think fit, and the provisions contained in the following sub-clauses shall be without prejudice to the general powers conferred by this sub clause; (17) From time to time and at any time to establish any number of offices and establishment for properly managing the affairs of the Company in any specified locality in India or elsewhere and to appoint staff for such offices and to fix their remuneration; (18) Subject to the provisions of the Act, from time to time and at any time, to delegate to any such local Board, or any member or members thereof or any managers or agents so appointed or to any other person(s) any of the powers, authorities, and discretions for the time being vested in the Board, and to authorise the members for the time being of any such local Board, or any of them to fill up any vacancies, therein and to act notwithstanding vacancies and any such appointment or delegation under the preceding and this sub-clause may be made on such terms and subject to such conditions as the Board may think fit, and the Board may at any time remove any person so appointed, and may annul or vary any such delegation; (19) At any time and from time to time by Power of Attorney under the Seal of the Company, to appoint any person or persons to be the Attorney or Attorneys of the Company for such purposes and with such powers, authorities and discretions (not exceeding those vested in or exercisable by the Board under these presents and excluding the power to make calls and excluding also those which are to be exercised by the Board, in its

			Meetings) and for such period and subject to such conditions as the Board may from time to time think fit, and any such appointment may (if the Board thinks fit) be made in favour of the members or any of the members of any local Board, established as aforesaid or in favour of any company, or the shareholders, directors, nominees, or managers or any company or firm or otherwise in favour of any persons whether appointed by name or designation by the Board and any such Power of Attorney may contain such powers for the protection or convenience of such Attorney as the Board may think fit, and Board may specifically bestow powers enabling any such delegate or attorneys to sub-delegate all or any of the powers, authorities and discretions for the time being vested in them; (20) Subject to Sections 188 of the Act, for or in relation to any of the matters aforesaid or otherwise for the purposes of the Company, to enter into such negotiations and contracts and rescind and vary such contracts, and execute and do all such acts deeds and things in the name and on behalf of the Company as they may consider expedient; (21) From time to time to make vary and repeal bye-laws for the regulations of the business of the Company regulate employment of its officers and servants by making service Rules and Regulations; (22) Maintain proper records at places as per provisions of the Act and where the Company has a branch office, whether in or outside India, the Company shall be deemed to have complied with this Article if proper Books of Account relating to the transactions effected at the branch office are kept at the branch office and proper summarized returns, made up-to-date at intervals of not more than three months, are sent by the branch office to the Company at its Office or other place in India, at which the Company?s Books of Accounts are kept as aforesaid; (23) Ensure proper maintenance of the Books of Account which shall give a true and fair view of the state of the affairs of the Company or branch office, as the case may be, and explain its transactions. The Books of Account and other books and papers shall be open to inspection by any Director during business hours.
			Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer
☐	☒	74	127 CEO, MANAGER, CS AND CFO Subject to the provisions of the Act, -- (i) A chief executive officer, manager, company secretary or chief financial officer may be appointed by the Board for such term, at such remuneration and upon such conditions as it may thinks fit; and any chief executive officer, manager, company secretary or chief financial officer so appointed may be removed by means of a resolution of the Board; (ii) A director may be appointed as chief executive officer, manager, company secretary or chief financial officer As per provisions of the Act or these regulations requiring or authorising a thing to be done by or to a director and chief executive officer, manager, company secretary or chief financial officer shall not be satisfied by its being done by or to the same person acting both as director and as, or in place of, chief executive officer, manager, company secretary or chief financial officer.
☐	☒	75	
			The Seal
☐	☒	76	128 The Seal its custody and use The Board shall provide a Common Seal for the purpose of the Company, and shall have power, from time to time, to destroy the same and substitute a new Seal in lieu thereof, and the Board shall provide for the safe custody of the Seal for the time being, and the seal shall never be used except on the authority of the Board or by Committee of the Board as authorised.' 129 Deeds how executed Every deed or other instrument, to which the Seal of the Company is required to be affixed, shall unless the same is executed by a duly constituted attorney issued under the seal; be signed by two Directors or one Director and Secretary or some other person authorised by the Board for the purpose: PROVIDED that in respect of the Share Certificate, the Seal shall be affixed in accordance with Article as mentioned above.
			Dividends and Reserve
☐	☒		130 Division of profits and dividends in proportion to amount paid- up (a) The profits of the Company, subject to any special rights relating thereto created or authorised to be created by these Articles and subject to the provisions of these Articles, shall be divisible among the

		77	Members in proportion to the amount of capital paid-up or credited as paid-up on the shares held by them. (b) All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares held during any portion or portions of the period in respect of which the dividend is paid, but if any share is issued on terms providing that it shall rank for dividend from a particular date, such share shall rank for dividend accordingly. 131 The Company in General Meeting may declare a dividend Company in General Meeting may declare dividends to be paid to Members according to their respective rights, but no dividends shall exceed the amount recommended by the Board, but the Company in General Meeting may declare a smaller dividend.
☐	☒	78	132 Dividends only to be paid out of Profits a) No dividend shall be declared or paid by the Company for any financial year except out of its profits for that year arrived at in the manner set out in Section 123 of the Act. (b) Where, owing to inadequacy or absence of profits in any financial year, any Company proposes to declare dividend out of the accumulated profits earned by it in previous years and transferred by the company to reserves, such declaration of dividend shall not be made except in accordance with such rules as may be made in that behalf. (c) No dividend shall be declared or paid by a company from its reserves other than free reserves. 133 Interim Dividend Subject to the provisions of Section 123, the Board may, from time to time, pay the Members such interim dividend as appear to it to be justified by the profits of the Company. 134 Capital paid - up in advance to carry Interest Where capital is paid in advance of calls such capital may carry interest but shall not in respect thereof confer a right to dividend or participate in profits. 135 Retention of dividends until completion of transfer The Board may retain the dividends payable on shares in terms of Section 126 in respect of which any person is entitled to become a Member, or on completion any person under those Articles is entitled to transfer, or until such person shall become a Member in respect of such shares or shall duly transfer the same.
☐	☒	79	136 Transfer of shares must be Registered A transfer of shares shall not pass the right to any dividend declared thereon before the registration of transfer. Provided that where any instrument of transfer of shares has been delivered to the Company for registration and the transfer of such shares has not been registered by the Company, it shall, notwithstanding anything contained in any other provision of this Act a) transfer the dividend in relation to such shares to the Unpaid Dividend Account referred to in Section 124 of the Act unless the Company is authorised by the registered holder of such shares in writing to pay such dividend to the transferee specified in such instrument of transfer ;and (b) keep in abeyance in relation to such shares, any offer of rights shares under clause (a) of sub-section (1) of section 62 of the Act and any issue of fully paid-up bonus shares in pursuance of first proviso to sub-section (5) of section 123 of the Act.
☐	☒	80	137 No Member to receive dividend whilst indebted to the Company &Company?s right of reimbursement Thereon No Member shall be entitled to receive payment as interest or dividend in respect of his shares, whilst any money may be due or owing from him to the Company in respect of such share or shares or otherwise howsoever, either alone or jointly with any person or persons, and the Board may deduct from the interest or dividend payable to any Member all sums of money so due from him to the Company.
☐	☒	81	138 Dividends how remitted (1) Unless otherwise directed any dividend payable in cash may be paid by cheque or warrant or in any electronic mode or by a pay slip or receipt or in any other manner having the force of a cheque or warrant sent through the post to the registered address of the Member or person entitled or in case of joint holders to that one of them first named in the Register in respect of the joint holdings. Every such cheque or warrant shall be made payable to the order of the person to whom it is sent the Company shall not be liable or responsible for any cheque or warrant or pay slip or receipt lost in transmission, or for any dividend lost to the Member or person entitled thereto by the forged endorsement of any cheque or warrant or the forged signature of any pay slip or receipt or the fraudulent recovery of the dividend by any other means. (2) Notwithstanding anything contained in these Articles any dividend declared, may be paid by Electronic Clearing System through any Sponsor Bank, after getting registration with the Reserve Bank of India for using this facility and collecting from the members necessary bank mandate in the prescribed format.
☐	☒	82	139 Dividends and call together Any General Meeting declaring a dividend, may, on the recommendation of the Board, make a call on the Members of such amount as the meeting may fix, but so that the call on each Member shall not exceed the dividend payable to him and so that the call be made payable at the same time as the dividend, and the dividend may, if so arranged between the Company and the Member, be set off against the calls.

☐	☒	83	140 Unclaimed dividend No unclaimed dividend shall be forfeited and all unclaimed dividends shall be dealt with in accordance with the provisions of Section 124 and other applicable provisions of the Act.
☐	☒	84	141 No interest against Dividend No dividend shall bear interest against the company.
☐	☒	85	
			Accounts
☐	☒	86	142 Directors to keep true accounts (a) Every company shall prepare and keep at its registered office including its branch office or offices or at such other place in India as the Board thinks fit, Books of Accounts and other relevant books and papers and financial statement for every financial year which give a true and fair view of the state of the affairs of the company in accordance with Section 128 of the Act with respect to- (i) all sums of money received and expended by the Company and the matters in respect of which the receipts and expenditure take place; (ii) all sales and purchases of goods by the Company; (iii) the assets and liabilities of the Company. (iv) state of affairs of the company. (b) Where the Board decides to keep all or any of the Books of Account at any place other than the Office of the Company, the Company shall within seven days of the decision file with the Registrar a Notice in writing giving the full address of that other place in accordance with Section 128 of the Act. (c) The company may keep such books of account or other relevant papers in electronic mode in such manner as may be prescribed. (d) The Company shall preserve in good order the Books of Account relating to a period of not less than eight financial years immediately preceding a financial year. The books of account and other relevant books and papers maintained in electronic mode shall remain accessible in India so as to be usable for subsequent reference together with the vouchers relevant to any entry in such Books of Account. 143 Inspection of accounts or record by members No Member (not being a director) shall have any right of inspecting any account or books or documents of the Company except as conferred by Section 94 of the Act or authorised by the Board or by the company in general meeting. The Board may determine whether and to what extent and at what time and place and under what conditions or regulations the accounts and books of the Company or any of them may be open to inspection of the Members. Notwithstanding anything to the contrary contained hereinabove, the authorised representative of Promoters shall have a right to inspect the accounts books, plant, facility, documents, records, premises, equipment and machinery and all other property of the Company at convenient time(s), after giving advance notice to the Company. 144 Statement of Accounts to be furnished to General Meeting The Directors shall, from time to time, in accordance with Sections 129 and 134 and other applicable provisions of the Act, cause to be prepared and to be laid before the Company in General Meeting, such Balance Sheets, Profit and Loss Accounts and Reports as are required by these Sections. 145 Copies shall be sent to each Member Without prejudice to the provisions of Section 101 and subject to the provisions of Section 136 of the Act, a copy of the financial statements, including consolidated financial statements, auditors? report and every other document required by law to be annexed or attached to the Balance Sheet shall at least twenty-one days before the General Body Meeting at which the same are to be laid before the members, be sent to the members of the company, to every trustee for every holder of any debenture issued by the company and to all persons other than such members or trustee, being the person so entitled to attend the General Body Meeting. 146 Copy of financial statement to be filed with registrar The Company shall comply with Section 137 of the Act as to filing copies of the Balance Sheet and Profit and Loss Account and documents required to be annexed or attached thereto with the Registrar.
			Winding up
☐	☒		147 Procedure for winding up If the Company shall be wound up and the assets available for distribution among the members as such shall be insufficient to repay the whole of the paid up capital such assets shall be distributed so that as nearly as may be the losses shall be borne by the members in proportion

		87	to the capital paid up or which ought to have been paid up at the commencement of the winding-up on the shares held by them respectively. And if in a winding-up the assets available for distribution among the members shall be more than sufficient to repay the whole of the capital paid up at the commencement of the winding-up, the excess shall be distributed amongst the members in proportion to the capital at the commencement of the winding-up paid up or which ought to have been paid up on the shares held by them respectively. But this Article is to be without prejudice to the rights of the holders of shares issued upon special terms and conditions. If the Company shall be wound up, whether voluntarily or otherwise, the liquidators may, with the sanction of a Special Resolution, divide among the contributions, in specie or kind, any part of the assets of the Company and may, with the like sanction, vest any part of the assets of the Company in Trustees upon such trusts for the benefit of the contributories, or any of them, as the liquidators, with the like sanction, shall think fit.
			Indemnity
☐	☒	88	148 Officers to be indemnified Subject to provisions of the Act, every Officer of the company shall be indemnified out of the assets of the Company against any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquitted or in which relief is granted to him by the court or the Tribunal. Provided that if such person is proved to be guilty, the premium paid on such insurance shall be treated as part of the remuneration.
☒			***Others***
			149 Company not bound to recognize holding of shares on trust or any interest in shares other than that of registered holder Except as ordered by a Court of competent jurisdiction or as required by law , the Company shall not be bound to recognize holding of any share upon any trust and to recognize any equitable, contingent, future or partial interest in any share, or any interest in any fractional part of a share (except only as is by these Articles otherwise expressly provided) any right in respect of a share other than an absolute right thereto, in accordance with these Articles, in the person from time to time registered as the holder thereof, but the Board shall be at liberty at their sole discretion to register any share in the joint names of any two or more persons or the survivor or survivors of them. 150 Funds etc. of Company may not be applied in purchase of shares of the Company The Company shall not give, either directly or indirectly, and either by means of a loan, guarantee, the provision of security or otherwise, any financial assistance for the purpose of or in connection with the purchase or subscription made or to be made by any person for purchase of any shares in the Company except in conformity with the provisions of Section 67 of the Act. 151 Underwriting and Brokerage Commission may be paid Subject to the provisions of Section 40 of the Act, the Company may at any time pay a commission to any person in consideration of his subscribing or agreeing to subscribe for any shares in or debentures of the Company, or procuring, or agreeing to procure subscriptions for any shares in or debentures of the Company, but so that the commission shall not exceed in case of shares, five percent of the price at which the shares are issued, and in case of debentures, two and a half percent of the price at which the debentures are issued. Such commission may be satisfied by payment in cash or by allotment of fully or partly paid shares or debentures or partly in one way and partly in the other. Brokerage The Company may also on any issue of shares or debentures, pay such brokerage as may be lawful. 152 Interest out of Capital Interest may be paid out of capital Where any shares are issued for the purpose of raising money to defray the expenses of the construction of any work or building or the provision of any plant, which cannot be made profitable for a lengthy period, the Company may pay interest on so much of that share capital as is for the time being paid up, for the period, at the rate and subject to the conditions and restrictions provided by the Company Act, 2013 and may charge the same to capital as part of the cost of construction of the work or building, or the provision of plant. 153 Annual Returns The Company shall comply with the provisions of Sections 92 of the Act as to the making of Annual Returns. 154 Borrowing powers As per the provisions of Section 73, 76, 179, 180 and other applicable provisions of the Act, the Board of Directors may, from time to time at its discretion, by resolution at a meeting of the Board and subject to the approval of the shareholders in General Meeting, accept deposits from Members, either in advance of calls or otherwise, and generally raise or borrow or secure the payment of any sums of money for the purpose of the Company. Provided however, where the moneys already borrowed (apart from temporary loans obtained from the Company?s bankers in the ordinary due course of business) exceed the aggregate of the paid-up capital of the Company, its free reserves (not being reserves set apart for any specific purpose) and the securities premium, the Board shall not borrow such moneys without the consent of the Company in General Meeting.

Payment or repayment of borrowed Moneys

Subject to the provisions of Article 64 hereof, the payment and repayment of moneys borrowed as aforesaid may be secured in such manner and upon such terms and conditions in all respects as the Board of Directors may think fit, by resolutions passed at a meeting of the Board and in particular, by the issue of bonds or debentures of the Company whether unsecured or secured by a mortgage or charge over all or any part of the property of the Company (both present and future) including its uncalled capital for the time being, and debentures and other securities may be made assignable free from any equities between the Company and the person to whom the same may be issued.

Terms of issue of Debentures

Any debentures or other securities may be issued or otherwise and may be issued on condition that they shall be convertible into shares of any denomination, and with any privileges and conditions to redemption , surrender, drawing, allotment of shares and attending (but not voting) at General Meetings. Debentures with the right to conversion into or allotment of shares shall be issued only with the consent of the Company in General Meetings accorded by special resolution.

Register of charges to be Kept

The Board shall cause a proper Register to be kept in accordance with the provisions of Section 85 of the Act of all charges and floating charges affecting the property or assets of the Company or any of its undertakings and shall cause the requirements of Sections 77, 79, and 81 to 87 (both inclusive) of the Act in that behalf to be duly complied with, so far as they are required to be complied with by the Board.

Register of Debenture holders

The Company shall, if at any time it issues debentures, keep a Register and Index of Debenture holders in accordance with Section 88 of the Act. The Company shall have the power to keep in any Country outside India a Register of Debenture holders residing outside India, in such manner as may be prescribed.

Application to Debentures and other securities

The provisions of the Articles shall apply mutatis mutandis to debentures, bonds or other securities issued by the company.

155 Dematerialization of Securities Definitions :

For the purpose of this Article :

"Depository" means a depository as defined in clause (e) of sub-section (1) of section 2 of the Depositories Act, 1996.

"Beneficial Owner" means a person or persons whose name is recorded in the Register maintained by a Depository under the Depository Act, 1996.

"SEBI" means the Securities and Exchange Board of India established under section 3 of the Securities& Exchange Board of India Act, 1992.

"Securities" means the securities as defined in clause (h) of section 2 of the Securities Contracts (Regulation) Act, 1956;

Dematerialization of Securities

Notwithstanding anything contained in these Articles, the Company shall be entitled to dematerialize its existing securities, rematerialize its securities held in the Depositories and / or offer its fresh securities in dematerialized form pursuant to the provisions of the Depositories Act, 1996 and the rules framed there under, if any.

Option for investors

Every person subscribing to or holding securities of the Company shall have the option to receive securities certificates or to hold the securities with the Depository. Such a person who is the beneficial owner of the securities can at any time opt out of the Depository, if permitted by the law, in respect of any security in the manner and within the time prescribed, issued to the beneficial owner the required certificate of the securities. If a person opts to hold his securities with a Depository, the Company shall intimate such Depository, the details of allotment of the security and on receipt of the information, the depository shall enter in its records the name of the allottees as the beneficial owner of the securities.

Securities in Depository to be in Fungible Form

All securities held by a Depository shall be dematerialized and be in fungible form. Nothing contained in Section 88, 89, 112 and 186 of the Act shall apply to a Depository in respect of the securities held by it on

behalf of the Beneficial Owners.
Rights and Liabilities of Beneficial Owner

(a) Notwithstanding anything to the contrary contained in the Act or these Articles, a Depository shall be deemed to be the registered owner for the purposes of effecting transfer of ownership of security on behalf of the beneficial owners.

(b) Save as otherwise provided in (a) above, the Depository as the registered owner of the securities shall not have any voting rights or any other rights in respect of the securities held by it.

(c) Every person holding securities of the Company and whose name is entered as the beneficial owner in the records of the Depository shall be deemed to be a member of the Company. The beneficial owner of securities shall be entitled to all the rights and benefits and be subject to all the liabilities in respect of his securities, which are held, by a Depository.
Service of Documents

Notwithstanding anything to the contrary contained in the Act or Articles to the contrary, where securities are held in a Depository, the records of the beneficial ownership may be served by such Depository on the Company by means of electronic mode or by delivery of floppies or discs.
Provisions of Articles to apply to shares held in Depository

Nothing contained in Section 56 of the Act or these Articles shall apply to a transfer of securities effected by a transferor and transferee both of whom are entered as beneficial owners in the records of a Depository.

89 Allotment of Securities dealt within a Depository

Notwithstanding anything in the Act or these Articles, where securities are dealt with by the Depository, the Company shall intimate the details thereof to the Depository immediately on allotment of such securities.
Distinctive numbers of securities held in the depository Mode

Nothing contained in the Act or these Articles regarding the necessity of having distinctive numbers on securities issued by the Company shall apply to securities held with a Depository.

Register and Index of Beneficial Owners

The Register and Index of Beneficial Owners maintained by a Depository under the Depositories Act, 1996 shall be deemed to be the Register and Index of member and security holder for the purpose of these Articles.

156 Conversion of Shares into Stock and Reconversion
Shares may be converted into stock and reconverted

The Company in General Meeting may convert any paid up shares into stock and when any shares shall have been converted into stock, the several holders of such stock may henceforth transfer their respective interest therein, or any part of such interest, in the same manner and subject to the same regulations, as if no such conversion had taken place, or as near thereto as circumstances will admit. The Company may at any time reconvert any stock into paid-up shares.

Rights of stock holders

The holders of stock shall, according to the amount of stock held by them, have the same rights, privileges and advantages as regards dividends, voting at meetings of the Company, and other matters, as if they held the shares from which the stock arose
157 Audit
Accounts to be audited

The Auditors of the Company shall be appointed or reappointed by the Comptroller and Auditor General of India and their remuneration, rights and duties shall be regulated by Section 139 to 143 and 145 to 148 of the Act.
Powers of the Comptroller and Auditor General of India.

The Comptroller and Auditor General of India shall have the powers:-

(a) to direct the manner in which the Company's accounts shall be audited by the auditors appointed in pursuance of Article hereof and to give such auditors instruction in regard to any matter relating to the performance of their functions as such.

(b) to conduct a supplementary or test audit of the financial statement of the Company by such persons as he may authorize in this behalf, and for the purposes of such audit, to have access at all reasonable times, to all accounts, account books, vouchers, documents and other papers of the Company and to require information or additional information to be furnished to any person or persons so authorized on such matters, by such person or persons and in such form as the Comptroller and Auditor General may, by general or special order, direct.

Comments upon or supplement to audit report by the Comptroller & Auditor General of India to be placed before the annual general meeting

The auditors aforesaid shall submit a copy of his / her audit report to the Comptroller and Auditor General of India who shall have the right to comment upon or supplement such audit report in such manner as he may think fit. Any such comments upon or supplement to the audit report shall be placed before the Annual General Meeting of the Company at the same time and in the same manner as the audit report.

158 Service of Documents

Manner of Service of Documents

A document or notice may be served or given by the Company to any Member either through speed post, registered post or through electronic mode to his registered address or (if he has no registered address in India) to the address, if any, in India supplied by him to the Company for serving documents or notices on him. Notice is to be sent by the company through its authorized and secured computer programme which is capable of producing confirmation and keeping record of such communication addressed to the person entitled to receive such communication at the last electronic mail address provided by the member.

The notice may be sent through e-mail as a text or as an attachment to e-mail or as a notification providing electronic link or Uniform Resource Locator for accessing such notice through in-house facility or its registrar and transfer agent or authorise any third party agency providing bulk e-mail facility.

When notices or documents served on Members

Where a document or notice is sent by post, service of the document or notice shall be deemed to be effected by properly addressing, prepaying and posting a letter containing the document or notice.

When notice or notifications of availability of notice are sent by e-mail, the company should ensure that it uses a system which produces confirmation of the total number of recipients e-mailed and a record of each recipient to whom the notice has been sent and copy of such record and any notices of any failed transmissions and subsequent re-sending shall be retained by or on behalf of the company as ??proof of sending??.

Provided that the member shall provide the updated email address to the company and for that company will provide an advance opportunity atleast once in a financial year, to the member to register his e-mail address and changes therein and such request may be made by only those members who have not got their email id recorded or to update a fresh email id. Notice will also be simultaneously updated in the website of the company.

By Advertisement

A document or notice advertised in a newspaper circulating in the neighborhood of the Registered Office shall be deemed to be duly served or sent on the day on which the advertisement appears on or to every Member who has no registered address in India and has not supplied to the Company an address within India for the serving of documents on sending the notices to him. Explanatory Statement of material facts under Section 102 need not be advertised but it will be mentioned in the advertisement that the Statement has been forwarded to the Members.

On personal representatives etc.

A document or notice may be served or given by the Company on or to the persons entitled to a share in consequence of the death or insolvency of a Member by sending it through the post in prepaid letter addressed to them by name or by the title of representative of the deceased, or assignee of the insolvent or by any like description, at the address (if any) in India supplied for the purpose by the persons claimed to be entitled, or until such an address has been so supplied by serving the document or notice in any manner in which the same might have been given if the death or insolvency had not occurred.

To whom documents or notices must be served or given

Documents or notices of every General Meeting shall be served or given in same manner as herein before or to (a) every member of the company, legal representative of any deceased member or the assignee of an insolvent member,(b) the auditor or auditors of the company; and (c) every director of the company.

Members bound by documents or notices served on or given to previous holders

Every person who, by operation of law, transfer or other means whatsoever, shall become entitled to any share, shall be bound by every document or notice in respect of such share, which previously to his name and address being entered in the Register of Members, shall have been duly served on or given to the person from

			whom he derives his title to such shares Documents or notice by Company and signature thereto Any document or notice to be served or given by the Company may be signed by a director or key managerial personnel or an officer of the company duly authorised by the Board in this behalf. Service of document or notice by Member All documents or notices to be served or given by Members on or to the Company or any officer thereof shall be served or given by sending it to the Company or Officer at the Office by post or through electronic mode under a certificate of posting or by registered post, or through email. 159 Secrecy (a) Every Director, Manager, Auditor, Treasurer, Trustee, member of a committee, officer, servant, agent, accountant or other person employed in the business of the Company, shall, if so required by the Directors, before entering upon his duties, sign a declaration pledging himself to observe strict secrecy respecting all transactions and affairs of the Company with the customers and the state of the accounts with individuals and in matters relating thereto, and shall by such declaration pledge himself not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required so to do by the Directors or by law or by the person to whom such matters relate and except so far as may be necessary in order to comply with any of the provisions in these presents contained. (b) No Member shall be entitled to visit or inspect any work of the Company without the permission of the Directors or to require discovery of or any information respecting any details of the Company?s trading, or any matter which is or may be in the nature of a trade secret, mystery of trade, secret process or any other matter which may relate to the conduct of the business of the Company and which in the opinion of the Directors, it would be in expedient in the interest of the Company to disclose. 160 Copies of Memorandum and Articles of Association to be sent by the Company Copies of the Memorandum and Articles of Association of the Company and other documents referred to in Section 17 of the Act shall be sent by the Company to every Member at his request within seven days of the request on payment of such fees as may be prescribed.

	Subscriber Details				
S. NO	Name, Address, Description and Occupation	DIN/PAN/Passport Number	Place	DSC	Dated

Signed Before Me

Name		Address, Description and Occupation	DIN/PAN/ Passport Number/ Membership Number	Place	DSC	Dated
FCS	AMIT AGRAWAL	Company Secretaries S/o Late Sh. M. L. Agrawal FCS 5311, C.P. No. 3647 H-63, Vijay Chowk , Laxmi Nagar Delhi-110092	5311	Delhi	AMIT AGRAWAL	02/05/2022

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STANDARD SINGLE STAGE REQUEST FOR PROPOSAL DOCUMENT

FOR

SELECTION OF BIDDER AS TRANSMISSION SERVICE PROVIDER THROUGH TARIFF BASED COMPETITIVE BIDDING PROCESS

TO

ESTABLISH INTER-STATE TRANSMISSION SYSTEM

FOR

TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ IN RAJASTHAN (20GW) UNDER PHASE-III PART G

ISSUED BY

PFC CONSULTING LTD.

(A wholly owned subsidiary of Power Finance Corporation Ltd.)

Registered Office:
1st Floor, "Urjanidhi", 1, Barakhamba Lane,
Connaught Place, New Delhi-110001

January 19, 2022

True Copy

PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)

Corporate Office:
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi-110001

Request for Proposal Document for selection of Bidder as Transmission Service Provider through tariff based competitive bidding process to establish Inter-State Transmission System for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G" is issued by PFC Consulting Limited.

This RFP document is issued to -

M/s. _____

_____

_____

_____

_____

General Manager
PFC Consulting Limited
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi-110001
Email: pfccl.itp@pfcindia.com
Place: New Delhi
Date:
Signature: ……

REQUEST FOR PROPOSAL NOTIFICATION

PFC Consulting Limited
(A wholly owned subsidiary of Power Finance Corporation Limited)

Corporate Office:
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi-110001

1. The Government of India, Ministry of Power, vide its gazette notification no. CG-DL-E-08122021-231686 dated 06.12.2021 has notified PFC Consulting Limited (PFCCL) to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish Inter-State transmission system for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"** through tariff based competitive bidding process.

2. PFC Consulting Limited (PFCCL) (hereinafter referred to as BPC) hereby invites all prospective Bidders for issue of Request for Proposal (RFP) for selection of Bidder as Transmission Service Provider (TSP) on the basis of international competitive bidding in accordance with the "Tariff Based Competitive Bidding Guidelines for Transmission Service" and "Guidelines for Encouraging Competition in Development of Transmission Projects" issued by Government of India, Ministry of Power under section – 63 of The Electricity Act, 2003 and as amended from time to time. The responsibility of the TSP would be to establish the following Inter-State Transmission System – "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G**" (hereinafter referred to as 'Project') on build, own, operate & transfer basis and to provide transmission service:

Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G		
S. No.	**Name of Transmission Element**	**Scheduled COD in months from Effective Date**
1.	Fatehgarh-3 – Beawar 765kV D/C (2nd) along with 330MVAR Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765kV D/C line Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 nos. 765 kV, 330 MVAR Switchable line reactor- 4 nos.	18 months
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3 765 kV line bays – 4 nos.	

Note:

i. *Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.*
ii. *Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors.*

3. The TSP shall ensure that design, construction and testing of all equipment, facilities, components and systems of the Project shall be in accordance with the provisions of the Transmission Service Agreement and applicable Rules/ Regulations, Orders and Guidelines issued by the Central Government.

4. **Transmission License**: The TSP shall obtain the Transmission License from the Commission.

5. **Bidding Process:** The Transmission Service Provider shall be selected through tariff based competitive bidding process for the Project based on meeting stipulated Qualification Requirements prescribed in Clause 2.1 of Section 2 of RFP and the lowest Quoted Transmission Charges discovered from Final Offers quoted during the e-reverse bidding. The selection of the TSP shall be subject to it obtaining Transmission License from the Commission, which, after expiry, may be further extended by such period as deemed appropriate by the Commission under powers vested with it to amend the conditions of the Transmission License.

   The entire bidding process shall be conducted on electronic platform created by MSTC Limited.

   The Bid shall be a single stage two envelope bid comprising the Technical Bid and the Financial Bid. The Bidders shall submit the Bid online through the electronic bidding platform. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI. There shall be no physical submission of the Financial Bid.

   The Technical Bid shall be opened first and the Financial Bid of only the bidder who have qualified in the Technical Bid shall be opened. The Financial Bid will comprise of two rounds. In the first round the Initial Offer of the responsive bids would be opened and Quoted Transmission Charges of Initial Offer shall be ranked on the basis of ascending order. The Bidders, in the first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Bidders, whichever is higher, shall qualify for participating in the electronic reverse auction stage and submit their Final Offer.

6. The objective of the bidding process is to select a Successful Bidder pursuant to this RFP, who shall acquire one hundred percent (100%) of the equity shares of **SPV [which is under incorporation]** along with all its related assets and liabilities as per the provisions of the Share Purchase Agreement, at the Acquisition Price to be intimated by the BPC, twenty (20) days prior to the Bid Deadline.

   The **SPV [which is under incorporation]**, of which one hundred percent (100%) equity shares will be acquired by the Selected Bidder, shall be responsible as the TSP, for ensuring that it undertakes ownership, financing, development, design, engineering, procurement, construction, commissioning, operation and maintenance of the Project, and to provide Transmission Service as per the terms of the RFP Project Documents.

   The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to CTU or its successors or an agency as decided by the Central Government after 35 years from COD of project at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which CTU shall be entitled to take over the project assets Suo moto.

7. **Commencement of Transmission Service**: The Bidder shall have to commence Transmission Service in accordance with the provisions of the Transmission Service Agreement.

8. **Transmission Charges**: The Transmission Charges shall be payable by the Designated ISTS Customers in Indian Rupees through the CTU as per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time. Bidders shall quote the Transmission Charges as per the pre-specified structure, as mentioned in the RFP.

9. **Issue of RFP document:** The detailed terms and conditions for qualification and selection of the Transmission Service Provider for the Project and for submission of Bid are indicated in the RFP document. All those interested in purchasing the RFP document may respond in writing to **General Manager, Tel. +91 11 23443996, Fax +91 11 23443990, Email: pfccl.itp@pfcindia.com** at the address given in para 12 below with a non-refundable fee of **Rs. 5,00,000/- (Rupees Five Lakh Only) or US$ 7000/- (US Dollars Seven Thousand Only)** plus 18% GST, to be paid via electronic transfer to the following Bank Account: latest by **March 24, 2022**:

   Bank Account Name : PFC Consulting Limited
   Account No. : 000705036117
   Bank Name : ICICI Bank
   IFSC : ICIC0000007
   Branch : Connaught Place, New Delhi-110001

   Immediately after issuance of RFP document, the Bidder shall submit the Pre-Award Integrity Pact in the format as prescribed in Annexure B, which shall be applicable for and during the bidding process, duly signed on each page by any whole-time Director / Authorized Signatory, duly witnessed by two persons, and shall be submitted by the Bidder in two (2) originals in a separate envelope, duly superscripted with Pre-Award Integrity Pact. The Bidder shall submit the Pre-Award Integrity Pact on non-judicial stamp paper of Rs. 100/- each duly purchased from the National Capital Territory of Delhi. In case the Bidder is in a consortium, the Pre-Award Integrity Pact shall be signed and submitted by each member of the Consortium separately.

   The RFP document shall be issued to the Bidders on any working day from **January 19, 2022 to March 24, 2022 between 10:30 hours (IST) to 16:00 hours (IST)**. The BPC, on written request and against payment of the above mentioned fee by any Bidder shall promptly dispatch the RFP document to such Bidder by registered mail/ air mail. BPC shall, under no circumstances, be held responsible for late delivery or loss of documents so mailed.

10. **Receipt and opening of Bid:** The Bid must be uploaded online through the electronic bidding platform on or before **15:00 hours (IST) on March 25, 2022**. Technical Bid will be opened by the Bid Opening Committee on the same day at 15:30 hours (IST) in the office of Central Electricity Authority, in the online presence of Bidders' representatives who wish to attend. If the Bid Deadline is a public holiday at the place of submission of Bid, it shall be opened on the next working day at the same time and venue. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure

14 before issuance of LoI. Bidders meeting the Qualification Requirements, subject to evaluation as specified in Clause 3.2 to 3.4 shall be declared as "Qualified Bidders" and eligible for opening of Initial Offer.

11. The RFP document is not transferable. BPC reserves the right to reject all Bid and/or annul the process of tariff based competitive bidding for selection of Bidder as TSP to execute the Project without assigning any reason. BPC shall not bear any liability, whatsoever, in this regard.

12. **Nodal person for enquiries and clarifications**

All correspondence and clarification in respect of RFP document shall be addressed to:

General Manager
PFC Consulting Limited
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi - 110001, India
Tel. + 91-11-23443996
Fax + 91-11-23443990
Email: pfccl.itp@pfcindia.com

DISCLAIMER

1. This Request for Proposal (RFP) document is not an agreement or offer by the BPC to the prospective Bidders or to any other party. The purpose of this RFP document is to provide interested parties with information to assist the formulation of their Bid. The RFP document is based on material and information available in public domain.

2. This RFP, along with its Annexures, is not transferable and the information contained therein are to be used only by the person to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors). In the event that the recipient does not continue with its involvement in the Project in accordance with this RFP, this RFP must be kept confidential.

3. While this RFP has been prepared in good faith, neither the BPC nor its employees or advisors/consultants make any representation or warranty expressed or implied as to the accuracy, reliability or completeness of the information contained in this RFP. The Bidders shall satisfy themselves, on receipt of the RFP document, that the RFP document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within ten (10) days from the date of issue of this RFP document on or before the date & time mentioned in this RFP, it shall be considered that the issued document, complete in all respects, has been received by the Bidders.

   This bidding process is in accordance with the Bidding Guidelines issued by Ministry of Power, Government of India under Section 63 of the Electricity Act, 2003. Revisions or amendments in these Bidding Guidelines may cause the BPC to modify, amend or supplement this RFP document, including the RFP Project Documents to be in conformance with the Bidding Guidelines.

4. This RFP document includes statements, which reflect various assumptions arrived at by BPC in order to give a reflection of current status in the RFP. These assumptions should not be entirely relied upon by Bidders in making their own assessments. This RFP document does not purport to contain all the information each Bidder may require and may not be appropriate for all persons. It is not possible for BPC to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP document. Certain Bidders may have a better knowledge of the Project than the others. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and obtain independent advice from appropriate sources.

5. Neither BPC nor their employees or consultants make any representation or warranty as to the accuracy, reliability or completeness of the information in this RFP document.

6. Neither BPC, its employees nor its consultants will have any liability to any Bidder or any other person under the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this RFP document, any matter deemed to form part of this RFP document, the award of the Project, the information supplied by or on behalf of BPC or its employees, any consultants or otherwise arising in any way from the qualification process for the said Project.

7. By participating in the bidding process, each of the Bidder shall have acknowledged and accepted that it has not been induced to enter into such agreement by any representation or warranty, expressed or implied, or relied upon any such representation or warranty by or on behalf of BPC or any person working in the bidding process.

8. BPC may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement this RFP document. Such updations, amendments or supplements, if any, will however be circulated to the Bidders not later than 15 days prior to the last date for submission of Bid.

9. Each Bidder unconditionally agrees, understands and accepts that the BPC reserves the rights to accept or reject any or all Bids without giving any reason. Neither the BPC nor its advisers shall entertain any claim of any nature, whatsoever, including without limitations, any claim seeking expenses in relation to the preparation of Bids.

10. This RFP may be withdrawn or cancelled by the BPC at any time without assigning any reasons thereof. BPC further reserves the right, at its complete discretion to reject any or all of the Bids without assigning any reasons whatsoever.

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DEFINITIONS

Any capitalized term, used but not defined in this RFP, shall have the meaning ascribed to such term in the RFP Project Documents, or the Bidding Guidelines, in that order. In absence of availability of definitions in the foregoing references, the capitalized terms shall be interpreted in accordance with the Electricity Act 2003, Grid Code or any other relevant electricity law, rule or regulation prevalent in India, as amended or re-enacted from time to time, in that order.

The following terms are defined for use in this RFP:

"Acquisition Price" shall have the same meaning as defined in the Share Purchase Agreement;

"Affiliate" shall mean a company that either directly or indirectly

i. controls or

ii. is controlled by or

iii. is under common control with

a Bidding Company (in the case of a single company) or a Member (in the case of a Consortium) and "**control**" means ownership by one entity of at least twenty six percent (26%) of the voting rights of the entity. As an illustration a chart is annexed hereto as Annexure – 12;

"Bid" shall mean Technical Bid and Financial Bid (Initial Offer and Final Offer) submitted by the Bidder, in response to this RFP, in accordance with the terms and conditions thereof;

"Bidder" shall mean either a single company (including its permitted successors and legal assigns) or a Consortium of companies (including its permitted successors and legal assigns) submitting a Bid in response to this RFP. Any reference to the Bidder includes Bidding Company, Bidding Consortium/ Consortium, Member in a Bidding Consortium and Lead Member of the Bidding Consortium jointly and severally, as the context may require;

"Bidding Company" shall refer to such single company (including its permitted successors and legal assigns) that has submitted a Bid for the Project;

"Bidding Consortium/ Consortium" shall refer to a group of companies (including their permitted successors and legal assigns) that has collectively submitted a Bid for the Project;

"Bidding Guidelines" shall mean the "Tariff Based Competitive-Bidding Guidelines for Transmission Service" and "Guidelines for Encouraging Competition in Development of Transmission Projects" issued by Government of India, Ministry of Power under Section – 63 of Electricity Act as amended from time to time;

"Bid Bond" shall mean the unconditional and irrevocable bank guarantee for Rupees Twenty Eight Crore Only (Rs.28 Crore) only, to be submitted along with the Technical Bid by the Bidder under Clause 2.11 of this RFP, as per the format prescribed in Annexure 14**;**

"Bid Deadline" shall mean the last date and time for submission of online Bid in response to this RFP, specified in Clause 2.7.1;

"Bid Process Coordinator or BPC" shall mean a person or its authorized representative notified by the Government of India, responsible for carrying out the process for selection of Bidder who will acquire Transmission Service Provider;

~~**"Bid Security Declaration"** shall mean the declaration to be submitted along with the Technical Bid by the Bidder in lieu of the Bid Bond, as per the format prescribed in Annexure 14A [only applicable for projects for which RFP has been issued before 31.12.2021];~~

"CEA" shall mean the Central Electricity Authority constituted under Section - 70 of the Electricity Act;

"Commission" or "CERC" shall mean the Central Electricity Regulatory Commission of India constituted under Section-76 of The Electricity Act, 2003 and any successors and assigns;

"Conflict of Interest" A Bidder shall be considered to be in a Conflict of Interest with one or more Bidders in the same bidding process if they have a relationship with each other, directly or through a common company, that puts them in a position to have access to information about or influence the Bid of another Bidder.

Provided that if two or more bidders in the bidding process have formed a Joint Venture Company or Consortium to execute another project, the Bidders will not be considered to have Conflict of Interest;

"Commercial Operation Date (COD)" shall mean the date as per Article 6.2 of the Transmission Service Agreement;

"Consents, Clearances, Permits" shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the development, execution and performance of Project including without any limitation on the construction, ownership, operation and maintenance of the transmission lines and/or sub-stations;

"Contract Performance Guarantee" shall have the meaning as per Clause 2.12 of this RFP;

"Contract Year" shall mean the period beginning on the Scheduled COD, and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that:

(i) the last Contract Year shall end on the last day of the term of the Transmission Service Agreement;

"Infrastructure sector" shall mean such sectors notified by Department of Economic Affairs in its Gazette Notification no. 13/1/2017-INF dated 14th November, 2017 and as amended from time to time;

"CTU/Central Transmission Utility" shall have same meaning as defined in the Electricity Act, 2003;

"Designated ISTS Customers" or "DICs" shall have the meaning as ascribed in Regulation 2(l) of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulation 2020 and as amended or modified from time to time;

"Effective Date" shall have the meaning as ascribed thereto in the Transmission Service Agreement;

"Element" shall mean-each Transmission Line or each circuit of the Transmission Lines (where there are more than one circuit) or each bay of the Sub-station or switching station or HVDC terminal or inverter station of the Project, including ICTs, Reactors, SVC, FSC, etc. forming part of the ISTS which will be owned, operated and maintained by the concerned ISTS Licensee, and which may have a separate scheduled COD as per Schedule 2 of the Transmission Service Agreement and may have a separate percentage for recovery of Transmission Charges on achieving COD as per Schedule 5 of the Transmission Service Agreement;

"Final Offer" shall mean the Quoted Transmission Charges, required to be submitted as part of the Financial Bid on the electronic bidding platform during the e-reverse bidding stage. In case, no Final Offer is received during the e-reverse bidding stage then the lowest "Initial Offer" shall be deemed to be the Final Offer**;**

"Financial Bid" shall mean the Initial Offer and Final Offer, containing the Bidder's Quoted Transmission Charges, as per the format at Annexure – 21 of this RFP**;**

"Financially Evaluated Entity" shall mean the company which has been evaluated for the satisfaction of the financial requirement set forth in Clause **2.1.3** hereof;

"Government" shall mean the Central Government;

"Grid Code" / "IEGC" or **"State Grid Code"** shall mean the Grid Code specified by the Central Commission under clause (h) of sub-section (1) of Section 79 of the Electricity Act and/or the State Grid Code as specified by the concerned State Commission referred under clause (h) of sub-section (1) of Section 86 of the Electricity Act as applicable;

"Initial Offer" shall mean the Quoted Transmission Charges, required to be submitted as part of the Financial Bid on the electronic bidding platform along with the Technical Bid**;**

"Inter State Generating Station" or "ISGS" shall mean a Central / other generating station in which two or more states have shares and whose scheduling is to be coordinated by the Regional Load Despatch Centre;

"Inter-State Transmission System" shall have same meaning as defined in the Electricity Act, 2003;

"Lead Member of the Bidding Consortium" or "Lead Member" shall mean a company who commits at least twenty six percent (26%) equity stake in the Project, meets the technical requirement as per Clause 2.1.2 and so designated by other Member(s) in Bidding Consortium;

"Letter of Intent" or "LoI" shall mean the letter to be issued by the BPC to the Bidder, who has been identified as the selected bidder, for award of the Project to such Bidder;

"Member in a Bidding Consortium/Member" shall mean each company in the Bidding Consortium;

"MOP" shall mean the Ministry of Power, Government of India;

"MOEF" shall mean the Ministry of the Environment and Forests, Government of India;

"National Committee on Transmission" shall mean the committee constituted by the Ministry of Power, Government of India in terms of the "Guidelines for Encouraging Competition in Development of Transmission Projects", as notified from time to time;

"Nodal Agency" shall mean CTU, which shall execute and implement the Transmission Service Agreement (TSA);

Provided that while taking major decisions, CTU shall consult CEA on technical matters and any other matter it feels necessary.

"Parent Company" shall mean an entity that holds at least twenty six percent (26%) of the paid - up equity capital directly or indirectly in the Bidding Company or in the Member in a Bidding Consortium, as the case may be;

"Qualification Requirements" shall mean the qualification requirements as set forth in Section-2, Clause 2.1 of this RFP;

"Quoted Transmission Charges" shall mean the quoted single annual Transmission Charges submitted online through the electronic bidding platform by the Bidder as part of its Financial Bid as per the format in Annexure – 21 of this RFP;

"RFP" shall mean Request for Proposal document along with all schedules, formats, annexure and RFP Project Documents attached hereto, issued by BPC for tariff based competitive bidding process for selection of bidder who will acquire the TSP through e-reverse bidding to execute the Project, and shall include any modifications, amendments or alterations or clarifications thereto;

"RFP Project Documents" shall mean the following documents to be entered into in respect of the Project, by the parties to the respective agreements:

a. Transmission Service Agreement (TSA),

b. Share Purchase Agreement,

c. Agreement(s) required, if any, under Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time and

d. Any other agreement, as may be required;

"Scheduled COD" shall have the meaning as ascribed hereto in Clause 2.6 of this RFP;

"Statutory Auditor" shall mean the auditor appointed under the provisions of the Companies Act, 1956 / Companies Act, 2013 (as the case may be) or under the provisions of any other applicable governing law;

"Share Purchase Agreement" shall mean the agreement amongst **PFC Consulting Limited**, **SPV [which is under incorporation]** and the Successful Bidder for the purchase of one hundred (100%) per cent of the shareholding of the **SPV [which is under incorporation]** for the Acquisition Price, by the Successful Bidder on the terms and conditions as contained therein;

"Successful Bidder" or **"Selected Bidder"** shall mean the Bidder selected pursuant to this RFP to acquire one hundred percent (100%) equity shares of **SPV [which is under incorporation]**, along with all its related assets and liabilities, which will be responsible as the TSP to establish the Project on build, own, operate and transfer basis as per the terms of the Transmission Service Agreement and other RFP Project Documents;

"Survey Report" shall mean the report containing initial information regarding the Project and other details provided as per the provisions of Clause 1.6.2.1.1 of this RFP;

"Technical Bid" shall mean the bid submitted online through the electronic bidding platform, containing the documents as listed out in Clause 2.5.2 of this RFP;

"Technically Evaluated Entity" shall mean the company which has been evaluated for the satisfaction of the technical requirement set forth in Clause 2.1.2 hereof;

"Transmission Charges" shall mean the Final Offer quoted by Selected Bidder and adopted by the Commission, and as computed in terms of the provisions of Schedule 4 of the TSA, payable to the ISTS Licensee by the Designated ISTS Customers, and collected / disbursed by the CTU, as per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time;

"Transmission License" shall mean the license granted by the Commission in terms of the relevant regulations for grant of such license issued under the Electricity Act, 2003;

"Transmission Service Agreement" or **"TSA"** shall mean the agreement entered into between Nodal Agency and the TSP, pursuant to which the TSP shall build, own, operate and transfer the Project and make available the assets of the Project on a commercial basis;

"Transmission Service Provider" or "TSP" shall mean **SPV [which is under incorporation]** which has executed the Transmission Service Agreement and which shall be acquired by the Selected Bidder;

"Ultimate Parent Company" shall mean an entity which owns at least twenty six percent (26%) equity in the Bidding Company or Member of a Consortium, (as the case may be) and in the Technically Evaluated Entity and/or Financially Evaluated Entity (as the case may be) and such Bidding Company or Member of a Consortium, (as the case may be) and the Technically Evaluated Entity and/or Financially Evaluated Entity (as the case may be) shall be under the direct control or indirectly under the common control of such entity.

SECTION – 1

INTRODUCTION

SECTION 1

1. INTRODUCTION

1.1 The Government of India, Ministry of Power, vide its gazette notification no. CG-DL-E-08122021-231686 dated 06.12.2021 has notified PFC Consulting Limited to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish Inter-State transmission system for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G**" through tariff based competitive bidding process.

The BPC hereby invites Bids from all prospective Bidders in accordance with this Request for Proposal (RFP) to select prospective Transmission Service Provider (TSP) in accordance with the "Tariff Based Competitive-Bidding Guidelines for Transmission Service" and "Guidelines for Encouraging Competition in Development of Transmission Projects" issued by Government of India, Ministry of Power under Section – 63 of the Electricity Act. The BPC shall select the Bidder having the prescribed technical and financial capability to become TSP and be responsible for establishing the Project in the state(s) of Rajasthan. The TSP will make the Project available against payment of Transmission Charges, as adopted by the Commission, payable to the TSP, as per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time.

1.2 The TSP will be required to establish the following Inter State Transmission System for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G**" (hereinafter referred to as 'Project') on build, own, operate and transfer basis, and to provide transmission service.

Inter State Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G		
S. No.	**Name of Transmission Element**	**Scheduled COD in months from Effective Date**
1.	Fatehgarh-3 – Beawar 765kV D/C (2nd) along with 330MVAR Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765kV D/C line Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 nos. 765 kV, 330 MVAR Switchable line reactor- 4 nos.	18 months
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3 765 kV line bays – 4 nos.	

Note:

i. *Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.*
ii. *Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors*.

1.3 **Project Description**

In order to integrate and evacuate power from additional 20 GW renewable potential of Renewable Energy Zones (Fatehgarh: 9.1 GW, Bhadla: 8GW, Ramgarh: 2.9 GW) in Rajasthan, various transmission alternatives were evolved and deliberated in the 3rd NRPC-TP meeting held on 19.02.21. Based on the discussion, hybrid (EHVAC& HVDC) transmission system was agreed in above meeting for evacuation of power from additional 20 GW REZ in Rajasthan (Phase-III).

As part of Phase-III system, Fatehgarh-4 & Bhadla-3 Polling stations (new) are to be established which will be interconnected with Fatehgarh-3 & Fatehgarh-2 PS respectively. Further, renewable sources in Ramgarh complex are also proposed to be pooled at Ramgarh PS which shall be interconnected with Bhadla-3 PS. In view of integration & evacuation of additional 20 GW RE in Rajasthan with reliability as well as taking care of RE variability, under Phase-III System, Hybrid transmission system comprising EHV AC (765kV) & HVDC corridors are planned towards Delhi & Southern UP.

The subject transmission scheme involves implementation of Fatehgarh-3– Beawar 765 kV D/c (2nd) line which shall facilitate evacuation of RE power from Fatehgarh complex through Fatehgarh-3 PS for onward dispersal of power to various beneficiaries

Above transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III was also agreed in 49th Northern Region Power Committee (NRPC) meeting held on 27/09/2021 & 5th National Committee on Transmission (NCT) held on 25th Aug, 2021 and 2nd Sep, 2021. Subsequently, Ministry of Power, Government of India, vide its Gazette Notification CG-DL-E-08122021-231686 (No. 4661) dated 06.12.2021 declared establishment of Transmission system for evacuation of power from REZ in Raj (20 GW) under Phase III Part G through tariff based competitive bidding process route as part of “Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III”.

1.4 **Transmission Grid Map**

Transmission Grid Map indicating the location of the Project is enclosed as Annexure 18 of this RFP for information and reference of the Bidders**.**

1.5 The objective of the bidding process is to select a Successful Bidder pursuant to this RFP, who shall acquire one hundred percent (100%) of the equity shares of **SPV [which is under incorporation]** along with all its related assets and liabilities as per the provisions of the Share Purchase Agreement, at the Acquisition Price to be intimated by the BPC, twenty (20) days prior to the Bid Deadline.

The **SPV [which is under incorporation]**, of which one hundred percent (100%) equity shares will be acquired by the Selected Bidder, shall be responsible as the TSP, for ensuring that it undertakes ownership, financing, development, design, engineering, procurement, construction, commissioning, operation and maintenance of the Project, and to provide Transmission Service as per the terms of the RFP Project Documents.

The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to CTU or its successors or an agency as decided by the Central

Government after 35 years from COD of project at zero cost and free from all encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which CTU shall be entitled to take over the project assets Suo moto.

1.6 Brief Scope of Work

1.6.1 Scope of Transmission Service Provider

The TSP's scope of work for the Project shall comprise, but not necessarily be limited to the following:

1.6.1.1 Establishment, operation and maintenance of the Project on build, own, operate and transfer basis and completion of all the activities for the Project, including survey, detailed project report formulation, arranging finance, project management, necessary Consents, Clearances and Permits (way leave, environment & forest, civil aviation, railway/ road/river/canal/power crossing/PTCC, etc.), land compensation, design, engineering, equipment, material, construction, erection, testing & commissioning. Further, the actual location of substations, switching stations or HVDC terminal or inverter stations in the scope of TSP shall not be beyond 1 Km radius of the location proposed by the BPC in the survey report.

1.6.1.2 The TSP shall ensure that design, construction and testing of all equipment, facilities, components and systems of the Project shall be in accordance with Transmission Service Agreement and applicable Rules/ Regulations, Orders and Guidelines issued by the Central Government.

1.6.1.3 The TSP shall ensure timely completion of entire scope of Project in all respects and its operation and maintenance, as shall be specified in the RFP documents.

1.6.1.4 The TSP shall seek Transmission License from the Commission, as per the provisions of the Electricity Act and regulations made thereunder.

1.6.1.5 The TSP shall seek approval under Section 164 of Electricity Act, from CEA after acquisition of **SPV [which is under incorporation]**. The approval shall be granted by CEA generally within 30 days but in no case later than 45 days from the date of receipt of application (complete in all aspects).

1.6.2 Scope of Bid Process Coordinator (BPC)

BPC's scope of work is briefly outlined hereunder:

1.6.2.1 The BPC has initiated development of the Project and shall be responsible for the tasks in this regard as specified hereunder:

1. Provide to the Bidders a Survey Report for the Project at least forty five (45) days prior to the Bid Deadline. The Survey Report shall include the suggested route with approximate route length, type of terrain likely to be encountered and its likely implication in terms of Right of Way (ROW), statutory clearances, location of substations or converter stations and land area to be acquired for the substation or converter station.

2. To obtain approval for laying of overhead transmission lines under Section 68 of Electricity Act, from the Government at least twenty (20) days prior to Bid Deadline.

3. To initiate acquisition of land for location specific substations, switching stations or HVDC terminal or inverter stations, if required.

4. To initiate process of seeking forest clearance, if required

5. The BPC shall intimate to the Bidders, the Acquisition Price payable by the Selected Bidder to the PFC Consulting Limited for the acquisition of one hundred percent (100%) of the equity shareholding of **SPV [which is under incorporation]**, along with all its related assets and liabilities at least twenty (20) days prior to the Bid Deadline.

6. The BPC shall ensure issuance of all finalized RFP Project Documents, at least fifteen (15) days prior to the Bid Deadline.

Provided that for any delay in meeting the above obligations of the BPC within the specified time period above, the Bid Deadline as per Clause 2.7.1 shall be extended on a day for day basis.

1.6.2.2 The details and documents as may be obtained by the BPC/ project specific SPV in relation to the Project shall be handed over to the TSP on an as-is-where-is basis, so that it may take further actions to obtain Consents, Clearances and Permits.

1.7 All costs (including direct and indirect) incurred by the BPC/ project specific SPV in connection with the activities concerning the Project shall be recovered from the TSP, which shall be included in the Acquisition Price.

1.8 The Project is required to be completed progressively in accordance with the schedule prescribed in this RFP.

1.9 A company under the Companies Act, 2013 by the name **SPV [which is under incorporation]** has been incorporated to initiate the activities for execution of the Project. The said company shall be acquired by the successful Bidder as per terms and conditions as may be prescribed in RFP.

1.10 The Ministry of Power and the appropriate state government(s) shall provide their support to the TSP, on best endeavor basis, in enabling the TSP to develop the Project.

1.11 All Bidders are required to submit their Bid in accordance with the instructions set forth in this RFP.

1.12 Once the Successful Bidder is selected, the details and documents as may be obtained by the BPC/ project specific SPV in relation to the Project, shall be handed over to the Successful Bidder on as is where basis, so that it may take further actions to obtain all necessary Consents, Clearances and Permits and the TSP shall not be entitled for any extensions in the Scheduled COD of the Project except as provided for in the TSA.

1.13 The assets of the Project shall be made available on a commercial basis as per the terms and conditions of the Transmission Service Agreement and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time.

SECTION - 2

INFORMATION AND INSTRUCTIONS FOR BIDDERS

SECTION – 2

2. INFORMATION AND INSTRUCTIONS FOR BIDDERS

2.1 Qualification Requirements

2.1.1 The Bidder should be a company duly incorporated under the relevant laws (Bidding Company) or a Consortium of companies (Bidding Consortium) with one of the companies acting as the Lead Member of the Bidding Consortium. The Bidder shall be selected on meeting the Qualification Requirements specified in Section 2 of this RFP, as demonstrated by the Bidder's Technical Bid and the lowest Quoted Transmission Charges discovered from Final Offers quoted during the e-reverse bidding. A Bidding Consortium can participate in the bidding process for the Project if any Member of the Consortium has purchased the RFP document for such Project. Bidder who agree and undertake to procure the products associated with the Transmission System as per provisions of Public Procurement (Preference to Make in India) orders issued by Ministry of Power vide orders No. 11/5/2018 - Coord. dated 28.07.2020 for transmission sector, as amended from time to time read with Department for Promotion of Industry and Internal Trade (DPIIT) orders in this regard, shall be eligible hereunder. Further, it is clarified that Procuring Entity as defined in orders shall deemed to have included Selected Bidder and/ or TSP.

Besides, Department of Expenditure, Ministry of Finance vide Order (Public Procurement No 1) bearing File No. 6/18/2019-PPD dated 23.07.2020, Order (Public Procurement No 2) bearing File No. 6/18/2019-PPD dated 23.07.2020 and Order (Public Procurement No. 3) bearing File No. 6/18/2019-PPD, dated 24.07.2020, as amended from time to time, have issued directions regarding public procurement from a bidder of a country, which shares land border with India are also applicable.

2.1.2 **Technical requirement to be met by the Bidding Company or Lead Member of Bidding Consortium**

The Bidder must fulfill any one of the following technical requirements:

(i) Experience of development of projects in the Infrastructure Sector in the last five (5) years with aggregate capital expenditure of not less than **Rs.1400 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1). However, the capital expenditure of each project shall not be less than **Rs.280 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1).

For this purpose, capital expenditure incurred on projects that have been commissioned/ completed at least seven (7) days prior to Bid Deadline shall be considered. The capital expenditure discussed above shall be as capitalized and reflected in the audited books of accounts of the Technically Evaluated Entity. In case a clearly identifiable part of a project has been put into commercial operation, the capital expenditure on such part of the project shall be considered. The Technically Evaluated Entity must have either executed such projects itself or must have held directly or indirectly at least twenty six percent (26%) of the shareholding in the company that has executed the project(s) from the date of financial closure of the project(s) till the time of

commissioning/completion of such project(s).

OR

(ii) Experience in construction of project in infrastructure sector: The Technically Evaluated Entity should have received aggregate payments not less than **Rs.1400 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1) from its client(s) for construction works fully completed during the last 5(five) financial years. However, the payment received from each project shall not be less than **Rs.280 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1).

For this purpose, payments received on projects that have been commissioned/ completed at least seven (7) days prior to Bid Deadline shall be considered. Further only the payments (gross) actually received, during such 5 (five) financial years shall qualify for purposes of computing the technical capacity. For the avoidance of doubt, construction works shall not include cost of land, supply of goods or equipment except when such goods or equipment form part of a turn-key construction contract/ EPC contract for the project. Further, in cases where different individual contracts are signed between same entities for the same project, the cumulative payments received under such individual contracts shall be considered for meeting the qualification requirement.

The Technically Evaluated Entity may be the Bidding Company or the Lead Member of a Consortium or an Affiliate or Parent of such Bidding Company or the Lead Member, as the case may be.

Bidders shall furnish documentary evidence duly certified by authorized signatory of the Bidder who has been issued Power of Attorney in support of their technical capability as defined in Clause 2.1.2 of this RFP.

2.1.3 **Financial requirement to be met by the Bidding Company/Bidding Consortium**

2.1.3.1 The Bidder must fulfill following financial requirements:

A. Networth:

Networth should be not less than **Rs.560 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1**)** computed as the Networth based on unconsolidated audited annual accounts (refer to Note below) of any of the last three (3) financial years as provided in Clause 2.2.3, immediately preceding the Bid Deadline. Also, the Networth of any of the last three (3) financial years should not be negative.

Note: Audited consolidated annual accounts of the Bidder may be used for the purpose of financial criteria provided the Bidder has at least 26% equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Technical Bid. Bidders shall furnish prescribed Annexure 7(A) duly certified by authorized signatory of the Bidder who has been issued Power of Attorney and the

Statutory Auditor and separate computation sheet for Networth duly certified by Statutory Auditor in support of their financial capability as defined in Clause 2.1.3 of this RFP.

2.1.3.2 The Networth shall be computed in the following manner by the Bidder:

A. Networth

=	Equity share capital
Add:	Reserves
Subtract:	Revaluation Reserves
Subtract:	Intangible Assets
Subtract:	Miscellaneous expenditures to the extent not written off and carry forward losses

2.1.3.3 If the Technical Bid is submitted by a Bidding Consortium the financial requirement shall be met individually and collectively by all the Members in the Bidding Consortium. The financial requirement to be met by each Member of the Bidding Consortium shall be computed in proportion to the equity commitment made by each of them for investment in the Project.

2.1.4 The Bidder may seek qualification on the basis of technical and financial capability of its Parent and/ or its Affiliate(s) for the purpose of meeting the Qualification Requirements. However, in the case of the Bidder being a Consortium, the Lead Member has to meet the technical requirement on its own or by seeking the technical capability of its Parent and/or its Affiliate(s). Authorization for use of such technical or financial capability shall have to be provided from its Parent and/or Affiliate(s) as per Annexure 9. The technical and financial capability of a particular company/ particular project, including its Parents and/or Affiliates, shall not be used directly or indirectly by more than one Bidder/ Member of a Bidding Consortium/ Bidding Company. However, development and construction experience of a particular project may be used by more than one company.

The determination of the relationship of Parent or Affiliate with the Bidding Company or with the Member of the Bidding Consortium, including the Lead Member, shall be on the date at the most seven (7) days prior to the last date of submission of the Bid. Documentary evidence to establish such relationship shall be furnished by the Bidder along with the Technical Bid.

If the Technically Evaluated Entity and/or Financially Evaluated Entity is an entity other than the Bidding Company or a Member in a Bidding Consortium, the Bidding Company or Member relying on such Technically Evaluated Entity and/or Financially Evaluated Entity will have to submit a legally binding undertaking supported by a board resolution from the Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, that all the equity investment obligations of the Bidding Company or the Member of the Consortium shall be deemed to be equity investment obligations of the Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, and in the event of any default the same shall be met by such evaluated entity or by or the Ultimate Parent Company. The Bidding Company or the Consortium Member shall have to provide information and documents relating to its relationship with such Technically Evaluated Entity and/or Financially Evaluated Entity

including details about the equity shareholding between them as per Annexure 7.

2.1.5 A Bidder shall submit only one Bid in the same bidding process, either individually as Bidding Company or as a Member of a Bidding Consortium (including the Lead Member). It is further clarified that any of the Parent/ Affiliate/Ultimate Parent of the Bidder/ Member in a Bidding Consortium shall not separately participate directly or indirectly in the same bidding process. Further, if any Bidder is having a Conflict of Interest with other Bidders participating in the same bidding process, the Bids of all such Bidders shall be rejected.

2.1.6 Notwithstanding anything stated above, BPC reserves the right to verify the authenticity of the documents submitted for meeting the Qualification Requirements and request for any additional information and documents. BPC reserves the right at its sole discretion to contact the Bidder's bank and project references and verify the Bidder's information and documents for the purpose of bid evaluation.

2.1.7 The Qualified Bidder(s) will be required to continue to maintain compliance with the Qualification Requirements throughout the bidding process and till execution of the Transmission Service Agreement. Where the Technically Evaluated Entity and/or the Financially Evaluated Entity is not the Bidding Company or a Member in a Bidding Consortium, as the case may be, the Bidding Company or Member shall continue to be an Affiliate of the Technically Evaluated Entity and/or Financially Evaluated Entity till the execution of the Transmission Service Agreement. Failure to comply with the aforesaid provisions shall make the Bid liable for rejection at any stage.

2.1.8 The Selected Bidder will be required to continue to maintain compliance with the Qualification Requirements till the COD of the Project. Where the Technically Evaluated Entity and/or the Financially Evaluated Entity is not the Bidding Company or a Member in a Bidding Consortium, as the case may be, the Bidding Company or Member shall continue to be an Affiliate of the Technically Evaluated Entity and/or Financially Evaluated Entity till the COD of the Project. Failure to comply with the aforesaid provisions shall be dealt as per provisions of Transmission Service Agreement.

2.1.9 On the Bid Deadline, for the Bidder to be eligible to participate in the bidding process:

a. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate, their directors or key personnel should not have been barred or included in the blacklist by any government agency or authority in India, the government of the jurisdiction of the Bidder or Members where they are incorporated or the jurisdiction of their principal place of business, any international financial institution such as the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank etc or the United Nations or any of its agencies; or

b. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate or their directors should not have been convicted of any offence in India or abroad.

In case any investigation is pending against the Bidder, including any Consortium Member or Affiliate, or CEO or any of the directors/ manager/key managerial personnel

of the Bidder /Consortium /Member or their Affiliates, full details of such investigation including the name of the investigating agency, the charge/offence for which the investigation has been launched, name and designation of persons against whom the investigation has been launched and other relevant information should be disclosed while submitting the Bid.

The Bidders shall confirm the above though a notarized affidavit as per Annexure 22.

2.2 Submission of Bid by the Bidder

2.2.1 The information and documents in Technical Bid will be submitted by the Bidder as per the formats specified in Section – 4 (Formats for RFP) of this document

2.2.2 Strict adherence to the formats wherever specified, is required. Wherever, information has been sought in specified formats, the Bidder shall refrain from referring to brochures/ pamphlets. Non-adherence to formats and/ or submission of incomplete information may be a ground for declaring the Technical Bid as non-responsive. Each format has to be duly signed and stamped by the authorized signatory of Bidder.

2.2.3 The Technical Bid shall contain unconsolidated/consolidated audited annual accounts (consisting of unabridged Balance Sheet, Profit and Loss Account, profit appropriation account, Auditors Report, etc.), as the case may be, of Bidding Company or each Member in Consortium including Lead Member or the Financially Evaluated Entity for the last three (3) financial years immediately preceding the last date for submission of Bid for the purpose of calculation of Networth.

In case the annual accounts for the financial year immediately preceding the Bid Deadline is not audited, the Bidder shall give declaration in this regard duly certified by its statutory auditor. In such a case, the Bidder shall provide the audited annual accounts for the three (3) financial years preceding the financial year as above for which the annual accounts have not been audited.

2.2.4 <u>Bid submitted by a Bidding Consortium:</u>

2.2.4.1 The Technical Bid shall contain a legally enforceable Consortium Agreement entered amongst the Members in the Bidding Consortium, designating one of the Members to be the Lead Member (as per Annexure 6). There shall be only one Lead Member which shall continue to hold twenty six percent (26%) equity in the TSP and cannot be changed upto one (1) year from the Commercial Operation Date (COD) of the Project. Each Member in Bidding Consortium shall duly sign the Consortium Agreement making it liable for raising the required funds for its respective equity investment commitment as specified in the Consortium Agreement. In absence of Consortium Agreement, the Technical Bid will not be considered for evaluation and will be rejected.

Provided that the Lead Member of the Bidding Consortium will be required to be liable to the extent of 100% of the total proposed commitment of equity investment of the Bidding Consortium i.e. for both its own equity contribution as well as the equity contribution of other Members.

Provided further that the Consortium Agreement shall not be amended without the explicit approval of the BPC.

The Lead Member of the Consortium will be the single point of contact for the purposes of the bid process before the date of signing of Share Purchase Agreement. Settlement of any dispute amongst the Consortium Members shall not be the responsibility of the BPC and/or the CTU and the BPC and/or the CTU shall not bear any liability whatsoever on this account.

2.2.4.2 The Lead Member should designate at the most two persons to represent the Consortium in its dealings with the BPC. The person(s) designated by the Lead Member should be authorized through a Power of Attorney (as per Annexure 3) to perform all tasks including, but not limited to providing information, responding to enquiries, signing of Technical Bid on behalf of the Consortium, etc. The Bidding Consortium shall provide board resolutions from their respective Boards for committing their respective portion of equity requirement for the Project. Additionally, the Lead member shall provide a Board resolution committing to make good any shortfall in the equity for the project, in case of any member not meeting its equity commitment.

2.2.4.3 The Technical Bid should also contain signed Letter of Consent (as per Annexure 2) from each Member in Consortium confirming that the entire Technical and Financial Bids has been reviewed and each element of the Technical and Financial Bids is agreed to by them including investment commitment for the Project.

In addition, the Technical Bid should also contain Board Resolution from each Member of the Consortium other than the Lead Member in favour of their respective authorized representatives for executing the POA, Consortium Agreement and signing of the requisite formats.

2.2.5 Bid submitted by a Bidding Company

2.2.5.1 The Bidding Company should designate at the most two persons to represent the Bidding Company in its dealings with BPC. The person(s) should be authorized to perform all tasks including, but not limited to providing information, responding to enquiries, signing of Technical and Financial Bids etc. The Bidding Company should submit, along with Technical Bid, a Power of Attorney (as per Annexure 3), authorizing the signatory of the Technical and Financial Bids. The Bidding Company shall submit the board resolution committing 100% of equity requirement for the Project, in the Technical Bid.

2.3 Clarifications & Pre-Bid Meeting

2.3.1 The Bidders may seek clarifications or suggest amendments to the RFP by sending an email to the BPC at the email id indicated in Clause 2.14 within the date and time mentioned in Clause 2.7.2. For any such clarifications or amendments, the Bidders should adhere to the format as per Annexure – 19.

2.3.2 Only those Bidders or their authorized representatives, who have purchased the RFP documents, are invited to attend the pre-bid meeting(s), which will take place on date as specified in Clause 2.7.2, or any such other date as notified by the BPC. The time and address of this would be intimated later.

2.3.3 The purpose of the pre-bid meeting will be to clarify any issues regarding the RFP,

including in particular, issues raised in writing by the Bidders as per the provision of Clause 2.3.1.

2.3.4 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

2.3.5 The BPC is not under any obligation to entertain / respond to suggestions made or to incorporate modifications sought for.

2.3.6 In case Bidders need any further clarifications not involving any amendments in respect of final RFP, they should ensure that request for such clarification is submitted through e-mail to the BPC at least ten (10) days prior to the Bid Deadline as mentioned in Clause 2.7.1. The BPC may issue clarifications only, as per its sole discretion, which is considered reasonable by it. Any such clarification issued shall be sent to all the Bidders to whom the RFP has been issued. Clarifications sought after this date shall not be considered in any manner and shall be deemed not to have been received. There shall be no extension in Bid Deadline on account of clarifications sought as per this clause 2.3.6.

2.4 Amendment of RFP

2.4.1. At any time before the timeline mentioned in Clause 2.7.1, the BPC may, for any reason, whether at its own initiative or in response to clarifications requested by any Bidder modify or amend the RFP, including the timelines specified in Clause 2.7.2 by issuance of addendum/modification/errata and/or revised document. Such document shall be notified in writing through a letter or fax or e-mail to all the entities to whom the RFP has been issued and shall be binding on them. In order to ensure that Bidders have reasonable time to take the modification into account in preparing their Bid, or for any other reasons, BPC may at its discretion, extend the due date for submission of Bid. Late receipt of any addendum/modification/errata and/or revised document will not relieve the Bidder from being bound by that modification.

2.4.2. All modifications shall become part of the terms and conditions of this RFP. No interpretation, revision or communication regarding this RFP is valid, unless made in writing.

2.4.3. The amendment to the RFP shall be notified to all the Bidders through the electronic bidding platform and shall be binding on them.

2.5 The Bidding Process

The entire bidding process shall be conducted on electronic bidding platform created by MSTC Limited. The Bid shall comprise of the Technical Bid and the Financial Bid. The Bidders shall submit the Technical Bid & Financial Bid through the electronic bidding platform. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI. There shall be no physical submission of the Financial Bid.

Evaluation of Technical Bid will be carried out considering the information and documents furnished by the Bidders as required under this RFP. This step would involve responsiveness check, technical and financial evaluation of the details/

documents furnished by the Bidding Company / Bidding Consortium in support meeting the Qualification Requirements. Bidders meeting the Qualification Requirements, subject to evaluation as specified in Clause 3.2 to 3.4 shall be declared as "Qualified Bidders" and eligible for opening of Initial Offer. The BPC shall also upload the list of all Qualified Bidders and Non-Qualified Bidders on the bidding portal along with the reasons for non-qualification. Also, the Financial Bids of Qualified Bidders shall be opened after at least 24 hours from the date of declaration of the Technically Qualified Bidders.

The Financial Bid will comprise of two rounds. In the first round the Initial Offer (submitted online along with the Technical Bids) of the responsive bids would be opened and Quoted Transmission Charges of Initial Offer shall be ranked on the basis of ascending order for determination of the Qualified Bidders as provided in Section-III of RFP. The Qualified Bidders, in the first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall qualify for participating in the electronic reverse auction stage and submit their Final Offer.

Provided however, in case only one Bidder remains after the evaluation of Technical Bid as per Clause 3.2, 3.3 and Clause 3.4, the Initial Offer of such Bidder shall not be opened and the matter shall be referred to the Government.

Provided that in the event the number of qualified Technical Bids is between two and four, then each of the qualified Bidder shall be considered as "Qualified Bidders".

Provided that in the event of identical Quoted Transmission Charges discovered from the Initial Offer having been submitted by one or more Bidders, all such Bidders shall be assigned the same rank for the purposes of determination of Qualified Bidders. In such cases, all the Qualified Bidders who share the same rank till 50% of the rank (with any fraction rounded off to higher integer) determined above, shall qualify to participate in the electronic e-reverse auction stage. In case 50% of the ranks (with any fraction rounded off to higher integer) is having less than 4 (four) Bidders and the rank of the fourth (4^{th}) Bidder is shared by more than one (1) Bidder, then all such Bidders who share the rank of the fourth (4^{th}) Bidder shall qualify to participate in the electronic reverse auction.

The applicable ceiling for electronic reverse bidding shall be the lowest Quoted Transmission Charges discovered from the Initial Offer received from the Qualified Bidders. The Qualified Bidders shall be permitted to place their Final Offer on the electronic bidding platform, which is lower than zero point two five (0.25) % of the prevailing lowest Quoted Transmission Charges.

The initial period for conducting the e-reverse bidding should be 2 hours which will be extended by 30 minutes from the last received bid time, if the bid is received during the last 30 minutes of the scheduled or extended bid time. Subsequently, it will be extended again by 30 minutes from the latest received bid time.

The technical details with respect to access to such electronic platform are provided in Annexure-A (Technical Details with respect to electronic reverse auction).

In case of any technical clarification regarding access to the electronic reverse auction

platform or conduct of the auction process, the Bidders may contact MSTC directly at the address provided in Annexure-A.

2.5.1 Bid Formats

The Bids in response to this RFP will be submitted online through the electronic bidding platform by the Bidders in the manner provided in Clause 2.9. The Bids shall comprise of the following:

2.5.2 Technical Bid comprising of:

1. Covering Letter (as per prescribed format enclosed as **Annexure 1**);

2. Letter of Consent from Consortium Members in **Annexure 2;**

3. Power of attorney issued by the Bidding Company or the Lead Member of the Consortium, as the case may be, in favour of the person signing the Bid, in the format attached hereto as **Annexure 3**.

   Additionally, in case of a Bidding Consortium, the power of attorney in favour of the Lead Member issued by the other Members of the Consortium shall be provided in as per format attached hereto as **Annexure 4**. Further, the Lead Member shall furnish Board resolution(s) from each Member of the Consortium other than the Lead Member in favour of their respective authorized representatives for executing the POA and signing of the requisite formats.

   Provided that in the event the Bidding Company or the Lead Member of the Consortium or any Member of the Bidding Consortium, as the case may be, is a foreign entity, it may issue Board resolutions in place of power of attorney for the purpose of fulfilling these requirements.

4. Bidder's composition and ownership structure in **Annexure 5**

5. Format for Authorization submitted in Non-Judicial stamp paper duly notarized as per **Annexure 5** from the Bidding Company / each Member of the Consortium authorizing the BPC to seek reference from their respective bankers & others.

6. In case of Bidding Consortium, the Consortium Agreement shall be provided in as per format attached hereto as **Annexure 6**

7. Format of Qualification Requirement (**Annexures 7A, 7B, 7C and 7D)**

8. Bidders Undertakings and details of equity investment in Project (as per prescribed formats 1 and 2 of **Annexure 8**);

9. Authorization from Parent / Affiliate of Bidding Company / Member of Bidding Consortium whose technical / financial capability has been used by the Bidding Company / Member of Bidding Consortium **(Annexure 9)**.

10. Undertaking from the Technically / Financially Evaluated Entity(ies) **OR** Undertaking from the Ultimate Parent Company, for total equity investment commitment, in the prescribed format in **Annexure – 10**, to meet any shortfall in the equity investment by the Selected Bidder in the **SPV [which is under incorporation]**.

Note: The effective Equity holding of the Selected Bidder in the **SPV [which is under incorporation]**, as specified in Clause 2.5.8.1 shall be computed as per the provisions of Clause 2.5.8.3 of this RFP.

Provided further, in case the Bidding Company or Member of a Consortium, (as the case may be) holds at least twenty six percent (26%) equity in such Technically/ Financially Evaluated Entities, whose credentials have been considered for the purpose of meeting the Qualification Requirements as per the RFP, no such Undertaking shall be required from the Technically / Financially Evaluated Entities.

11. Board resolutions, as per prescribed formats enclosed as Annexure – 11, duly certified by the Company Secretary or any Whole-time Director / Manager (supported by a specific Board Resolution), as applicable to the Bidder and mentioned hereunder,

(a) Board resolution from the Bidding Company (and any investing Affiliate / Parent Company / Ultimate Parent Company) committing one hundred percent (100%) in aggregate of the equity requirement for the Project - Format-1 of **Annexure 11**;

(b) Board resolutions from each of the Consortium Member of the Bidding Consortium (and any investing Affiliate / Parent Company / Ultimate Parent Company) together committing to one hundred percent (100%) in aggregate of equity requirement for the Project, in case Bidder is a Bidding Consortium - Format-1 of **Annexure 11**;

(c) In either of the cases as in (a) or (b) above as applicable, Board resolutions as per Format 2 of **Annexure 11** for total equity investment commitment from the Technically / Financially Evaluated Entity(ies) whose technical / financial credentials had been considered for the purpose of meeting Qualification Requirements as per the RFP

OR

Board resolutions as per Format 2 of **Annexure 11** from the Parent Company or the Ultimate Parent Company for total equity investment commitment.

Provided that such Board resolutions, as specified in (a) or (b) or (c) above, in case of a foreign entity, shall be supported by an unqualified opinion issued by an independent legal counsel practicing in the relevant country, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.

For clarity sake, illustrations identifying which Board Resolution shall be applicable in typical cases are provided in **Annexure 11A**.

12. Format for Illustration of Affiliates at the most seven (7) days prior to Bid Deadline, duly certified by Company Secretary and supported by documentary evidence **(Annexure 12)**.

    Certified copy of the Register of Members / Demat Account Statement, Share Certificate, Annual Return filed with ROC etc. submitted as documentary evidence along with **Annexure 12.**

13. Disclosure as per **Annexure 13** regarding participation of any related companies in this bidding process.

14. Bid Bond, as per the prescribed format at **Annexure 14 or** Bid Security Declaration as per prescribed format at **Annexure-14A (as applicable)**;

15. Checklist for Technical Bid submission requirements as per **Annexure 16**.

16. Last three (3) financial years' unconsolidated / consolidated audited annual accounts / statements, as the case may be, of the Financially Evaluated Entity / Technical Evaluated Entity

17. Unconsolidated audited annual accounts of both the TEE and the Bidding Company/Lead member, as applicable, for the financial years in which financial closure was achieved and the financial year in which the said project was completed / commissioned.

18. Copy of the Memorandum and Articles of Association and certificate of incorporation or other organizational document (as applicable), including their amendments, certified by the Company Secretary of Bidding Company or each Member in case of a Consortium including Lead Member.

19. For each project listed in Annexure 7(D), certified true copy of the certificates of final acceptance and / or certificates of good operating performance duly issued by owners or clients for the project, duly signed by authorized signatory.

In addition to the online submission of above formats through the electronic platform, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI. In case, there is a discrepancy between the online submission and physical documents, the bid would be out rightly rejected and the bidder shall be construed to have engaged in the fraudulent practice as defined in Clause 2.19.3 with consequences as mentioned in Clause 2.19.2.

2.5.3 Financial Bid (as per prescribed format at Annexure-21)

Financial Bid shall comprise of: (i) the Initial Offer; and (ii) the Final Offer. The Initial Offer is required to be submitted along with the Technical Bid. It is hereby clarified that the Financial Bid will comprise of two rounds. In the first round the Initial Offer of the responsive bids would be opened and Quoted Transmission Charges of Initial Offer shall be ranked on the basis of ascending order for determination of the Qualified Bidders as provided in Section-III of RFP.

In accordance with clause 2.5 of this RFP, the qualified Bidders shall be eligible to participate in the electronic reverse auction and submit their Final Offer.

The applicable ceiling for electronic reverse bidding shall be the lowest Quoted Transmission Charges discovered from the Initial Offer received from the Qualified Bidders. The Qualified Bidders shall be permitted to place their Final Offer on the electronic bidding platform, which is lower than zero point two five (0.25) % of the prevailing lowest Quoted Transmission Charges.

The initial period for conducting the e-reverse bidding should be 2 hours which will be extended by 30 minutes from the last received bid time, if the bid is received during the last 30 minutes of the scheduled or extended bid time. Subsequently, it will be extended again by 30 minutes from the latest received bid time.

The Bidders shall inter-alia take into account the following while preparing and submitting the Initial Offer and Final Offer of Financial Bid :-

a. The Bidders shall quote single annual Quoted Transmission Charges for a period of 35 years commencing from the Scheduled COD of the Project.

b. The Quoted Transmission Charges as per the format at Annexure-21 shall be inclusive of all charges and no exclusions shall be allowed. The Bidders shall take into account all costs including capital and operating, statutory taxes, duties, levies. Availability of the inputs necessary for operation and maintenance of the Project should be ensured by the TSP at the Project site and all costs involved in procuring the inputs (including statutory taxes, duties, levies thereof) at the Project site must be included in the Quoted Transmission Charges.

c. Annexure 21 duly digitally signed by authorized signatory.

2.5.4 Wherever information has been sought in specified formats, the Bidders shall fill in the details as per the prescribed formats and shall refrain from referring to any other document for providing any information required in the prescribed format.

2.5.5 Transmission Charges

2.5.5.1. The Transmission Charges shall be specified in the Transmission Service Agreement and shall be payable to the TSP in Indian Rupees only. The Bidders shall quote single Transmission Charges as per the format at Annexure – 21.

2.5.5.2. The Transmission Charges of the Selected Bidder shall be inserted in Schedule 5 of the Transmission Service Agreement.

2.5.6 Bidders may note that:

a) All the information and documents in Bid shall be submitted in English language only.

b) Bidders shall mention the name, designation, telephone number, fax number, email address of the authorized signatory and complete address of the Bidder in the covering letter.

c) All pages of the Bid submitted shall be initialed and stamped by the authorized signatory on behalf of the Bidder.

d) A Bidder shall submit only one Bid in the same bidding process, either individually as Bidding Company or as a Member of a Bidding Consortium.

e) The technical and financial capability of a particular company / particular project (Parent and/ or Affiliate) shall not be used directly or indirectly by more than one Bidder/ Member of a Bidding Consortium including Lead Member / Bidding Company.

f) This Request for Proposal (RFP) document is not transferable. The RFP document and the information contained therein is for the use only by the Bidder to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors). In the event that the recipient does not continue with its involvement in the Project, this RFP document must be kept confidential.

g) Though adequate care has been taken while preparing this RFP document, the Bidder shall satisfy himself that the document is complete in all respects. Intimation of any discrepancy shall be given to the BPC immediately. If no intimation is received from any Bidder within ten (10) days from the date of issue of RFP document, it shall be considered that the RFP document is complete in all respects and has been received by the Bidder.

h) Bids submitted by the Bidder and opened on scheduled date and time as stipulated in this RFP shall become the property of the BPC and BPC shall have no obligation to return the same to the Bidder.

i) If any Bidder conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in its Bid, in any manner whatsoever, the BPC reserves the right to reject such Bid or cancel the Letter of Intent, if issued. If such event is discovered after the Effective Date, consequences specified in Transmission Service Agreement shall apply.

j) If for any reason the Bid of the Bidder with the lowest Quoted Transmission Charges is not selected or Letter of Intent issued to such Selected Bidder is cancelled or such Bidder withdraws its Bids, the BPC may :-

   i. Invite all the remaining Bidders to revalidate or extend their respective Bid Security, as necessary, and match the Bid of the Bidder with the lowest Quoted Transmission Charges (the "second round of bidding") with following cases:

      - If in the second round of bidding, only one Bidder matches the Bid of the Bidder with lowest Quoted Transmission Charges, it shall be the Selected Bidder.

      - If two or more Bidders match the Bid of the Bidder with the lowest Quoted Transmission Charges in the second round of bidding, then the Bidder whose Quoted Transmission Charges was lower as compared to other Bidder(s) in the first round of bidding shall be the Selected Bidder. For example, if the

third and fifth lowest Bidders in the first round of bidding offer to match the Bid of the Bidder with lowest Quoted Transmission Charges in the second round of bidding, the said third lowest Bidder shall be the Successful Bidder.

- In the event that no Bidder offers to match the Bid of the Bidder with the lowest Quoted Transmission Charges in the second round of bidding, the BPC may, in its discretion, invite fresh Bids (the "third round of bidding") from all Bidders except the Bidder which quoted the lowest Quoted Transmission Charges in the first round of bidding. In case the Bidders are invited for the third round of bidding to revalidate or extend their Bid Security, as necessary, and offer fresh Bids, they shall be eligible for submission of fresh Bids provided, however, that in such third round of bidding only such Bids shall be eligible for consideration which are lower than the Quoted Transmission Charges of the second lowest Bidder in the first round of bidding; or;

ii. Annul the bid process; or

iii. Take any such measure as may be deemed fit in the sole discretion of the BPC[1]

k) The BPC may, at its sole discretion, ask for additional information / document and/or seek clarifications from a Bidder after the Bid Deadline, inter alia, for the purposes of removal of inconsistencies or infirmities in its Bid. However, no change in the substance of the Quoted Transmission Charges shall be sought or permitted by the BPC.

l) Non submission and/or submission of incomplete data/ information required under the provisions of RFP shall not be construed as waiver on the part of BPC of the obligation of the Bidder to furnish the said data / information unless the waiver is in writing.

m) Bidders shall familiarize itself with the procedures and time frames required to obtain all Consents, Clearances and Permits.

n) All Bidders are required to ensure compliance with the standards and codes mentioned in Clause 1.6.1.2.

o) BPC reserves the right to reject all Bids and/or annul the process of tariff based competitive bidding for selection of Bidder as TSP to execute the Project without assigning any reason. BPC shall not bear any liability, whatsoever, in this regard.

p) Foreign companies submitting the Bid are required to follow the applicable law in their country for execution of POA, Consortium Agreement and affixation of Common Seal (wherever required) and in such cases, their Bid should be supported by an unqualified opinion issued by an independent legal counsel practicing in the relevant country, stating that execution of such POA, Consortium Agreement and the authorizations granted therein are true and valid. Foreign companies executing POA outside India shall necessarily pay the adequate stamp charges in India as per the provisions of Stamp Act.

[1] **BPC shall record reasons for the same.**

2.5.7 Bidders to inform themselves fully

2.5.7.1. The Bidders shall make independent enquiry and satisfy themselves with respect to all the required information, inputs, conditions and circumstances and factors that may have any effect on his Bid. Once the Bidders have submitted their Bids, the Bidders shall be deemed to have inspected and examined the site conditions (including but not limited to its surroundings, its geological condition and the adequacy of transport facilities to the site), the laws and regulations in force in India, the transportation facilities available in India, the grid conditions, the adequacy and conditions of roads, bridges, railway sidings, ports, etc. for unloading and/or transporting heavy pieces of material and has based its design, equipment size and fixed its price taking into account all such relevant conditions and also the risks, contingencies and other circumstances which may influence or affect the transmission of power. Accordingly, each Bidder acknowledges that, on being selected as Successful Bidder and on acquisition of one hundred percent (100%) of the equity shares of the **SPV [which is under incorporation]**, the TSP shall not be relieved from any of its obligations under the RFP Project Documents nor shall the TSP be entitled to any extension in Scheduled COD mentioned in this RFP or financial compensation for any reason whatsoever.

2.5.7.2. In their own interest, the Bidders are requested to familiarize themselves with all relevant laws of India, including without limitation, the Electricity Act 2003, the Income Tax Act 1961, the Companies Act, 1956 / Companies Act, 2013 (as the case may be), Environment Protection Act 1986 and Forest (Conservation) Act, 1980, the Customs Act, the Foreign Exchange Management Act, Land Acquisition Act, 1894, the Indian Telegraph Act 1885, Labour & Employment Laws of India, [Insurance Act] the regulations/standards framed by the Commissions and CEA, all other related acts, laws, rules and regulations prevalent in India, as amended from time to time.

In addition to the above, the Bidders are required to familiarize themselves with all relevant technical codes and standards, including but not limited to the Grid Code / State Grid Code, Central Electricity Authority (Installation and Operations of Meters) Regulations, 2006, Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007, Central Electricity Regulatory Commission Grant of Connectivity, Long-term Access and Medium - Term Open Access in Inter-State Transmission and related matters) Regulations, 2009, Central Electricity Authority (Technical Standards for construction of Electrical Plants and Electric Lines) Regulation, 2010, Central Electricity Authority (Technical Standards for Communication System in Power System Operation) Regulations, 2020, Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and other relevant Rules/ Regulations/ Guidelines issued by the Central Government, the CERC and the CEA and amendments thereof.

The BPC shall not entertain any request for clarifications from the Bidders regarding the above laws / acts / rules / regulations / standards. Non-awareness of the same shall not be a reason for the Bidder to request for extension in Bid Deadline. The Bidders undertake and agree that, before submission of their Bid, all such factors as generally brought out above, have been fully investigated and considered while submitting their Bids.

2.5.7.3. The Survey Report has been prepared in good faith, and on best endeavor basis. Neither BPC & Nodal Agency nor their employees or advisors/consultants make any

representation or warranty, express or implied, or accept any responsibility or liability whatsoever, in respect of any statements or omissions made in the Survey Report, or the accuracy, completeness or reliability of information contained therein, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of such Survey Report, even if any loss or damage is caused to the Bidders by any act or omission on their part.

2.5.7.4. Bidders shall make best efforts and carry out its own due diligence upon survey report provided by BPC and shall consider all possible techno-commercial factors before submission of Bid. Bidders may also visit the route of the Transmission Lines associated with the Project and the surrounding areas and obtain / verify all information which they deem fit and necessary for the preparation of their Bid. Bidders may also carry out required surveys and field investigation for submission of their Bid. Bidders may also opt for any other route and is not bound to follow the route suggested in survey report provided by BPC.

2.5.7.5. Failure to investigate, examine and to inspect site or subsurface conditions fully shall not be grounds for a Bidder to alter its Bid after the Bid Deadline nor shall it relieve a Bidder from any responsibility for appropriately eliminating the difficulty or costs of successfully completing the Project.

2.5.7.6. The Selected Bidder shall obtain all necessary Consents, Clearances and Permits as required. The Bidders shall familiarize itself with the procedures and time frame required to obtain such Consents, Clearances and Permits.

2.5.7.7. The technical requirements of integrated grid operation are specified in the Indian Electricity Grid Code (IEGC). The Bidders should particularly acquaint themselves with the requirements of connection conditions, operating code for regional grids, scheduling and dispatch instructions/codes, etc. The Bidders are also advised to fully familiarize themselves with the real time grid conditions in the country. Information regarding grid parameters such as voltage and frequency is available on the websites of Regional / State Load Despatch Centres.

2.5.8 Minimum Equity holding/Equity Lock-in

2.5.8.1. (a) The aggregate equity share holding of the Selected Bidder, in the issued and paid up equity share capital of **SPV [which is under incorporation]** shall not be less than Fifty one percent (51%) up to a period of (1) one year after COD of the Project;

(b) In case the Selected Bidder is a Bidding Consortium, then any Member (other than the Lead Member) of such Bidding Consortium shall be allowed to divest its equity as long as the other remaining Members (which shall always include the Lead Member) hold the minimum equity specified in (a) above.

(c) If equity is held by the Affiliates, Parent Company or Ultimate Parent Company, then subject to the second proviso of this Clause 2.5.8.1 (c), such Affiliate, Parent Company or Ultimate Parent Company shall be permitted to transfer its shareholding in **SPV [which is under incorporation]** to another Affiliate or to the Parent Company / Ultimate Parent Company. If any such shareholding entity, qualifying as an Affiliate / Parent Company / Ultimate Parent Company, is likely to cease to meet the criteria to qualify as an Affiliate / Parent Company / Ultimate Parent Company, the shares held by

such entity shall be transferred to another Affiliate / Parent Company / Ultimate Parent Company.

Provided that in case the Lead Member or Bidding Company is holding equity through Affiliate/s, Ultimate Parent Company or Parent Company, such restriction shall apply to such entities.

Provided further, that the aggregate equity share holding of the Bidding Consortium or a Bidding Company in the issued and paid up equity share capital of **SPV [which is under incorporation]** shall not be less than fifty one percent (51%) up to a period of one (1) year after COD of the Project and the lead Member of the Consortium shall have the equity share holding not less than twenty six percent (26%). In case the Selected Bidder is a Bidding Consortium, then any Member (other than the Lead Member) of such Bidding Consortium shall be allowed to divest its equity as long as the other remaining Members (which shall always include the Lead Member) hold the minimum equity specified in (a) above.

(d) All transfer(s) of shareholding of **SPV [which is under incorporation]** by any of the entities referred to above, shall be after prior written intimation to the Nodal Agency.

2.5.8.2. The Selected Bidder may invest in the equity share capital of **SPV [which is under incorporation]** through its Affiliate(s) or Ultimate Parent Company or Parent Company. Details of such investment will have to be specified in the Technical Bid as per Format 2 of Annexure 8 of the RFP. If the Selected Bidder so invests through any Affiliate(s) or Ultimate Parent Company or Parent Company, the Selected Bidder shall be liable to ensure that minimum equity holding/lock-in limits specified in Clause 2.5.8.1 and as computed as per the provisions of Clause 2.5.8.3 are still maintained.

2.5.8.3. For computation of effective Equity holding, the Equity holding of the Selected Bidder or its Ultimate Parent Company in such Affiliate(s) or Parent Company and the equity holding of such Affiliate (s) or Ultimate Parent Company in **SPV [which is under incorporation]** shall be computed in accordance with the example given below:

If the Parent Company or the Ultimate Parent Company of the Selected Bidder A directly holds thirty percent (30%) of the equity in **SPV [which is under incorporation]** then holding of Selected Bidder A in **SPV [which is under incorporation]** shall be thirty percent (30%);

If Selected Bidder A holds thirty percent (30%) equity of the Affiliate and the Affiliate holds fifty percent (50%) equity in **SPV [which is under incorporation]**, then for the purposes of ascertaining the minimum equity/equity lock-in requirements specified above, the effective holding of Bidder A in **SPV [which is under incorporation]** shall be fifteen percent (15%), (i.e., 30%* 50%);

2.5.8.4. The provisions as contained in this Clause 2.5.8 and Article 19.1 of the Transmission Service Agreement shall override the terms of the Consortium Agreement submitted by the Bidder as part of the RFP.

2.6 Project Schedule

2.6.1. All Elements of the Project are required to be commissioned progressively as per the schedule given in the following table;

S. No.	Name of the Transmission Element	Scheduled COD in months from Effective Date	Percentage of Quoted Transmission Charges recoverable on Scheduled COD of the Element of the Project	Element(s) which are pre-required for declaring the commercial operation (COD) of the respective Element
1.	Fatehgarh-3 – Beawar 765 kV D/c (2nd) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3 – Beawar 765 kV D/c line	18 months	100%	All elements of scheme are required to be commissioned simultaneously as their utilization is dependent on commissioning of each other.
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3			

Note:-

i. Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.

ii. Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors.

The payment of Transmission Charges for any Element irrespective of its successful commissioning on or before its Scheduled COD shall only be considered after successful commissioning of the Element(s) which are pre-required for declaring the commercial operation of such Element as mentioned in the above table.

Scheduled COD for overall Project: **18 months from Effective Date.**

2.7 Due dates

2.7.1. The Bidders should submit the Bids online through the electronic bidding platform before the Bid Deadline i.e. on or before **March 25, 2022**. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI.

2.7.2. Important timelines are mentioned below:

Date	Event
19-01-2022	Issuance of RFP
08-02-2022	Submission of written clarifications/amendments, if any, on the RFP / RFP Project Documents by Bidders so as to reach BPC by 1700 hours. Such written clarifications/amendments shall be in the format provided in Annexure-20.
15-02-2022	Pre-Bid meeting(s)
28-02-2022	Issue of written clarifications and revised RFP documents
10-03-2022	Issue of final RFP Project Documents
25-03-2022	Submission of Bid (Online submission of Bid through electronic bidding portal)
25-03-2022	Opening of Technical Bid
04-04-2022	Shortlisting and announcement of Qualified Bidders on bidding portal
05-04-2022	Opening of Financial Bid - Initial Offer
06-04-2022	Electronic reverse auction (Financial Bid – Final Offer) for the Qualified Bidders.
11-04-2022	Submission of original hard copies of Annexure 3, Annexure 4, Annexure 6, as applicable and Annexure 14 by the bidder with lowest Final Offer
18-04-2022	Selection of Successful Bidder and issue of LOI
28-04-2022	Signing of RFP Project Documents and transfer of SPV [which is under incorporation]

2.7.3. To enable BPC to meet the schedule, all Bidders are expected to respond expeditiously during the bidding process. If any milestone/activity falls on a day which is not a working day or which is a public holiday then the milestone/activity shall be achieved/ completed on the next working day.

2.8 Validity of the Bid

2.8.1. The Bid shall remain valid for a period of one hundred and eighty (180) days from the Bid Deadline. The BPC reserves the right to reject any Bid which does not meet aforementioned validity requirement.

2.8.2. The BPC may solicit the Bidders' consent for an extension of the period of validity of the Bid. The request and the response, thereafter, shall be in writing. In the event any Bidder refuses to extend its Bid validity as requested by the BPC, the BPC shall not be entitled to invoke the Bid Bond. A Bidder accepting the BPC's request for validity extension shall not be permitted to modify its Bid and such Bidder shall,

accordingly, extend the validity of the Bid Bond as requested by the BPC within seven (7) days of such request, failing which the Bid shall not be considered as valid.

2.9 Method of Submission

2.9.1. Both the Technical and Financial Bids duly filled in, all formats and supporting shall be scanned and uploaded online through electronic bidding platform in the manner specified in Annexure A

2.9.2. It may be noted that Technical Bid shall not contain any information/document relating to Financial Bid. If Technical Bid contains any such information/documents, the BPC shall not be responsible for premature opening of the Financial Bid.

All pages of the Bid, except for the Bid Bond (Annexure 14) and any other document executed on non-judicial stamp paper, forming part of the Bid and corrections in the Bid, if any, must be signed by the authorized signatory on behalf of the Bidder. It is clarified that the same authorized signatory shall sign all pages of the Bid. However, any published document submitted in this regard shall be signed by the authorized signatory at least on the first and last page of such document.

2.9.3. No change or supplemental information to a Bid already submitted will be accepted after the Bid Deadline, unless the same is requested for by the BPC as per Clause 2.5.6 (k).

Provided that a Bidder shall always have the right to withdraw / modify its Bid before the Bid Deadline. No Technical Bid or Initial Offer shall be modified, substituted or withdrawn by the Bidder on or after the Bid Deadline.

2.10 Preparation cost

2.10.1. The Bidders shall be responsible for all the costs associated with the preparation of the Bid and participation in discussions and attending pre-bid meetings, and finalization and execution of the RFP Project Documents (other than the TSA), etc. BPC shall not be responsible in any way for such costs, regardless of the conduct or outcome of the process of tariff based competitive bidding for selection of Bidder as TSP as per Bidding Guidelines.

2.10.2. The cost of this RFP is Rupees Five Lakh (Rs.5,00,000/-) or U.S. Dollar Seven Thousand Only (US$7,000 /-) plus GST as per applicable rate, which shall be non-refundable. This amount shall be paid via electronic transfer to the following Bank Account:

Bank Account Name	**: PFC Consulting Limited**
Account No.	**: 000705036117**
Bank Name	**: ICICI Bank**
IFSC	**: ICIC0000007**
Branch	**: Connaught Place, New Delhi-110001**

Immediately after issuance of RFP document, the Bidder shall submit the Pre-Award Integrity Pact in the format as prescribed in Annexure B, which shall be applicable for and during the bidding process, duly signed on each page by any whole-time Director / Authorized Signatory, duly witnessed by two persons, and shall be submitted by the Bidder in two (2) originals in a separate envelope, duly superscripted with Pre-Award

Integrity Pact. The Bidder shall submit the Pre-Award Integrity Pact on non-judicial stamp paper of Rs. 100/- each duly purchased from the National Capital Territory of Delhi. In case the Bidder is in a consortium, the Pre-Award Integrity Pact shall be signed and submitted by each member of the Consortium separately.

2.11 Bid Bond

2.11.1. Each Bidder shall submit the Bid accompanied by Bid Bond issued by any of the Banks listed in Annexure-17. The Bid Bond shall be valid for a period of thirty (30) days beyond the validity of the Bid.

2.11.2. Subject to the provisions of Clause 2.15.5, the Bid Bond may be invoked by the BPC or its authorized representative, without any notice, demure, or any other legal process upon occurrence of any of the following:

- Bidder withdraws during the period of Bid Validity as specified in this RFP or as extended by mutual consent of the respective Bidder(s) and the BPC
- Failure to execute the Share Purchase Agreement as per the provisions of Clause 2.15.2; or
- Failure to furnish the Contract Performance Guarantee as per Clause 2.12; or
- Failure to acquire one hundred percent (100%) equity shares of **SPV [which is under incorporation]**, along with all its related assets and liabilities, in accordance with the provisions of Clause 2.15.2; or
- Failure to comply with the provisions of Clause 2.15.5 and Clause 2.15.6, leading to annulment of the award of the Project.
- Bidders submitting any wrong information or making any misrepresentation in their Bid as mentioned in Clause 2.5.6.

Intimation of the reasons of the invocation of the Bid Bond shall be given to the Selected Bidder by the BPC within three (3) working days after such invocation.

2.11.3. The Bid Bond of the Selected Bidder shall be returned on submission of the Contract Performance Guarantee as per Clause 2.12 and the relevant provisions of the Transmission Service Agreement.

2.11.4. The Bid Bond of all the Bidders, whose Bids are declared non-responsive, shall be returned within a period of thirty (30) days after the date on which the Financial Bids are opened.

2.11.5. The Bid Bond of all unsuccessful Bidders shall be returned and released by the BPC on the same day on which the **SPV [which is under incorporation]** is transferred to the Selected Bidder. The Bid Bond of the Successful Bidder shall be returned on submission of Contract Performance Guarantee as per Clause 2.12 of this RFP and the provisions of the Transmission Service Agreement.

2.12 Contract Performance Guarantee

2.12.1. Within ten (10) days from the date of issue of the Letter of Intent, the Selected Bidder, on behalf of the TSP, will provide to the Nodal Agency the Contract Performance Guarantee for an amount of **Rs 70 Crore (Rupees Seventy Crore Only)**. The Contract Performance Guarantee shall be initially valid for a period up to three (3) months after the Scheduled COD of the Project and shall be extended from time to time to be valid for a period up to three (3) months after the COD of the Project and thereafter shall be dealt with in accordance with the provisions of the Transmission Service Agreement. The Contract Performance Guarantee shall be issued by any of the banks listed in Annexure-17.

2.12.2. In case the Selected Bidder is unable to obtain the Contract Performance Guarantee for the total amount from any one bank specified in Annexure-17, the Selected Bidder may obtain the same from not more than three (3) banks specified in Annexure-17.

2.13 Opening of Bids

2.13.1. Technical Bid will be opened by the Bid Opening Committee as per the following time schedule and in the office of Central Electricity Authority, in the online presence of Bidders' representatives who wish to attend:

Opening of Envelope (Technical Bid): **1530 hours (IST) on March 25, 2022** ~~or such other dates as may be intimated by BPC to the Bidders.~~

In the event of any of above dates falling on a day which is not a working day or which is a public holiday, then the bids shall be opened on the next working day at the same venue and time.

Opening of Initial Offer: Initial Offer shall be opened by the Bid Opening Committee in presence of the Bid Evaluation Committee at **1500 hours (IST) on April 05, 2022** in the office of CEA.

2.13.2. The following information from each Bid will be read out to all the Bidders at the time of opening of Technical Bid:

- Name of the Bidding Company / Consortium Members in case of Bidding Consortium.

Information to be provided after opening of Initial Offer:

Only the lowest Initial Offer (s) shall be communicated to all the Qualified Bidders to participate in the e-reverse bidding process. During the e-reverse bidding process only the lowest prevailing bid should be visible to all the bidders on the electronic platform.

2.14 Enquiries

Written clarifications on the RFP and other RFP Project Documents as per Clause 2.3 and 2.4 may be sought from:

General Manager
PFC Consulting Limited
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Tel. + 91 11 23443996
Fax + 91 11 23443990
Email: pfccl.itp@pfcindia.com

2.15 Other Aspects

2.15.1. The draft of the Transmission Service Agreement has been attached to this RFP. In addition to above, the following documents have also been attached to this RFP:

a) Share Purchase Agreement

When the drafts of the above RFP Project Documents are provided by the BPC, these RFP Project Documents shall form part of this RFP as per Formats – 1 & 2 of Annexure 20.

Upon finalization of the RFP Project Documents after incorporating the amendments envisaged in Clause 2.4 of this RFP, all the finalized RFP Project Documents shall be provided by BPC to the Bidders at least fifteen (15) days prior to the Bid Deadline.

The Transmission Service Agreement and Share Purchase Agreement shall be signed in required number of originals so as to ensure that one (1) original is retained by each party to the Agreement(s) on the date of transfer of SPV.

2.15.2. Within ten (10) days of the issue of the Letter of Intent, the Selected Bidder shall:

a) provide the Contract Performance Guarantee in favour of the Nodal Agency as per the provisions of Clause 2.12;

b) execute the Share Purchase Agreement and the Transmission Service Agreement;

c) acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of **SPV [which is under incorporation]** from PFC Consulting Limited, who shall sell to the Selected Bidder, the equity shareholding of **SPV [which is under incorporation]**, along with all its related assets and liabilities;

Stamp duties payable on purchase of one hundred percent (100%) of the equity shareholding of **SPV [which is under incorporation]**, along with all its related assets and liabilities, shall also be borne by the Selected Bidder.

Provided further that, if for any reason attributable to the BPC, the above activities are not completed by the Selected Bidder within the above period of ten (10) days as mentioned in this Clause, such period of ten (10) days shall be extended, on a day for day basis till the end of the Bid validity period.

2.15.3. After the date of acquisition of the equity shareholding of **SPV [which is under incorporation]**, along with all its related assets and liabilities, by the Selected Bidder,

i. the authority of the BPC in respect of this Bid Process shall forthwith cease and any actions to be taken thereafter will be undertaken by the Nodal Agency,

ii. all rights and obligations of **SPV [which is under incorporation]**, shall be of the TSP,

iii. any decisions taken by the BPC prior to the Effective Date shall continue to be binding on the Nodal Agency and

iv. contractual obligations undertaken by the BPC shall continue to be fulfilled by the TSP.

v. Further, the TSP shall execute the Agreement(s) required, if any, under Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time.

2.15.4. Within five (5) working days of the issue of the acquisition of the SPV by the Successful Bidder, the TSP shall apply to the Commission for grant of Transmission License and make an application to the Commission for the adoption of Transmission Charges, as required under Section – 63 of The Electricity Act 2003.

2.15.5. If the Selected Bidder / TSP fails or refuses to comply with any of its obligations under Clauses 2.15.2, 2.15.3 and 2.15.4, and provided that the other parties are willing to execute the Share Purchase Agreement and PFC Consulting Limited is willing to sell the entire equity shareholding of **SPV [which is under incorporation]**, along with all its related assets and liabilities, to the Selected Bidder, such failure or refusal on the part of the Selected Bidder shall constitute sufficient grounds for cancellation of the Letter of Intent. In such cases, the BPC / its authorized representative(s) shall be entitled to invoke the Bid Bond of the Selected Bidder.

2.15.6. If the TSP fails to obtain the Transmission License from the Commission, it will constitute sufficient grounds for annulment of award of the Project.

2.15.7. The annulment of award, as provided in Clauses 2.15.5 and 2.15.6 of this RFP, will be done by the Government on the recommendations of National Committee on Transmission. However, before recommending so, National Committee on Transmission will give an opportunity to the Selected Bidder / TSP to present their view point.

2.15.8. The annulment of the award, under Clause 2.15.5 or 2.15.6 of this RFP, shall be sufficient grounds for blacklisting the bidder, whose award has been annulled, for a period of five years or more, as decided by the National Committee on Transmission, provided that the blacklisting shall be done only after giving the bidder an opportunity for showing cause.

2.16 Confidentiality

2.16.1. The parties undertake to hold in confidence this RFP and RFP Project Documents and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

a) to their professional advisors;

b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities;

c) disclosures required under Law, without the prior written consent of the other parties of the concerned agreements.

Provided that the TSP agrees and acknowledges that the Nodal Agency may at any time, disclose the terms and conditions of the RFP and RFP Project Documents to any person, to the extent stipulated under the Law or the Bidding Guidelines.

2.17 Right of the BPC to reject any Bid

BPC reserves the right to reject all or any of the Bids/ or cancel the RFP without assigning any reasons whatsoever and without any liability.

2.18 Non submission and/or submission of incomplete data/ information required under the provisions of RFP shall not be construed as waiver on the part of BPC of the obligation of the Bidder to furnish the said data / information unless the waiver is in writing.

2.19 Fraudulent and Corrupt Practices

2.19.1. The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bid process and subsequent to the issue of the LoI Notwithstanding anything to the contrary contained herein, or in the LoI, the BPC shall reject a Bid, withdraw the LoI, as the case may be, without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bid process. In such an event, the BPC shall forfeit the Bid Bond, without prejudice to any other right or remedy that may be available to the BPC hereunder or otherwise.

2.19.2. Without prejudice to the rights of the BPC under Clause 2.19.1 hereinabove and the rights and remedies which the BPC may have under the LoI, if a Bidder is found by the BPC to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bid process, or after the issue of the LoI, such Bidder & its Affiliates shall not be eligible to participate in any tender or RFP issued by any BPC for an indefinite period from the date such Bidder is found by the BPC to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be.

2.19.3. For the purposes of this Clause 2.19, the following terms shall have the meaning hereinafter respectively assigned to them:

a) **"corrupt practice"** means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bid process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the BPC who is or has been associated or dealt in any manner, directly or indirectly with the Bid process or the LoI or has dealt with matters concerning the Transmission Service Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year

from the date such official resigns or retires from or otherwise ceases to be in the service of the BPC, shall be deemed to constitute influencing the actions of a person connected with the Bid Process); or (ii) engaging in any manner whatsoever, whether during the Bid Process or after the issue of the LoI or after the execution of the Transmission Service Agreement, as the case may be, any person in respect of any matter relating to the Project or the LoI or the Transmission Service Agreement, who at any time has been or is a legal, financial or technical adviser of the BPC in relation to any matter concerning the Project;

b) **"Fraudulent practice"** means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bid process;

c) **"Coercive practice"** means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Bid process;

d) **"undesirable practice"** means (i) establishing contact with any person connected with or employed or engaged by the BPC with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bid process; or (ii) having a Conflict of Interest; and

e) **"Restrictive practice"** means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bid process.

SECTION - 3

EVALUATION OF THE TECHNICAL AND FINANCIAL BID

SECTION 3

1. EVALUATION OF BID

3.1. The evaluation process of Technical Bid comprises the following five steps:

Step I – Responsiveness check
Step II- Compliance with submission requirements
Step III– Evaluation of Technical Bids
Step IV– Evaluation of Financial Bids
Step V – Bidder Selection

3.2. STEP I – Responsiveness check

The Technical Bid submitted by the Bidder shall be initially scrutinized to establish "Responsiveness". Subject to clause 2.5.6 (k), any of the following conditions shall cause the Technical Bid to be "Non-responsive":

a) Technical Bid that are incomplete.

b) Technical Bid not signed by authorized signatory and / or stamped in the manner indicated in this RFP.

c) All pages of the Technical Bid submitted but not initialed by the authorized signatories on behalf of the Bidder.

d) Technical Bid not including the covering letter as per Annexure 1.

e) Technical Bid submitted by a Bidding Consortium not including the Consortium Agreement.

f) Technical Bid contains material inconsistencies in the information and documents submitted by the Bidder, affecting the Qualification Requirements.

g) Bidder submitting or participating in more than one Bid either as a Bidding Company or as a Member of Bidding Consortium.

h) More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.

i) Information not submitted in formats specified in the RFP.

j) Applicable Board resolutions, or any other document, as provided in Clause 2.5.2, not being submitted;

k) Bid not accompanied by a valid Bid Bond or Bid Security Declaration, as applicable;

l) Non submission of power of attorney, supported by a Board resolution;

m) Bid validity being less than that required as per Clause 2.8 of this RFP;

n) Bid not containing Format-1 (Bidders' Undertakings) of Annexure-8;

o) Bidder having Conflict of Interest

p) The Bidder has not submitted a disclosure as per Annexure 13.

q) Bidders delaying in submission of additional information or clarifications sought by the BPC.

r) If the Bidder makes any misrepresentation as specified in Clause 3.7.

s) Bid being conditional in nature.

t) More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.

3.3. STEP II - Compliance with submission requirements

Each Bidder's Technical Bid shall be checked for compliance with the submission requirements set forth in this RFP before the evaluation of Technical Bid is taken up. Annexure 16 and Annexure 11A shall be used to check whether each Bidder meets the stipulated requirements.

3.4. STEP III -Evaluation of Technical Bid

Evaluation of Technical Bid will be carried out considering the information and documents furnished by the Bidders as required under this RFP. This step would involve technical and financial evaluation of the details/ documents furnished by the Bidding Company / Bidding Consortium in support of meeting the Qualification Requirements

3.4.1. Interpolation of financial data.

For the Qualification Requirements data provided by the Bidders in foreign currency, equivalent rupees of Networth will be calculated using bills selling exchange rates (card rate) USD/INR of State Bank of India prevailing on the date of closing of the accounts for the respective financial year as certified by their Banker.

For the purpose of calculating the aggregate capital expenditure/construction experience of the projects completed/ commissioned where such projects are executed outside India and capital expenditure is denominated in foreign currency, bills selling exchange rates (card rate) USD/INR of State Bank of India prevailing on the date of closing of the financial year in which the projects were completed and as certified by their Banker shall be considered.

For the projects executed in the current financial year bills selling (card rate) USD/INR of State Bank of India prevailing on seven (7) days prior to the last date of submission of Technical Bid and as certified by their Banker shall be considered.

For currency other than USD, Bidders shall convert such currency into USD as per the exchange rates certified by their Banker prevailing on the relevant date and used for such conversion. Such Bidders shall submit necessary certification from their Banker for the exchange rate used in the conversation.

If the exchange rate for any of the above dates is not available, the rate for the immediately available previous day shall be taken into account.

3.4.2. Bidders meeting the Qualification Requirements, subject to evaluation as specified in Clauses 3.2 to 3.4 shall be declared as Qualified Bidders and eligible for opening of Initial Offer.

3.4.3. The BPC shall upload the list of all Qualified Bidders and Non-Qualified Bidders on the bidding portal along with the reasons for non-qualification.

3.5. STEP IV - Evaluation of Financial Bids

3.5.1. The Bids which have been found Qualified by the BPC, based on the Steps I to III as specified above in Clauses 3.2.to 3.4, shall be opened and Quoted Transmission Charges of such Initial Offer shall be ranked on the basis of the ascending Initial Offer submitted by each Qualified Bidder.

Based on such ranking of the Qualified Bidders, in the first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall qualify for participating in the electronic reverse auction.

Provided however, in case only one Bidder remains after the Evaluation of Technical Bid (Steps 1 to III) as per Clause 3.2 to 3.4, the Initial Offer of such Bidder shall not be opened and the matter shall be referred to the Government.

Provided that in the event the number of Qualified Bidders is between two and four, then each of the responsive Bidder shall be considered as Qualified Bidders.

Provided that in the event of identical Quoted Transmission Charges discovered from the Initial Offer having been submitted by one or more Bidders, all such Bidders shall be assigned the same rank for the purposes of determination of Qualified Bidders. In such cases, all Qualified Bidders who shares the same rank till 50% of the rank (with any faction rounded off to higher integer) determined above, shall qualify to participate in the electronic reverse auction stage. In case 50% of the rank is having less than four (4) Bidders and the rank of the fourth (4^{th}) Bidder is shared by more than one Bidder, then all such all such Bidders who share the rank of the fourth Bidder shall qualify to participate in the electronic reverse auction.

3.5.2. The Financial Bids comprising of both Initial Offer and Final Offer submitted by the Bidders shall be scrutinized to ensure conformity with the provisions of Clause 2.5.3 of this RFP. Any Bid not meeting any of the requirements as per Clause 2.5.3 of this RFP may cause the Bid to be considered "Non-responsive", at the sole decision of the BPC. Financial Bid not in conformity with the requirement of SI. No. (c) of Clause 2.5.3 of this RFP shall be rejected.

3.5.3 The Bidders shall quote the single annual Quoted Transmission Charges as specified in the format at Annexure – 21.

3.6. STEP V - Bidder Selection

3.6.1. The prevailing lowest Quoted Transmission Charges discovered from Final Offers shall only be displayed during the e-reverse bidding and the Bidder quoting such Final Offer will always remain anonymous during the e-reverse bidding. The Bidder with the prevailing lowest Quoted Transmission Charges discovered from Final Offers at the close of the scheduled or extended period of e-reverse bidding as mentioned in clause 2.5 shall be declared as the Successful Bidder, subject to verification of the original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14. The Letter of Intent shall be issued to such Successful Bidder in two (2) copies.

However, if no bid is received during the e-reverse bidding stage then the Bidder with lowest quoted initial transmission charges ("Initial Offer") during e-bidding stage shall be declared as the Successful Bidder, subject to verification of the original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14. The Letter of Intent shall be issued to such Successful Bidder in two (2) copies.

In case, there is a discrepancy between the online submission and physical documents, the bid would be out rightly rejected and the bidder shall be construed to have engaged in the fraudulent practice as defined in Clause 2.19.3 with consequences as mentioned in Clause 2.19.2. Further, in such a case, the provisions of Clause 2.5.6 (j) shall apply.

3.6.2. The Selected Bidder shall unconditionally accept the LoI, and record on one (1) copy of the LoI, "Accepted unconditionally", under the signature of the authorized signatory of the Successful Bidder and return such copy to the BPC within seven (7) days of issue of LoI.

3.6.3. If the Successful Bidder, to whom the Letter of Intent has been issued, does not fulfill any of the conditions specified in Clauses 2.15.2, 2.15.3 and Clause 2.15.4, then subject to Clause 2.15.5, the BPC reserves the right to annul the award of the Project and cancel the Letter of Intent. Further, in such a case, the provisions of Clause 2.5.6 (j) shall apply.

3.6.4. The BPC, in its own discretion, has the right to reject all Bids if the Quoted Transmission Charges are not aligned to the prevailing prices.

3.7. Misrepresentation by the Bidder

If the Bidder conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in the Technical Bid or Bid, as the case may be, in any manner whatsoever, in order to create circumstances for the acceptance of its Technical Bid/Bid, the BPC reserves the right to reject such Technical Bid/Bid, and/ or cancel the Letter of Intent, if issued. Further, in case Letter of Intent is cancelled, consequences as per provisions of the RFP shall follow.

3.8. Disposition of Technical Bid

3.8.1. Technical Bid found to be Non-responsive as per Clause **3.2,** due to any of the following conditions, shall be liable for rejection.

- Technical Bid that is incomplete.
- Technical Bid not signed by authorized signatory and / or stamped in the manner indicated in this RFP.
- All pages of the Technical Bid submitted but not initialed by the authorized signatories on behalf of the Bidder.
- Technical Bid not including the covering letter as per Annexure 1.
- Technical Bid contains material inconsistencies in the information and documents submitted by the Bidder, affecting the Qualification Requirements.
- Information not submitted in formats specified in the RFP.
- The Bidder has not submitted a disclosure as per Annexure 13**.**
- Bidders delaying in submission of additional information or clarifications sought by the BPC.

3.8.2. Technical Bid found to be Non-responsive as per Clause **3.2,** due to any of the following conditions, shall be rejected.

- Technical Bid not received by the scheduled date and time.
- Technical Bid submitted by a Bidding Consortium not including the Consortium Agreement.
- Bidder submitting or participating in more than one response either as a Bidding Company or as a Member of Bidding Consortium.
- More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.
- Technical Bid having Conflict of Interest.
- If the Bidder makes any misrepresentation as specified in Clause **3.7.**

3.9. BPC reserves the right to interpret the Bid in accordance with the provisions of this RFP document and make its own judgment regarding the interpretation of the same. In this regard, BPC shall have no liability towards any Bidder and no Bidder shall have any recourse to BPC with respect to the qualification process.

BPC shall evaluate Bid using the process specified in Clause 3.1 to 3.6, at its sole discretion. BPC's decision in this regard shall be final and binding.

SECTION - 4

ANNEXURES FOR BID

SECTION – 4

I. Formats for Bid

The following formats are required to be included in the Bidder's Technical and Financial Bid. These formats are designed to demonstrate the Bidder's compliance with the Qualification Requirements set forth in Clause 2.1 of Section – 2.

Technical Bid

1. Format for the Covering Letter
2. Format for Letter of Consent from Consortium Members
3. Format for evidence of authorized signatory's authority (Power of Attorney)
4. Format for Power of Attorney from to be provided by each of the other Members of the Consortium in favor of the Lead Member
5. Format for Bidder's composition and ownership structure and Format for Authorization
6. Format for Consortium Agreement
7. Formats for Qualification Requirement
8. Format of Bidders Undertaking and details of Equity Investment
9. Authorization from Parent/Affiliate of Bidding Company/Member of Bidding Consortium whose technical/financial capability has been used by the Bidding Company/Member of Bidding Consortium.
10. Undertaking from the Technically / Financially Evaluated Entity(ies) or from Ultimate Parent Company for equity investment
11. Format of Board Resolutions
12. Format for Illustration of Affiliates
13. Format for Disclosure
14. Format for Bid Bond

14A. Format for Bid Security Declaration

15. Format for Contract Performance Guarantee
16. Checklist for Technical Bid submission requirements
22. Format for Affidavit

In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI.

Financial Bid

21. Format for Financial Bid

II. The following formats are for the information to the Bidders to enable them to submit their Bid.

11A. Illustration For Applicable Board Resolution Requirements Under Clause 2.5.2

17. List of Banks
18. GRID Map of the Project
19. Format for clarification/amendments on the RFP/RFP Project Documents
20. Formats for RFP Project Documents

Bidder may use additional sheets to submit the information for its detailed Bid.

ANNEXURE 1 - COVERING LETTER

(The covering letter should be on the Letter Head of the Bidding Company/ Lead Member of the Consortium)

Date: ……
From: ……
……
……
Tel. No.: .....
Fax No.: .....
E-mail address: .....

To,
PFC Consulting Limited
9thFloor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: **Bid for selection of Bidder as Transmission Service Provider to establish Inter-State Transmission System for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G" through tariff based competitive bidding process.**

1. Being duly authorized to present and act on behalf of M/s ……. (insert name of Bidding Company / Bidding Consortium) (hereinafter called the "Bidder") and having read and examined in detail the Request for Proposal (RFP) document, the undersigned hereby submit our Technical Bid with duly signed formats and Financial Bid (Initial Offer) as stipulated in RFP document for your consideration.

2. It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFP document and subsequent clarifications/amendments as per Clause 2.3 and 2.4 of RFP.

3. The information submitted in our Bid is complete, is strictly as per the requirements stipulated in the RFP document and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid.

4. We hereby agree and undertake to procure the products associated with the Transmission System as per provisions of Public Procurement (Preference to Make in India) orders issued by Ministry of Power vide orders No. 11/5/2018 - Coord. dated 28.07.2020 for transmission sector, as amended from time to time read with Department for Promotion of Industry and Internal Trade (DPIIT) orders in this regard.

   We hereby also agree and undertake to comply with Department of Expenditure, Ministry of Finance vide Order (Public Procurement No 1) bearing File No. 6/18/2019-PPD dated 23.07.2020, Order (Public Procurement No 2) bearing File No. 6/18/2019-PPD dated 23.07.2020 and Order (Public Procurement No. 3) bearing File No.

6/18/2019-PPD, dated 24.07.2020, as amended from time to time, regarding restrictions on procurement from a bidder of a country, which shares land border with India.

5. We hereby agree to comply with Ministry of Power order no. 25-11/6/2018 – PG dated 02.07.2020 as amended from time to time.

6. We are herewith submitting legally binding board resolution for the total equity requirement of the Project.

7. We hereby confirm that in accordance with Clause 2.1.4 of the RFP, we are herewith submitting legally binding undertaking supported by a board resolution from the ……..(Insert name of Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) that all the equity investment obligations of …….. (Insert name of the Bidding Company) shall be deemed to be equity investment obligations of the …… (Insert name of Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) and in the event of any default by……. (Insert name of the Bidding Company), the same shall be met by ……. (Insert name of Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be).

[Sl. No 7 to be inserted only in case the Bidder is a Bidding Company / Lead Member of a Consortium and has sought qualification on the basis of technical and financial capability of its Affiliate(s) and/or its Parent]

8. We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to the Project.

9. We hereby confirm that we shall continue to maintain compliance with Qualification Requirements till the execution of the Transmission Service Agreement. Further, in case we emerge as Selected Bidder for the Project, we shall continue to maintain compliance with Qualification Requirements till the COD of the Project.

10. We confirm that we have studied the provisions of relevant Indian laws and regulations required to enable us to build, own, operate and transfer the said Project and to prepare this Bid.

11. We hereby confirm that we shall abide unreservedly with BPC's decision in the qualification process for selection of Qualified Bidder and further warrant that under no circumstances we shall challenge either the BPC's decision or its right to make such decision at any time in the future.

12. We confirm that the Bid shall remain valid for a period of one eighty (180) days from the Bid Deadline.

13. The details of contact person are furnished as under:

Name: ……

Designation: ……

Name of the Company: ……

Address of the Bidder: ……

Phone Nos.: ……..
Fax Nos.: ……..
E-mail address: ……..

14. Bid Bond

We have enclosed a Bid Bond of Rupees …… Crores (Rs. ……) only or US$ ..... (…….US Dollars), in the form of bank guarantee no……[Insert number of the Bank Guarantee] dated……[Insert Date of the Bank Guarantee] as per your proforma (Annexure-14) from……[Insert name of bank providing Bid Bond] and valid up to ……in terms of Clause 2.11 of the RFP.

15. Acceptance

We hereby unconditionally and irrevocably agree and accept that the decision made by the BPC on any matter regarding or arising out of the RFP shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.

16. Familiarity With Relevant Indian Laws & Regulations

We confirm that we have studied the provisions of relevant Indian laws and regulations as required to enable us to submit this Bid and execute the RFP Project Documents (other than TSA), in the event of our selection as the TSP. We further undertake and agree that all such factors as mentioned in Clause 2.5.7 of RFP have been fully examined and considered while submitting the Bid.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFP and subsequent communications from BPC.

The information submitted in our Bid is complete, strictly as per the requirements stipulated in the RFP and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid.

We confirm that we have not taken any deviation so as to be deemed non-responsive with respect to the provisions stipulated at Clause 2.5.1, of this RFP.

Thanking you,

Yours sincerely,

……
(Name and Signature of the authorized signatory in whose name Power of Attorney/ Board Resolution as per Clause 2.5.2 is issued)

Name: ……
Designation: ……
Address: ……

Date: ……..
Place: ……

Company Rubber Stamp

ANNEXURE 2 - LETTER OF CONSENT FROM CONSORTIUM MEMBERS

(On the letter head of each Member of the Consortium including Lead Member)

Date: ……
From: ……
……
……
Tel. No.: ……
Fax No.: ……
E-mail address: ……..

To,
PFC Consulting Limited
9thFloor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: **Bid for selection of Bidder as Transmission Service Provider to establish Inter-State Transmission System for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G" through tariff based competitive bidding process.**

We, the undersigned Member of …… (Insert name of the Bidding Consortium) have read, examined and understood the RFP document for the short-listing of Bidders as prospective TSP to establish Inter-State Transmission System for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"** through tariff based competitive bidding process. We hereby confirm our concurrence with the Bid including in particular the Consortium Agreement submitted by ……. (Insert name of the Lead Member) in response to the RFP document.

We hereby confirm our commitment to participate in the said Bidding Consortium and invest ……. % of the total equity requirement for the Project as per the terms of the Consortium Agreement dated …… and board resolution for such investment commitment is enclosed herewith.

We hereby confirm that in accordance with Clause 2.1.4 of the RFP, we are enclosing legally binding undertaking supported by a board resolution from the ……. (Insert name of Technically Evaluated Entity and / or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) that all the equity investment obligations of ……. (Insert name of the Member) shall be deemed to be equity investment obligations of the …… (Insert name of Technically Evaluated Entity and / or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) and in the event of any default by……. (Insert name of the Member), the same shall be met by……. (Insert name of Technically Evaluated Entity and / or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be). [Insert if applicable]

[To be inserted by the Lead Member only] We are also enclosing legally binding Board resolution for the total equity requirement of the Project in case of any breach of any of the equity investment commitment by any of the Consortium Members, in line with the provisions of the Consortium Agreement dated ……. [Bidder to insert date of Consortium Agreement].

The details of contact person are furnished as under:

Name: …….
Designation: …….
Name of the Company: …….
Address: …….
Phone Nos.: …….
Fax Nos.: …….
E-mail address: …….

Dated the ……. day of ……. of 20…

Thanking you,

Yours faithfully,

……
(Signature)

Name: …….
Designation: …….

(Signature, Name, Designation of Authorized Signatory of Consortium Member and Company's Seal)

ANNEXURE 3 - FORMAT FOR EVIDENCE OF AUTHORIZED SIGNATORY'S AUTHORITY (POWER OF ATTORNEY)

POWER OF ATTORNEY

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign companies submitting bids are required to follow the applicable law in their country)

Know all men by these presents, We ……(name and address of the registered office of the Bidder) do hereby constitute, appoint and authorize Mr./Ms……(name and residential address) who is presently employed with us and holding the position of …… as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Bid for selection of Bidder as Transmission Service Provider to establish Inter-State Transmission System for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"** through tariff based competitive bidding process in the country of India, including signing and submission of all documents related to the Bid, including, undertakings, letters, certificates, acceptances, clarifications, guarantees, etc., making representations to the BPC, and providing information / responses to the BPC, representing us in all matters before the BPC, and generally dealing with the BPC in all matters in connection with our Bid for the said Project till the completion of the bidding process in accordance with the RFP and signing of the Share Purchase Agreement by all the parties thereto.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFP.

For ……. [Insert name of the Bidder on whose behalf PoA is executed]

……..
(Signature)

Name: …….
Designation: …….

Accepted

……
(Signature of the Attorney)

Name: …….
Designation: ……..
Address: .....
.....
(Name, Designation and Address of the Attorney)

Specimen signatures of attorney attested by the Executant

……
(Signature of the Executant)

……..
(Signature of Notary Public)

Place: ……
Date: ……

Notes:

1) To be executed by Bidding Company or the Lead Member, in the case of a Bidding Consortium, as the case maybe.

2) The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

3) Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a Board resolution / power of attorney, in favour of the Person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

4) In case of foreign Bidders, refer to clause 2.5.6 (p)

ANNEXURE 4 - FORMAT FOR POWER OF ATTORNEY TO BE PROVIDED BY EACH OF THE OTHER MEMBERS OF THE CONSORTIUM IN FAVOUR OF THE LEAD MEMBER

POWER OF ATTORNEY

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign companies submitting bids are required to follow the applicable law in their country)

KNOW ALL MEN BY THESE PRESENTS THAT M/s……., having its registered office at ……, …… and M/s …… having its registered office at …… , (Insert names and registered offices of all Members of the Consortium), the Members of Consortium, have formed a Bidding Consortium named …… (insert name of the Consortium) (hereinafter called the **"Consortium"**) vide Consortium Agreement dated…….. and having agreed to appoint M/s…… as the Lead Member of the said Consortium do hereby constitute, nominate and appoint M/s……..a company incorporated under the laws of ……and having its Registered / Head Office at ……..as our duly constituted lawful Attorney (hereinafter called as **"Lead Member"**) which is one of the Members of the Consortium, to act as the Lead Member and our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of Consortium's Bid for the Project, including signing and submission of the Bid and all documents related to the Bid, including, undertakings, letters, certificates, acceptances, clarifications, guarantees, etc, making representations to the BPC, and providing information / responses to the BPC, representing us and the Consortium in all matters before the BPC, and generally dealing with the BPC in all matters in connection with our Bid for the said Project, till completion of the bidding process in accordance with the RFP and signing of the Share Purchase Agreement by all the parties thereto.

It is expressly understood that in the event of the Consortium being selected as Successful Bidder, this Power of Attorney shall remain valid, binding and irrevocable until the Bidding Consortium achieves execution of all RFP Project Documents.

We, as the Member of the Consortium, agree and undertake to ratify and confirm all whatsoever the said Attorney/Lead Member has done on behalf of the Consortium Members pursuant to this Power of Attorney and the same shall bind us and deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFP.

IN WITNESS WHEREOF M/s ……., as the Member of the Consortium have executed these presents on this……. day of .....

For and on behalf of
Consortium Member

……..
(Signature of the Authorized Signatory)

Name: ……
Designation: .....
Place: ……
Date: ……..

Name: ……
Designation: .....
Place: ……
Date: ……..

Accepted
Specimen signatures of attorney attested

……
(Signature)

……

……
(Signature of Notary Public) ……
(Name, Designation and Address of the Attorney)

Place: ……
Date: …….

Notes:

1. The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

2. Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a Board resolution / power of attorney, in favour of the Person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

3. In case of foreign Bidders, refer to clause 2.5.6 (p)

ANNEXURE 5 - FORMAT FOR BIDDER'S COMPOSITION AND OWNERSHIP STRUCTURE

1. Corporate Details:

Please provide the following information for the Bidder. If the Bidder is a Consortium, please provide this information for each Member including the Lead Member:

a. Company's Name, Address, and Nationality:

Name: ……

Address: ……
……
……

Website Address: ……..

Country of Origin: ……

b. Year Organized: ……..

c. Company's Business Activities: ……
.....

d. Status as a Bidder:

i. Bidding Company
ii. Lead Member of the Bidding Consortium
iii. Member of the Bidding Consortium

Note: tick the applicable serial number

e. Company's Local Address in India (if applicable):

……
……
……

f. Name of the Authorized Signatory: .....

g. Telephone Number: ……..

h. Email Address: ……..

i. Telefax Number: ……..

j. Please provide the following documents:

i. Copy of the Memorandum and Articles of Association and certificate of incorporation or other equivalent organizational document (as applicable), including their amendments, certified by the Company Secretary as

Attachment 1 for Bidding Company / each Member of Bidding Consortium including Lead Member.

ii. Authority letter (as per format for authorization given below) in favour of BPC from the Bidder/every Member of the Consortium authorizing BPC to seek reference from their respective bankers & others as **Attachment 2** as per Clause 2.1.6 of the RFP.

2. Details of Ownership Structure:

Equity holding of Bidding Company/ each Member of Bidding Consortium including Lead Member owning 10% or more of total paid up equity.

Name of the Bidding Company / Consortium Member: …….
Status of equity holding as on ……

Name of the Equity Holder	Type and No. of Shares owned	Extent of Voting Control (%)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
….		

Notes:

1. The above table is to be filled in separately for each Consortium Member.
2. Status of equity holding should be provided not earlier than thirty (30) days prior to Bid Deadline.

For and on behalf of Bidding Company / Lead Member of the Bidding Consortium
M/s…….

……..
(Signature of authorized representative)
Name: ……..
Designation: ……

……..
(Stamp)

Date: ……
Place: ……

FORMAT FOR AUTHORISATION

(In case of Bidding Consortium, to be given separately by each Member)
(On Non – judicial stamp paper duly attested by notary public. Foreign companies submitting bids are required to follow the applicable law in their country)

The undersigned hereby authorize(s) and request(s) all our Bankers, including its subsidiaries and branches, any person, firm, corporation or authority to furnish pertinent information deemed necessary and requested by **PFC Consulting Limited** to verify our Bid for selection of Bidder as Transmission Service Provider to establish Inter-State Transmission system for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"** through tariff based competitive bidding process or regarding our project development experience, financial standing and general reputation.

For and on behalf of M/s……. (Insert Name of Bidding Company or Member of the Consortium)

.....
(Signature)

Name of Authorized Signatory: …….

(Signature and Name of the authorized signatory of the Company)

Place: ……
Date: ……

……..
(Company rubber stamp/seal)

……..
(Signature of Notary Public)

Place: ……
Date: ……

ANNEXURE 6 - FORMAT FOR CONSORTIUM AGREEMENT

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign companies submitting bids are required to follow the applicable law in their country)

THIS CONSORTIUM AGREEMENT executed on this..... day of .....Two thousand.....between M/s....., a company incorporated under the laws of ..... and having its Registered Office at ..... (hereinafter called the "Party 1", which expression shall include its successors, executors and permitted assigns) and M/s.....a Company incorporated under the laws of ..... and having its Registered Office at ..... (hereinafter called the "Party n", which expression shall include its successors, executors and permitted assigns) and for the purpose of submitting the Bid, acquisition of **SPV [which is under incorporation]** (in case of award) and entering into other Agreement(s) as specified in the RFP (hereinafter referred to as "Agreements") as may be entered into with the Nodal Agency.

WHEREAS, the BPC had invited Bid in response to RFP issued to …… (insert the name of purchaser of RFP) for selection of the bidder as the Transmission Service Provider to establish Inter-State Transmission System for **"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"**.

AND WHEREAS, Clause 2.2.4 of the RFP document stipulates that the Bidders qualifying on the strength of a Bidding Consortium will have to submit a legally enforceable Consortium Agreement in a format specified in the RFP document wherein the Consortium Members have to commit equity of a specific percentage in the Project.

AND WHEREAS, Clause 2.2.4 of the RFP document also stipulates that the Bidding Consortium shall provide along with the Bid, a Consortium Agreement as per prescribed format whereby the Consortium Members undertake to be liable for raising the required funds for its respective equity investment commitment as specified in Consortium Agreement.

NOW THEREFORE, THIS INDENTURE WITNESSTH AS UNDER:

In consideration of the above premises and agreement all the parties in this Consortium do hereby mutually agree as follows:

1. In consideration of the selection of the Consortium as the selected bidder by the BPC, we the Members of the Consortium and parties to the Consortium Agreement do hereby unequivocally agree that M/s..... (Insert name of the Lead Member), shall act as the Lead Member as defined in the RFP for self and agent for and on behalf of ……., ..., ..., ... (the names of all the other Members of the Consortium to be filled in here).

2. The Lead Member is hereby authorized by the Members of Consortium and parties to the Consortium Agreement to bind the Consortium and receive instructions for and on behalf of the Members.

3. Notwithstanding anything contrary contained in this Consortium Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members, i.e., for both its own equity contribution as well as the equity contribution of other Members.

4. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all their respective equity obligations. Each Consortium Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this agreement.

5. Subject to the terms of this agreement, the share of each Member of the Consortium in the "issued equity share capital of the project company" shall be in the following proportion: (if applicable)

Name	Percentage of equity holding in the Project
Party 1	…….
…….	…….
Party n	…….
Total	**100%**

[**Note:** The percentage equity holding for any Consortium Member in the Project cannot be zero in the above table]

6. The Lead Member shall inter alia undertake full responsibility for liaising with lenders and mobilizing debt resources for the Project and achieving financial closure.

7. In case of any breach of any of the equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.

8. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.

9. It is further specifically agreed that the financial liability for equity contribution of Lead Member shall, not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of their scope of work or financial commitments.

10. It is expressly understood and agreed between the Members that the responsibilities and obligations of each of the Members shall be as delineated as annexed hereto as **Appendix-I,** forming integral part of this Agreement. It is further agreed by the Members that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities and liabilities of the Members, with regards to all matters relating to the Project.

11. It is clearly agreed that the Lead Member shall ensure performance under the Agreements and if one or more Consortium Members fail to perform its /their respective

obligations under the Agreement(s), the same shall be deemed to be a default by all the Consortium Members.

12. This Consortium Agreement shall be construed and interpreted in accordance with the Laws of India and courts at **Delhi** alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.

13. It is hereby agreed that, the Lead Member shall furnish the bid bond, as stipulated in the RFP, on behalf of the Consortium Members.

14. It is hereby agreed that in case of selection of Bidding Consortium as the selected bidder, the parties to this Consortium Agreement do hereby agree that they shall furnish the contract performance guarantee on behalf of the TSP in favor of the Nodal Agency, as stipulated in the RFP and Transmission Service Agreement.

15. It is further expressly agreed that the Consortium Agreement shall be irrevocable and shall form an integral part of the RFP Project Document and shall remain valid till the execution of the Share Purchase Agreement, unless expressly agreed to the contrary by the Nodal Agency. Over the term of the Transmission Service Agreement, Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time shall apply on the Consortium Members.

16. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Consortium Members respectively from time to time in response to the RFP and for the purposes of the Project.

17. It is hereby expressly agreed between the parties to this Consortium Agreement that neither party shall assign or delegate its rights, duties or obligations under this Agreement except with the prior written consent of the Nodal Agency.

THIS CONSORTIUM AGREEMENT:

a. has been duly executed and delivered on behalf of each party hereto and constitutes the legal, valid, binding and enforceable obligation of each such party,

b. sets forth the entire understanding of the parties hereto with respect to the subject matter hereof;

c. may not be amended or modified except in writing signed by each of the parties and with prior written consent of the Nodal Agency.

IN WITNESS WHEREOF, the parties to the Consortium Agreement have, through their authorized representatives, executed these present on the Day, Month and Year first mentioned above.

For and on behalf of Consortium Member 1 (Party 1)
M/s…….

.....
(Signature of authorized signatory)

Name: …….
Designation: .....
Place: ……..
Date: ……

For and on behalf of Consortium Member n (Party n)
M/s…….

.....
(Signature of authorized signatory)

Name: ……
Designation: .....
Place: ……
Date: ……..

Attested:
……
(Signature)
(Notary Public)

Place: …….
Date: …….

Note: In case of foreign Bidders, refer to clause 2.5.6 (p)

Appendix 1 to the Consortium Agreement:

Name of the Consortium Member	Responsibilities under the Consortium Agreement
M/s …… (Party 1)	
M/s ……	
M/s …… (Party n)	

ANNEXURE 7 A - FORMAT FOR QUALIFICATION REQUIREMENT

A. NET WORTH

To,
PFC Consulting Limited
9thFloor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Inter-State Transmission System for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G" through tariff based competitive bidding process

1. **[Note: Applicable in case of Bidding Company]**

We certify that the Financially Evaluated Entity(ies) had a Networth of Rs. …… Crore or equivalent USD* computed as per instructions in this RFP based on unconsolidated audited annual accounts (refer Note-2 below) of any of the last three (3) financial years as provided in Clause 2.2.3, immediately preceding the Bid Deadline. Also, the Networth of any of the last three (3) financial years is not negative.

Name of Financially Evaluated Entity(ies)	Relationship with Bidding Company**	Financial Year	Networth (Rs. Crore)
1. ……..			
2. ……..			
3. ……..			
….			
Total Networth			

*Equivalent USD shall be calculated as per provisions of Clause 3.4.1.
** The column for "Relationship with Bidding Company" is to be filled in only in case financial capability of Parent/Affiliate has been used for meeting Qualification Requirements.

2. **[Note: Applicable in case of Bidding Consortium]**

We certify that the Financially Evaluated Entity(ies) had a minimum Networth of Rs. …….. Crore or equivalent USD* computed as per instructions in the RFP and based on unconsolidated audited annual accounts (refer Note-2 below) of any of the last three (3) financial years as provided in Clause 2.2.3, immediately preceding the Bid Deadline. Also, the Networth of any of the last three (3) financial years is not negative.

Name of Consortium Member	Equity Commitment in the Project (%)	Networth of Member (Rs. Crore)	Networth Requirement to be met by Member in proportion to the Equity Commitment (Rs. Crore)	Whether the Member meets the Networth Requirement
(1)	(2)	(3) (As per table below)	(4)= (2 x Total Networth requirement for the Project)	(5)
1. ……				Yes / No
2. ……				Yes / No
..				Yes / No
Total Networth for financial requirement				

Member – I (Lead Member)

[Note: Similar particulars for each Member of the Consortium is to be furnished, duly certified by the Member's Statutory Auditors]

i. Name of Member: .....

ii. Total Networth requirement: Rs …… Crore

iii. Percentage of equity commitment for the Project by the Member: ……%

iv. Networth requirement for the Member***: Rs. ……. Crore

v. Financial year considered for the Member: …….

Name of Financially Evaluated Entity(ies)	Relationship** with Member of Consortium	Financial Year	Networth (Rs. Crore)
1. …….			
2. …….			
3. …….			
Total Networth			

* Equivalent USD shall be calculated as per provisions of Clause 3.4.1;

** The column for "Relationship with Member of Consortium" is to be filled in only in case the financial capability of Parent / Affiliate has been used for meeting Qualification Requirements;

*** Networth requirement to be met by Member should be in proportion to the equity commitment of the Member for the Project.

Yours faithfully

……
(Signature and name of the authorized signatory of the Company and Stamp)

Name : …….
Date : …….
Place : …….

……
(Signature and Stamp of statutory Auditors of Bidding Company / each Member of Consortium)

Name : …….
Date : …….
Place : …….

Date : …….

Notes:

1. Along with the above format, in a separate sheet, please provide details of computation of Networth of last three (3) financial years duly certified by Statutory Auditor.

2. Audited consolidated annual accounts of the Bidder may be used for the purpose of financial criteria provided the Bidder has at least 26% equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.

3. In case Bidder or a Member of Consortium takes recourse to its Parent/Affiliate for meeting technical / financial requirements, then the financial years considered for such purpose should be same for the Bidder / Member of Consortium and their respective Parent / Affiliate.

ANNEXURE 7B - FORMAT FOR TECHNICAL REQUIREMENT

To,
PFC Consulting Limited
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Inter-State Transmission System for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G" through tariff based competitive bidding process

1. To be used by Bidder using the development experience in infrastructure sector

We certify that M/s. ……. (Insert name of Technically Evaluated Entity(ies)) have experience of development of projects in the Infrastructure sector in the last five (5) years whose aggregate capital expenditure is Rs. ……. Crore or equivalent USD*. We further certify that the capital expenditure of any single project considered for meeting the technical Qualification Requirement is not less than Rs. …… Crore or equivalent USD*. For this purpose, capital expenditure incurred on projects which have been either wholly completed / commissioned or partly completed projects put under commercial operation and for which operation has commenced till at least seven (7) days prior to the Bid Deadline has been considered.

The project(s) considered for the purpose of technical experience (as per table given below) have been executed and owned to the extent as indicated in the table below (to be atleast twenty – six percent (26%)) by the Bidding Company / Lead Member of the Consortium / our Parent / our Affiliate(s) [strike off whichever is not applicable] on operation of the projects.

This technical requirement has been calculated as per the instructions provided in the RFP on the basis of following projects:

Name of Company (which has executed the project at (3)) whose technical capability has been used for Qualification Requirement	Relationship** with Bidding Company / Lead Member	Project name	Nature of Project (BOOT, BOT, BOOM, DBFOT etc.)	Relevant Infrastructure sector	Date of Financial Closure of the Project (in DD / MM / YYYY)	Date of Completion / Commissioning / Commercial Operation of partly completed projects	Project cost (Rs. Crore)	Percentage Equity Holding of Company at (1) in Completed project(s)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
……		……. (Project 1)						
……		…….						
Total (Rs. Crore)								

* Equivalent USD shall be calculated as per provisions of Clause ____

** The column for "Relationship with Bidding Company / Lead Member" is to be filled in only in case technical capability of Parent/Affiliate has been used for meeting Qualification Requirements.

We further certify that the Company(ies) as indicated in column (1) of the above table, whose technical capability has / have been used for meeting the qualification requirement, has / have held shareholding respectively of atleast twenty – six percent (26%)from the date of financial closure till the date of commissioning / completion of the above project(s).

2. To be used by Bidder using construction experience in infrastructure sector.

We certify that M/s. …….. (Insert name of Technically Evaluated Entity(ies)) have received aggregate payments not less than Rs. ……. Crore or equivalent USD (calculated as per provisions in Clause 3.4.1) from its client(s) for construction works fully completed during the last 5(five) financial years. We further certify that the payment received from each project shall not be less than Rs. ……. Crore or equivalent USD (calculated as per provisions in Clause 3.4.1). For this purpose, payments received on projects that have been commissioned/completed at least seven (7) days prior to the Bid Deadline shall be considered. Further only the payments (gross) actually received, during such 5 (five) financial years shall qualify for purposes of computing the technical capacity.

We also confirm that construction works does not include cost of land supply of goods or equipment except when such goods or equipment form part of a turn-key construction contract/ EPC contract for the project.

This technical requirement has been calculated as per the instructions provided in the RFP on the basis of following projects:

Name of Company (which has executed the project at (3)) whose technical capability has been used for Qualification Requirement	**Relationship** with Bidding Company / Lead Member**	**Project name**	**Nature of Project (EPC, Turnkey etc)**	**Relevant Infrastructure sector**	**Date of award of contract (in dd/mm/yy)**	**Date of Completion / Commissioning**	**Payment received (Rs. Crore)**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
……		……. Project 1					
……		…….					

……		…….					
	Total (Rs. Crore)						

Yours faithfully

……..
(Signature and name of the authorized signatory of the Company and stamp)

Name: ……..
Date: ……..
Place: ……..

……..
(Signature and Stamp of statutory Auditors of Bidding Company/ Lead Member of Consortium)
Name: ……..
Date: ……..
Place: ……..

Date: ……..

Notes:

1. Along with the above format, in a separate sheet, please provide details of computation of capital expenditure of projects duly certified by Statutory Auditor of the project company. In addition, the Statutory Auditor of the project company should also certify that the capital expenditure of projects commissioned or completed 7 days prior to Bid Deadline has been capitalized in the books of accounts.

   Additionally, in case construction experience is used, a certificate(s) from the statutory auditors stating the payments received and the concerned client(s) stating the works commissioned during the past 5 years in respect of the projects specified above. In case a particular job/ contract has been jointly executed by the Bidder (as part of a consortium), it should further support its claim for the share in work done for that particular job/ contract by producing a certificate from its statutory auditor or the client.

2. In case the accounts for the financial year in which the project claimed for meeting qualification requirement has been commissioned are not audited, the Bidder shall give declaration in this regard duly certified by its statutory auditor. In such a case, Bidder shall provide details of computation of capital expenditure of such project(s) duly certified by Statutory Auditor of the project company and the Statutory Auditor of the project company should also certify that the capital expenditure of projects commissioned or completed shall be capitalized in the books of accounts upon finalization.

3. The unconsolidated audited annual accounts of both the TEE and the Bidding Company / Lead Member for the respective financial years (financial years in which financial closure was achieved to the financial year in which the said project was completed / commissioned) should be submitted.

ANNEXURE 7C - FORMAT FOR TECHNICAL & FINANCIAL REQUIREMENT – RELATIONSHIP & DETAILS OF EQUITY SHAREHOLDING

[To be filled by Bidding Company / each Member of the Bidding Consortium including Lead Member if credentials of Parent and / or Affiliates have been used by them]

To,
PFC Consulting Limited
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Inter-State Transmission System for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G" through tariff based competitive bidding process

We certify that M/s. ……. (insert name of the **Bidding Company / Consortium Members**) have considered the technical and financial capability of its Parent and / or Affiliates, for the purpose of meeting Qualification Requirements as per the instructions provided in the RFP. The name of Parent and / or Affiliate, nature of relationship(s) with such Parent and / or Affiliate and details of equity holding are as follows:

Name of Company whose credentials considered	Type of credentials considered (technical and / or financial)	Relationship with Bidding Company / Consortium Member (Parent / Affiliate)	Details of equity shareholding (refer notes below)
Company 1			
…….			
…….			
…….			
…….			

NOTES:

i. In case of Parent, the equity holding of the Parent in the Bidding Company / Member of the Bidding Consortium, including the Lead Member of the Consortium, need to be specified.

ii. In case of Affiliate under direct control of Bidder, the equity holding of the Bidding Company / Member of the Bidding Consortium, including the Lead Member of the Consortium in the Affiliate, needs to be specified.

iii. In case of Affiliate under common control of Parent, the equity holding of the Parent in the Affiliate of the Bidding Company / Member of the Bidding Consortium, including the Lead Member of the Consortium, needs to be specified.

iv. Relationship of Parent / Affiliate with Bidding Company / Member of Consortium to be at the most seven (7) days prior to the Bid Deadline (as per Clause 2.1.4 of RFP)

Yours faithfully

……
(Signature and name of the authorized signatory of the Company and stamp)

Name: ……
Date: ……
Place: ……

……
(Signature and Stamp of statutory Auditors of Bidding Company / each Member of Bidding Consortium)

Name: ……..
Date: ……..
Place: ……..
Date: ……..

ANNEXURE 7D - ADDITIONAL INFORMATION FOR VERIFICATION OF FINANCIAL AND TECHNICAL CAPABILITIES OF BIDDERS.

……

(Name of Bidder (Bidding Company/ Bidding Consortium or Technically/Financially Evaluated Entity(ies))

(Note: In case of Consortium, details to be filled in by Lead Member for each Member of the Consortium including the Lead Member and in case of the qualification requirements of Technically / Financially Evaluated Entity(ies) being used, to be filled by each of such entity(ies)

i. Financial capability (Attachment 1):

1. Bidders shall attach unconsolidated / consolidated audited annual accounts, statements, as the case may be, (refer Clause 2.1.3) for the last three (3) financial years as Attachment 1. Such unconsolidated audited annual accounts shall include a Balance Sheet, Profit and Loss Account, Auditors Report and profit appropriation account.

ii. Technical capability (Attachment 2):

a. This attachment shall include details of projects completed/commissioned or partly completed projects for which commercial operation has commenced to be considered for the purpose of meeting Qualification Requirements.

1. To be used by Bidder using development experience in infrastructure sector

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Name(s) of project(s) from Infrastructure sectors					
Location(s) including country(s) where project was set up					
Nature of Project					
Voltage level (if any)					
Capital cost of project(s) Rs. in Crore					
*Status of the project					
% of equity owned in the project(s)					

***Note 1:** Date of completion/commissioning/commercial operation to be mentioned

Note 2: For each project listed in the table, the Bidder shall furnish an executive summary including the following information:

- Project model, i.e., BOO, BOOT, BOOM;

- Debt financing and equity raised and provided by Bidder/Bidder's Parent/Bidder's Affiliate for the project, including names of lenders and investors;
- Size and type of installation;
- Technical data/information on major equipment installed
- Description of role performed by the Bidder/Bidder's Parent/Bidder's Affiliate on the project
- Clearances taken by the Bidder/Bidder's Parent/Bidder's Affiliate including but limited to right-of-way (RoW), forest clearance and other statutory / Govt. clearances.
- Cost data (breakdown of major components)
- Name of EPC and/or other major contractor
- Construction time for the project
- Names, addresses and contact numbers of owners of the projects
- Operating reliability over the past five (5) years or since date of commercial operation
- Operating environmental compliance history
- Names of supervisory entities or consultant, if any
- Date of commercial operation
- Total duration of operation

2. To be used by Bidder using construction experience in infrastructure sector

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Name(s) of project(s) from Infrastructure sectors					
Location(s) including country(s) where project was set up					
Nature of Project					
Voltage level (if any)					
Revenue received Rs. in Crore					
*Status of the project					
% of equity owned in the project(s)					

***Note 1:** Date of completion/commissioning/commercial operation to be mentioned

Note 2: For each project listed in the table, the Bidder shall furnish an executive summary including the following information:

- Project model, i.e., EPC, Turnkey;
- Size and type of installation;
- Technical data/information on major equipment installed
- Description of role performed by the Bidder/Bidder's Parent/Bidder's Affiliate on the project
- Cost data (breakdown of major components)
- Name of sub-contractor
- Construction time for the project
- Names, addresses and contact numbers of owners of the projects

- Operating reliability over the past five (5) years or since date of commercial operation
- Operating environmental compliance history
- Names of supervisory entities or consultant, if any
- Date of commercial operation
- Total duration of operation

iii. Attachment-3:

a. For each project listed in Attachment 2 above, certificates of final acceptance and/or certificates of good operating performance duly issued by owners for the project and the same shall be certified as true by authorized signatory of the Bidding Company or the Lead Member of Consortium). In case the project listed in Attachment 2 is under BOOT / DBFOT mechanism, the certificates of final acceptance and/or certificates of good operating performance must be issued by the authority / independent engineer of the project as defined in the respective project agreement.

For and on behalf of Bidding Company/Consortium

M/s…….

…….
(Signature of authorized signatory)

Name: ……
Designation: ……
Date: ……
Place: ……

ANNEXURE 8 -UNDERTAKING AND DETAILS OF EQUITY INVESTMENT

Format 1: Bidders' Undertakings

[On the Letter Head of the Bidding Company/Lead Member of Bidding Consortium]

Date: .....

To,

PFC Consulting Limited
9thFloor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bidders' Undertakings in respect of Bid for selection of Bidder as TSP to establish Inter-State transmission system for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"

We hereby undertake on our own behalf and on behalf of the TSP, that if selected as the Successful Bidder for the Project:

1. The Project shall comply with all the relevant electricity laws, codes, regulations, standards and Prudent Utility Practices, environment laws and relevant technical, operational and safety standards, and we shall execute any agreements that may be required to be executed as per law in this regard.

2. We confirm that the Project shall also comply with the standards and codes as per Clause 1.6.1.2 of the RFP and the TSP shall comply with the provisions contained in the Central Electricity Regulatory Commission Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-state Transmission and related matters Open Access) Regulations, 2009.

3. We give our unconditional acceptance to the RFP dated **January 19, 2022** issued by the BPC and the RFP Project Documents, as amended, and undertake to ensure that the TSP shall execute all the RFP Project Documents, as per the provisions of this RFP.

4. We have submitted the Bid on the terms and conditions contained in the RFP and the RFP Project Documents. Further, the Financial Bid submitted by us is strictly as per the format provided in Annexure 21 of the RFP, without mentioning any deviations, conditions, assumptions or notes in the said Annexure.

5. Our Bid is valid up to the period required under Clause 2.8 of the RFP.

6. Our Bid has been duly signed by authorized signatory and stamped in the manner and to the extent indicated in this RFP and the power of attorney / Board resolution in requisite format as per RFP has been enclosed with this undertaking.

7. We have assumed that if we are selected as the Successful Bidder, the provisions of the Consortium Agreement, to the extent and only in relation to equity lock in and our liability thereof shall get modified to give effect to the provisions of Clause 2.5.8 of this RFP and Article 18.1 of the Transmission Service Agreement. ***(Note:*** *This is applicable only in case of a Bidding Consortium)*

8. We confirm that our Bid meets the Scheduled COD of each transmission Element and the Project as specified below:

S. No.	Name of the Transmission Element	Scheduled COD in months from Effective Date	Percentage of Quoted Transmission Charges recoverable on Scheduled COD of the Element of the Project	Element(s) which are pre-required for declaring the commercial operation (COD) of the respective Element
1.	Fatehgarh-3– Beawar 765 kV D/c (2^{nd}) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line	18 months	100%	All elements of scheme are required to be commissioned simultaneously as their utilization is dependent on commissioning of each other.
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3			

Note:

i. Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.

ii. Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors.

We agree that the payment of Transmission Charges for any Element irrespective of its successful commissioning on or before its Scheduled COD shall only be considered after the successful commissioning of Element(s) which are pre - required for declaring the commercial operation of such Element as mentioned in the above table.

Scheduled COD for the Project: 18 months from the Effective Date

9. We confirm that our Financial Bid conforms to all the conditions mentioned in this RFP, and in particular, we confirm that:

a. Financial Bid in the prescribed format of Annexure 21 has been submitted duly signed by the authorized signatory.

b. Financial Bid is unconditional.

c. Only one Financial Bid has been submitted.

10. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our Bid are true and accurate. In case this is found to be incorrect after our acquisition of **SPV [which is under incorporation]**, pursuant to our selection as Selected Bidder, we agree that the same would be treated as a TSP's Event of Default under Transmission Service Agreement, and relevant provisions of Transmission Service Agreement shall apply.

11. We confirm that there are no litigations or other disputes against us which materially affect our ability to fulfill our obligations with regard to the Project as per the terms of RFP Project Documents.

12. Power of attorney/ Board resolution as per Clause 2.5.2 is enclosed.

Signature and name of the authorized signatory of the Company and stamp of Bidding Company or Lead member of Consortium

Note:

1. In case of foreign Bidders, refer to clause 2.5.6 (p)

Format 2: Details of equity investment in Project

1.1.a Name of the Bidding Company/ Bidding Consortium:

1.1.b Name of the Lead Member in the case of a Bidding Consortium:

1.2 Investment details of the Bidding Company/Member of the Bidding Consortium investing in **SPV [which is under incorporation]** as per Clause 2.5.8.2.

S. No.	Name of the Bidding Company/ Member in case of a Bidding Consortium	Name of the Company investing in the equity of the _____[Name of SPV]	Relationship with Bidding Company /Member of the Bidding Consortium	% of equity participation in the _____[Name of SPV]
(1)	(2)	(3)	(4)	(5)
TOTAL				100%

* In case the Bidder proposes to invest through its Affiliate(s) / Parent Company / Ultimate Parent Company, the Bidder shall declare shareholding pattern of such Affiliate(s) / Parent Company / Ultimate Parent Company and provide documentary evidence to demonstrate relationship between the Bidder and the Affiliate(s) / Parent Company / Ultimate Parent Company. These documentary evidences could be, but not limited to, demat account statement(s) / Registrar of Companies' (ROC) certification / share registry book, etc duly certified by Company Secretary.

Members of the Consortium or the Bidding Company making investment in the equity of the _____[Name of SPV] themselves to fill in their own names in the column (3)

Signature and Name of authorized signatory in whose name power of attorney has been issued

Signature of authorized signatory

Name: …….

Designation: ……..

Date…….

Company rubber stamp

ANNEXURE 9 -AUTHORISATION FROM PARENT/ AFFILIATE OF BIDDING COMPANY/ MEMBER OF BIDDING CONSORTIUM WHOSE TECHNICAL/ FINANCIAL CAPABILITY HAS BEEN USED BY THE BIDDING COMPANY/ MEMBER OF BIDDING CONSORTIUM.

[On the Letter Head of the Parent /Affiliate]

Name: …….
Full Address: …….
Telephone No.: ……..
E-mail address: ……..
Fax / No.: ……

To

PFC Consulting Limited
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Authorization for use of Technical / Financial Capability of M/s……. (Insert name of Parent / Affiliate) by M/s …….. (Insert name of Bidding Company / Member of Bidding Consortium).

We refer to the RFP dated …….. ('RFP') issued by you for selection of Bidder as Transmission Service Provider for establishing the Inter-State Transmission System for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G**".

We confirm that M/s. ……. (Insert name of Bidding Company/ Consortium Member) has been authorized by us to use our technical and/or financial capability [strikeout whichever is not applicable] for meeting the Qualification Requirements for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"**.

We have carefully read and examined in detail the RFP including in particular, Clause 2.1.4 of the RFP, and we are also submitting legally binding undertaking supported by a board resolution that all the equity investment obligations of M/s…… (Insert Name of Bidding Company / Consortium Member), shall be deemed to be our equity investment obligations and in the event of any default the same shall be met by us.
For and on behalf of M/s……. (Insert Name of Parent / Affiliate)

……
(Signature and Name of the authorized signatory of the Company and stamp)

Name: ……
Date: ……
Place: ……

Notes:

1. The above undertaking can be furnished by Ultimate Parent of Technically Evaluated Entity or Financially Evaluated Entity, as the case maybe, if legally binding undertaking is also furnished by the Ultimate Parent on behalf of such Financially Evaluated Entity/Technically Evaluated Entity.

ANNEXURE 10- FORMAT OF UNDERTAKING BY TECHNICALLY / FINANCIALLY EVALUATED ENTITY / ULTIMATE PARENT COMPANY

[On the Letter Head of the Technically / Financially Evaluated Entity / Ultimate Parent Company]

Name: ……

Full Address: ……

Telephone No.: ……

E-mail address: ……

Fax/No.: ……..

To:

Chief Executive Officer
PFC Consulting Limited
9thFloor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Sub: **Undertaking for equity investment**

Dear Sir,

We refer to the Request for Proposal dated **January 19, 2022** ('RFP') issued by you regarding setting up of Inter-State transmission system for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G**" Project on build, own, operate and transfer basis.

We have carefully read and examined in detail the RFP and the RFP Project Documents, including in particular, Clause 2.1.4 of the RFP and Clauses 2.5.2 and 2.5.8 of the RFP, regarding submission of an undertaking regarding the investment in the equity share capital of **SPV [which is under incorporation]** and provisions for minimum equity holding and equity lock-in. We have also noted the amount of the equity investment required to be made in **SPV [which is under incorporation]** by the ……. [Insert the name of the Bidder or the Consortium Member] for the Project.

In view of the above, we hereby undertake to you and confirm that in the event of failure of ……[Insert the name of the Bidder or the Consortium Member] to invest in full or in part, in the equity share capital of **SPV [which is under incorporation]** as specified in the Bid, we shall invest the said amount not invested by……..[Insert the name of the Bidder or the Consortium Member] in **SPV [which is under incorporation]** by purchase of existing shares or subscribing to the new shares of **SPV [which is under incorporation]**, as stipulated by you.

We have attached hereto certified true copy of the Board resolution whereby the Board of Directors of our Company has approved issue of this Undertaking by the Company.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the RFP.

Certified as true.

……..

(Signature and Name of the authorized signatory of the Company and stamp)

Note:

1. Wherever required, extract of the charter documents and documents such as a Board resolution should be submitted for verification.

ANNEXURE 11 - FORMATS FOR BOARD RESOLUTIONS

Format 1

Format of the Board resolution for the Bidding Company / each Member of the Consortium / investing Affiliate / Parent Company / Ultimate Parent Company, where applicable

[Reference Clause 2.5.2 of the RFP and the illustrations in Annexure 11A]

[Note: The following resolution no.1 needs to be passed by the Boards of each of the entity/(ies) making equity investment]

The Board, after discussion, at the duly convened Meeting on …….. [Insert date], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956/2013, passed the following Resolution:

1. RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 / Companies Act 2013 (as the case may be) and compliance thereof and as permitted under the Memorandum and Articles of Association of the company, approval of the Board be and is hereby accorded for investment of…….% (……per cent) of the total equity share capital of **SPV [which is under incorporation]** representing the entire amount proposed to be invested by the company for the transmission system for "**Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"**, partly by acquisition of the existing equity shares from PFC Consulting Limited and / or partly by subscribing to the new equity shares, as per the terms of the RFP.

[Note: Equity investment obligations by the Bidding Company/each Member of the Bidding Consortium/investing Affiliate or Parent or Ultimate Parent should add up to 100%.]

[Note: In the event the Bidder is a Bidding Consortium, the following Board resolution no. 2 also needs to be passed by the Lead Member of the Bidding Consortium]

2. RESOLVED THAT approval of the Board be and is hereby accorded to contribute such further amount over and above the ;……. percentage (__%) limit to the extent becoming necessary towards the total equity share in the **SPV [which is under incorporation]**, obligatory on the part of the company pursuant to the terms and conditions contained in the Consortium Agreement dated ……executed by the company as per the provisions of the RFP.

[Note: In the event, the investing entity is an Affiliate or Parent or Ultimate Parent of the Bidder, the following Board resolution no. 3 shall also be passed by the Bidder]

3. FURTHER RESOLVED THAT the Board hereby acknowledges the Board Resolution(s) passed by the…….. [Name of the Affiliate(s)/ Parent / Ultimate Parent] regarding the investment of…….(….%) of the equity share capital requirements of **SPV [which is under incorporation]**, which is to be invested by the ……[Name of the Affiliate(s)/ Parent / Ultimate Parent] for the **SPV [which is under incorporation]**, partly by acquisition of the existing equity shares from PFC Consulting Limited and partly by subscribing to the new equity shares, as per the terms of the RFP.

[Note: The following resolution no. 4 is to be provided by the Bidding Company / Lead Member of the Consortium only]

4. FURTHER RESOLVED THAT MR/MS ……..be and is hereby authorized to take all the steps required to be taken by the Company for submission of the Bid, including in particular, signing of the Bid, making changes thereto and submitting amended Bid, all the documents related to the Bid, certified copy of this Board resolution or letter or undertakings etc, required to be submitted to BPC as part of the Bid or such other documents as may be necessary in this regard.

Certified True Copy

Company rubber stamp to be affixed

[Notes:

1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary or any Whole Time Director/ Manager (supported by a specific board resolution) of the Bidding Company or the Lead Member of Consortium.

2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution, i.e., the Bidding Company, each Member of the Bidding Consortium.

3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956 / Companies Act 2013 (as the case may be) may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.]

Format 2

Format for the Board resolution of Technically / Financially Evaluated Entity / Ultimate Parent Company (in case credentials of such TEE/ FEE has been utilized by the Bidding Company or Bidding Consortium)

The Board, after discussion, at the duly convened Meeting on …… [Insert date], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956 / 2013, passed the following Resolution:

RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 / Companies Act, 2013 (as the case may be) and compliance thereof and as permitted under the Memorandum and Articles of Association of the company, approval of the Board be and is hereby accorded for issuing an Undertaking to the BPC, in the format specified in the RFP issued by the BPC, draft of which is attached hereto and initialed by the Chairman whereby the company undertakes to invest …….percent (.... %) of the total equity share capital of **SPV [which is under incorporation]** representing the entire amount proposed to be invested by ……[insert the name of the Bidder or Member] for the said Project, in case of failure of ……[Insert the name of the Bidder or Member] to make such investment".

FURTHER RESOLVED THAT .....,be and is hereby authorized to take all the steps required to be taken by the Company, including in particular, signing the said Undertaking, submitting the same to the BPC through ……[Insert name of Bidding Company/Lead Member of the Consortium] of all the related documents, certified copy of this Board resolution or letter, undertakings etc, required to be submitted to BPC as part of the Bid or such other documents as may be necessary in this regard.

Certified True Copy

Company rubber stamp to be affixed

Note:

1. This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary or any Whole-time Director/Manager (supported by a specific board resolution) of Bidding Company or Lead Member of the Consortium.

2. The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.

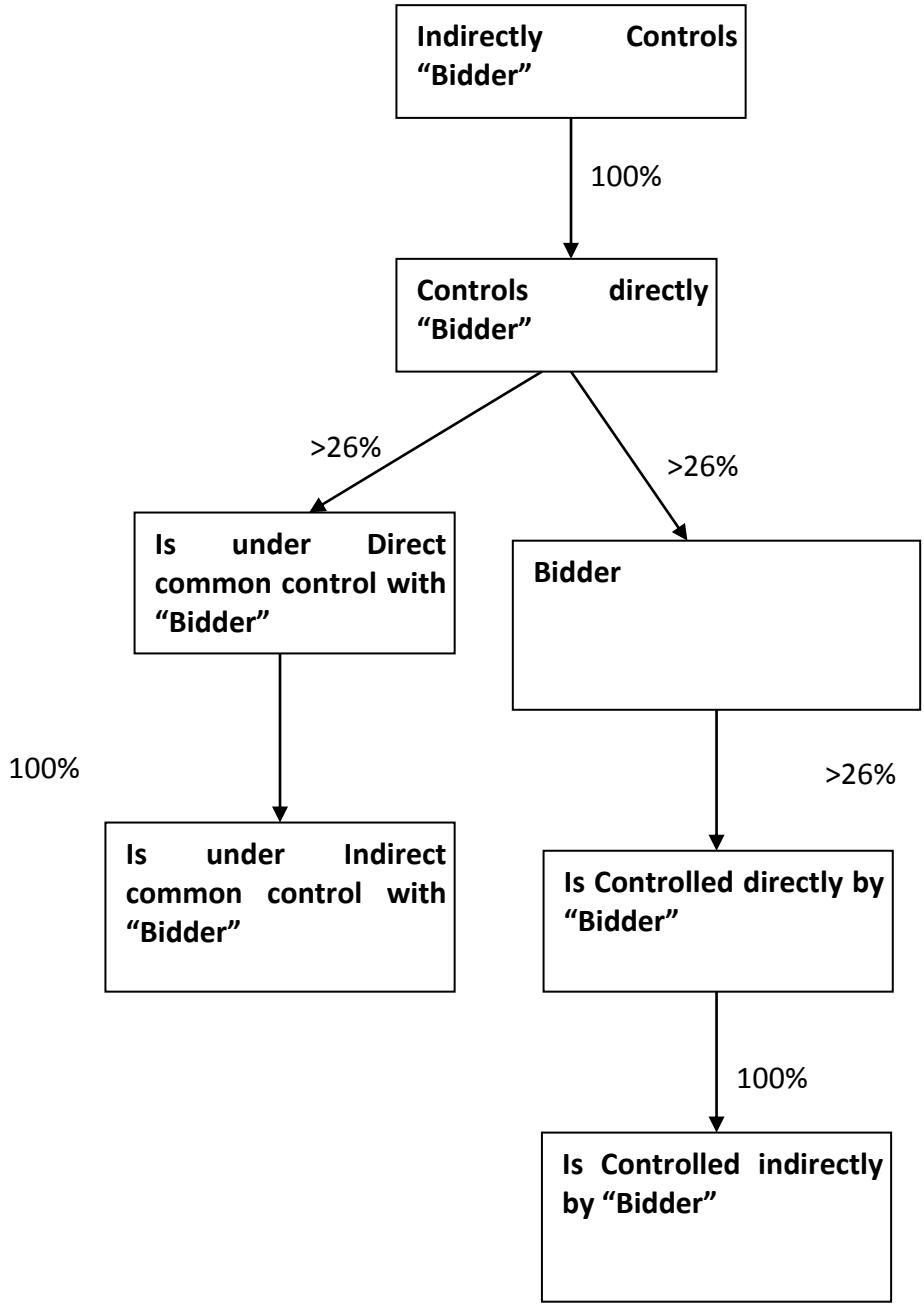
3. This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956 / Companies Act 2013 (as the case may be) may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.

ANNEXURE 11A – ILLUSTRATION FOR APPLICABLE BOARD RESOLUTION REQUIREMENTS UNDER CLAUSE 2.5.2

Investor in the TSP	Entities (other than Bidder) whose credentials (financial and/or technical) used by the Bidder for meeting RFP criteria	Applicable Board Resolutions	Requirement of Undertaking (Annexure 10)
Bidder himself for 100% equity	None	a) Format 1 of Annexure 11 - Resolution: 1, 2 and 4 from the Bidder	None
Bidder himself for 100% equity	Affiliate and/or Parent Company and/or Ultimate Parent	a) Format 1 of Annexure 11 - Resolution: 1, 2, and 4 from the Bidder b) Format 2 of Annexure 11 by either Technically/ Financially Evaluated Entity(ies) whose credentials have been used, or Ultimate Parent. Provided, if the Bidder himself is the Ultimate Parent, then Format 2 need not be provided.	Yes, by either Technically / Financially Evaluated Entity(ies) Affiliate(s) whose credentials have been used, or Ultimate Parent. Provided, if the Bidder himself is the Ultimate Parent, then the undertaking need not be provided.
Bidder himself + others (Affiliate and/or Parent Company and/or Ultimate Parent) in aggregate holding 100% equity	None	a) Format 1 of Annexure 11 - Resolution: 1,2, 3 and4 from the Bidder. b) Format 1 of Annexure 11 - Resolution: 1 from the Affiliate and /or Parent and /or Ultimate Parent	None

Investor in the TSP	Entities (other than Bidder) whose credentials (financial and/or technical) used by the Bidder for meeting RFP criteria	Applicable Board Resolutions	Requirement of Undertaking (Annexure 10)
		investing in the equity	
Bidder himself + others (Affiliate and/or Parent Company and/or Ultimate Parent) in Aggregate holding 100% equity	Affiliate and/or Parent Company and/or Ultimate Parent	a) Format 1 of Annexure 11 - Resolution: 1,2, 3 and 4 from the Bidder. b) Format 1 of Annexure 11 - Resolution: 1 from the Affiliate and/or Parent and/or Ultimate Parent investing in the equity c) Format 2 of Annexure 11 by either Parent / Affiliate(s) whose credentials have been used and /or Ultimate Parent investing in the equity	Yes, by either Parent/ Affiliate(s) whose credentials have been used, or Ultimate Parent

ANNEXURE 12 - FORMAT FOR ILLUSTRATION OF AFFILIATES



NOTE: **Bidder to provide the illustration, as applicable in their case, duly certified by the Company Secretary and supported by documentary evidence in this regard.**

ANNEXURE 13 - FORMAT FOR DISCLOSURE

[On the letter head of Bidding Company / Each Member in a Bidding Consortium]

Date: ……

DISCLOSURE

We hereby declare that the following companies with which we/ have direct or indirect relationship are also separately participating in this Bid process as per following details

S. No.	Name of the Company	Relationship
1.		
2.		
3.		

In case there is no such company please fill in the column "name of the company" as Nil.

Further we confirm that we don't have any Conflict of Interest with any other company participating in this bid process.

Certified as True

…….

(Signature)

Name: .....

Signature & Name of authorized signatory of the Company and Stamp

The above disclosure should be signed and certified as true by the authorized signatory of the Bidding Company or of the Member, in case of a Consortium).

ANNEXURE 14 - FORMAT OF THE BID BOND

FORMAT OF THE UNCONDITIONAL AND IRREVOCABLE BANK GUARANTEE FOR BID BOND

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

In consideration of the .....[Insert name of the Bidder] submitting the Bid inter alia for establishing the Inter-State transmission system for **SPV [which is under incorporation]** on build, own, operate and transfer basis, in response to the RFP dated January 19, 2022 issued by PFC Consulting Limited, and the Bid Process Coordinator (hereinafter referred to as BPC) agreeing to consider such Bid of …… [Insert the name of the Bidder] as per the terms of the RFP, the [Insert name and address of the bank issuing the Bid Bond, and address of the Head Office] (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to PFC Consulting Limited or its authorized representative at _____[Address of BPC] forthwith on demand in writing from PFC Consulting Limited or any representative authorized by it in this behalf, any amount up to and not exceeding Rupees_____ Only (Rs _____ Crore),on behalf of M/s…….[Insert name of the Bidder].

This guarantee shall be valid and binding on the Guarantor Bank up to and including …… [Date to be inserted on the basis of Clause 2.11 of this RFP] and shall not be terminable by notice or any change in the constitution of the Guarantor Bank or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between concerned parties.

Our liability under this Guarantee is restricted to Rupees _____ Only (Rs ____ Crore). Our Guarantee shall remain in force until ……..[Date to be inserted on the basis of Clause 2.11 of this RFP]. PFC Consulting Limited or its authorized representative shall be entitled to invoke this Guarantee until …… [Insert Date, which is three sixty five days (365) days after the date in the preceding sentence]. The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from PFC Consulting Limited or its authorized representative, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to PFC Consulting Limited or its authorized representative.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection, disputes, or disparities raised by the Bidder or any other person. The Guarantor Bank shall not require PFC Consulting Limited or its authorized representative to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against PFC Consulting Limited or its authorized representative in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly PFC Consulting Limited or its authorized representative shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder to enforce any security held by PFC Consulting Limited or its authorized representative or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rupees _____ Only (Rs ____ Crore) and it shall remain in force until …… [Date to be inserted on the basis of Clause 2.11 of RFP], with an additional claim period of three hundred sixty five (365) days thereafter. We are liable to pay the guaranteed amount or any part thereof under this BANK GUARANTEE only if PFC Consulting Limited or its authorized representative serves upon us a written claim or demand.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this…….. day of ..... at……

Witness:

1……. Signature: ……
Name and Address Name: …….

2. …….. Designation with Stamp:
Name and Address

Signature ……..

Attorney as per power of attorney
No……

For:
…… [Insert Name of the Bank]

Banker's Stamp and Full Address:

Dated this …… day of ……. 20……..

Notes:

The Stamp Paper should be in the name of the Executing Bank.

ANNEXURE 15 - FORMAT FOR CONTRACT PERFORMANCE GUARANTEE

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign entities submitting Bids are required to follow the applicable law in their country)

In consideration of the …… [Insert name of the SPV or Selected Bidder on behalf of SPV or Lead Member in case of the Consortium, with address] agreeing to undertake the obligations under the Transmission Service Agreement dated …… and the other RFP Project Documents and the Nodal Agency and PFC Consulting Limited, agreeing to execute the RFP Project Documents with the Selected Bidder, regarding setting up the Project, the……[Insert name and address of the bank issuing the guarantee and address of the head office] (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to the Nodal Agency at…… [Insert Place and Address of the Nodal Agency indicated in TSA] forthwith on demand in writing from the Nodal Agency or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees……Crores (Rs……..) only [Insert the amount of the bank guarantee] on behalf of M/s…… [Insert name of the Selected Bidder / SPV].

This guarantee shall be valid and binding on the Guarantor Bank up to and including ……and shall not be terminable by notice or any change in the constitution of the Bank or the term of the Transmission Service Agreement or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rupees ……. Crores (Rs……) only. Our Guarantee shall remain in force until…… [Insert the date of validity of the Guarantee as per Clause 2.12.1 of the RFP]. The Nodal Agency shall be entitled to invoke this Guarantee up to three hundred sixty five (365) days of the last date of the validity of this Guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from the Nodal Agency, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to the Nodal Agency.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by **SPV [which is under incorporation]**, …… [Insert name of the Selected Bidder], …… [Insert name of the TSP] and/or any other person. The Guarantor Bank shall not require the Nodal Agency to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Nodal Agency in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly the Nodal Agency shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against **SPV [which is under incorporation]** or the Selected Bidder, to make any claim against or any demand on **SPV [which is under incorporation]** or the Selected Bidder, as the case may be, or to give any notice to **SPV [which is under incorporation]** or the Selected Bidder, as the case may be, or to enforce any security held by the Nodal Agency or to exercise, levy or enforce any distress, diligence or other process against **SPV [which is under incorporation]** or the Selected Bidder, as the case may be.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to the Nodal Agency and may be assigned, in whole or in part, (whether absolutely or by way of security) by Nodal Agency to any entity to whom the Nodal Agency is entitled to assign its rights and obligations under the Transmission Service Agreement.

The Guarantor Bank hereby agrees and acknowledges that the Nodal Agency shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rupees ……..Crore (Rs ……..) only and it shall remain in force until [Date to be inserted on the basis of Article 3.1.2 of TSA], with an additional claim period of three hundred sixty five (365) days thereafter. This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by…… [Insert name of the Selected Bidder or Lead Member in case of the Consortium or SPV]. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if the Nodal Agency serves upon us a written claim or demand.

In witness where of:

Signature……

Name: ……

Power of attorney No.: ……..

For:

…… [Insert Name of the Bank]

Banker's Seal and Full Address, including mailing address of the Head Office

Notes:

1. The Stamp Paper should be in the name of the Executing Bank.

ANNEXURE 16 – FORMAT OF CHECKLIST FOR TECHNICAL BID SUBMISSION REQUIREMENTS

[This format needs to be duly filled in, signed by the authorized signatory of the Bidder (Bidding Company / Lead Member in case of a Bidding Consortium) and submitted along with the Bidder's Technical Bid]

Technical Bid Submission Requirements	Response (Yes / No)
1. Format for the Covering Letter on the letterhead of Bidding Company or Lead Member of the Consortium, as applicable; 2. Format for Letter of Consent from each Consortium Member, including Lead Member, on their respective letterheads; 3. Format for evidence of authorized signatory's authority ; 4. Board resolution from the Bidding Company / Lead Member of the Consortium in favour of the person executing the Power of Attorney as per **Annexure 3**; 5. Power of Attorney from each Consortium Member in favour of Lead Member to be provided by each of the other Members of the Consortium as per **Annexure 4**; 6. Board Resolution from each Member of the Consortium, other than the Lead Member, in favour of their respective authorized representatives for executing the POA, Consortium Agreement and signing of the requisite formats; 7. Format for Bidder's composition and ownership structure, along with status of equity holding (owning ten percent or more of the total paid up equity) not earlier than thirty (30) days prior to the Bid Deadline as per **Annexure 5**; 8. Consortium Agreement duly signed as per **Annexure 6**, along with Appendix-1, indicating the responsibilities and obligations of each Member of the Consortium; 9. Format for Qualification Requirement: a. Calculation sheets, detailing computation of Networth considered for meeting Qualifying Requirements, duly signed and stamped by the Statutory Auditor of the Bidding Company / each Member in case of a Bidding Consortium / FEE in cases where credentials of FEE is taken; b. Calculation sheets, detailing computation of capital expenditure of projects and revenue received in construction projects considered for meeting Qualification Requirements, duly signed and stamped by the Statutory Auditor of the Bidding Company / Lead Member in case of Bidding Consortium / TEE in cases where credentials of TEE is taken;	

Technical Bid Submission Requirements	Response (Yes / No)
c. Last financial year unconsolidated / consolidated audited annual accounts / statements, as the case may be, of the Financially Evaluated Entity / Technical Evaluated Entity d. Unconsolidated audited annual accounts of both the TEE and the Bidding Company/Lead member, as applicable, from the financial years in which financial closure was achieved till the financial year in which the said project was completed / commissioned. 10. Copy of the Memorandum and Articles of Association and certificate of incorporation or other organizational document (as applicable), including their amendments, certified by the Company Secretary of Bidding Company or each Member in case of a Consortium including Lead Member. 11. Attachment of **Annexure 7(D)**, detailing projects completed / commissioned and for which commercial operation has commenced including Executive Summary for each project. 12. For each project listed in the attachment above, certified true copy of the certificates of final acceptance and / or certificates of good operating performance duly issued by owners or clients for the project, duly signed by authorized signatory in support of technical capability as defined in Clause 2.1.2 of RFP. 13. Authority letter in favour of BPC from the Bidder/every Member of the Consortium authorizing the BPC to seek reference from their respective bankers & others. 14. Authorization from Parent / Affiliate of Bidding Company / Member of Bidding Consortium whose technical / financial capability has been used by the Bidding Company / Member of Bidding Consortium. 15. Initialing of all pages of Technical Bid by the Authorized Signatory in whose favour the POA (**Annexure 3**) has been executed. 16. Format for Illustration of Affiliates at the most seven (7) days prior to the Bid Deadline, duly certified by Company Secretary and supported by documentary evidence. 17. Certified copy of the Register of Members / Demat Account Statement, Share Certificate, Annual Return filed with ROC etc. submitted as documentary evidence along with **Annexure 12**. 18. Format for Disclosure by Bidding Company / each Member of the Consortium. 19. Format for Affidavit by the Bidding Company / each Member of the Consortium	

Technical Bid Submission Requirements	Response (Yes / No)
20. Format for Authorization submitted in Non-Judicial stamp paper duly notarized. 21. Bidders Undertaking and details of Equity Investment 22. Proof of Payment of RFP Fees 23. Bid Bond/Bid Security Declaration (As applicable) 24. Board Resolution as per Annexure 11 (If required)	

[**Note:** The checklist is not exhaustive. Bidders are required to submit all the information/documents as per requirement of RFP]

For and on behalf of Bidder

M/s. ……..

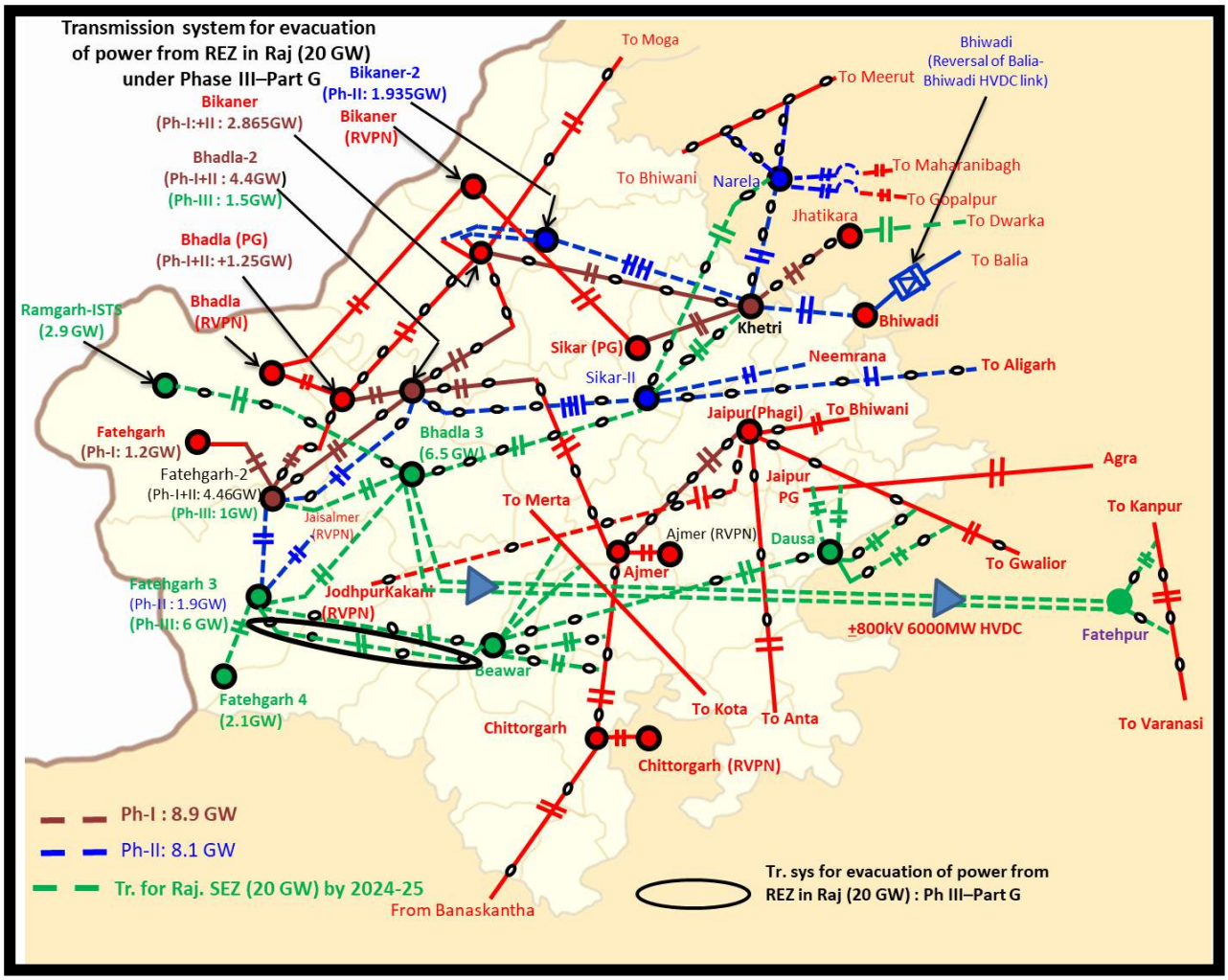
……..
(Signature of authorized signatory)

ANNEXURE 17 – LIST OF BANKS

The list of banks shall include all Scheduled Commercial Banks as per Second Schedule of RBI Act-1934 and any amendments thereof.

Note:
The above list of banks is indicative and can be modified by the BPC as required and any such change shall not be construed as a deviation from this document.

ANNEXURE 18 - GRID MAP OF THE PROJECT



ANNEXURE 19 - FORMAT FOR CLARIFICATIONS / AMENDMENTS ON THE RFP / RFP PROJECT DOCUMENTS

S. No.	Name of the Document	Clause No. and Existing provision	Clarification required	Suggested text for the amendment	Rationale for the Clarification or Amendment

Signature ……

Name……..

For

Bidder's Rubber Stamp and Full Address.

(Note: This format shall be used for submission of requests for clarifications/ amendments on the draft RFP Project Documents as per the provisions of Clause 2.3.1)

ANNEXURE 20 - LIST FOR RFP PROJECT DOCUMENTS

ENCLOSURE 1: TRANSMISSION SERVICE AGREEMENT (Provided separately)

ENCLOSURE 2: SHARE PURCHASE AGREEMENT (Provided Separately)

……..

ANNEXURE 21 - FORMAT FOR FINANCIAL BID

[To be uploaded online]

Quoted Transmission Charges …….

Notes

1. The Bidders are required to ensure compliance with the provisions of Clause 2.5.3 of this RFP.

2. Quotes to be in Rupees Millions and shall be up to two (2) decimal points.

3. The contents of this format shall be clearly typed.

4. The Financial Bid shall be digitally signed by the authorized signatory in whose name power of attorney as per Clause 2.5.2 is issued.

5. Ensure only one value for annual Transmission Charges is quoted. The same charge shall be payable every year to TSP for the term of TSA.

ANNEXURE 22 – FORMAT FOR AFFIDAVIT

[On non-judicial stamp paper. Foreign companies submitting bids are required to follow the applicable law in their country]

AFFIDAVIT

We [including any of our Affiliate and Consortium Member & any of its Affiliate], hereby declare that as on Bid Deadline:

a. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate, their directors or key personnel have not been barred or included in the blacklist by any government agency or authority in India, the government of the jurisdiction of the Bidder or Members where they are incorporated or the jurisdiction of their principal place of business, any international financial institution such as the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank etc. or the United Nations or any of its agencies; or

b. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate or their directors have not been convicted of any offence in India or abroad.

We further declare that following investigations are pending / no investigation is pending [strike off whichever is not applicable] against us [including any of our Consortium Member or Affiliate or Parent or Ultimate Parent or Affiliate] or CEO or any of our directors/ manager/key managerial personnel of the Applicant /Consortium Member or their Affiliates.

We further undertake to inform the BPC of any such matter as mentioned above on its occurrence after the date of this affidavit till the Effective Date.

We undertake that, in case, any information provided in relation to this affidavit is found incorrect at any time hereafter, our BID / Letter of Intent / contract (if entered) would stand rejected / recalled / terminated, as the case may be.

…….
Signature and Name of the authorized signatory of the Company Bidding Company / Lead Member of the Bidding Consortium

……..
(Signature of Notary Public)

Place: ……
Date: ……

Note: In case any investigation is pending against the Applicant, including any Consortium Member or Affiliate, or CEO or any of the directors/ manager/key managerial personnel of the Applicant /Consortium /Member or their Affiliates, full details of such investigation including the name of the investigating agency, the charge/offence for which the investigation has been launched, name and designation of persons against whom the investigation has been launched and other relevant information should be disclosed under this affidavit.

ANNEXURE A

Technical Details with respect to electronic bidding

Registration Methodology

In order to submit online bids in the e-bidding process for selection of Transmission Service Provider, interested Bidders are required to register themselves with the e-procurement website of MSTC Limited namely www.mstcecommerce.com/eprochome/tsp/index.jsp. To register with the website, the Bidder is required to fill up the online form available under the link Register as Vendor in the above website and fill up the same and click on Submit.

During this process, the Bidder shall create his user id and password and keep note of the same. The Bidder shall ensure that the secrecy of his user id and password is maintained at all time and he/she shall alone be responsible for any misuse of the user id and password.

The Bidder may check the details entered by it before final submission. On successful submission of the online registration Form, the Bidder shall receive a confirmation mail in the registered email address advising the Bidder to submit the following documents.

i. Self attested Income Tax PAN Card. In case of a registered Company or Firm, the Firm's PAN card and in case of a proprietorship firm, proprietor's personal PAN card is required. In case of partnership firm, PAN of the firm and that of the authorized partner are to be submitted.

ii. Copy of the confirmation email Letter received from MSTC after successful completion of on-line registration.

iii. A non-refundable registration fee of Rs.10,000/- plus GST as per applicable rate to be paid online. The account details will be available in the System generated email sent by MSTC post registration.

Please provide details of payment made like UTR No, remitting bank name, date of payment and amount in the covering letter.

The Bidder shall have to submit all the above documents to MSTC Limited for verification and activation of their login ids. The Bidders should send scanned copies of the above documents to the designated email id only which is given below.

tsp@mstcindia.co.in

It may be noted that Bidders need not visit any of the offices of MSTC Limited for submission of the documents.

Contact persons of MSTC Limited:

Mr. Chirag Sindhu
9830336290

Mr. Setu Dutt Sharma
7878055855

Once the complete set of documents and requisite registration fee are received from a Bidder, MSTC shall activate the Bidder's login after verification / scrutiny of the documents. MSTC Limited reserves the right to call for additional documents from the Bidder if needed and the Bidder shall be obliged to submit the same.

On completion of the above stated registration process, a Bidder shall be able to login to MSTC's website.

ANNEXURE B

Draft Pre-Award Integrity Pact

GENERAL

This pre-bid contract Agreement (herein after called the Integrity Pact) is made on …….. day of the month of ……. 20……, between, on one hand, …….. [Insert name of BPC] through Shri …….. [Insert Name & designation of representative of BPC] (hereinafter called the "Bid Process Coordinator/ BPC", which expression shall mean and include, unless the context otherwise requires, his successors in the office and assigns) of the First Part and M/s …… represented by Shri …….. [Insert Name & Designation of Authorized Signatory of the Bidder/ Lead Member of Consortium] (hereinafter called the "Bidder" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BPC is conducting the bidding process for selection of bidder as Transmission Service Provider (TSP), who will be responsible to set up the transmission project on build, own, operate and transfer (BOOT) basis and to provide Transmission Service.

WHEREAS the Bidder is a Private Company/Public Company/Government Undertaking/ Partnership, constituted in accordance with the relevant law in the matter and the BPC is a Public Sector Undertaking (PSU) performing its function on behalf of the Ministry of Power, Government of India.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings during the complete bidding process with a view to:-

Enabling the BPC to select the bidder as TSP in conformity with the defined procedures by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling Bidder to abstain from bribing or indulging in any corrupt practice in order to emerge as selected bidder by providing assurance to them that their competitors will also abstain from bribing and other practices and the BPC will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Commitments of BPC

1.1 The BPC undertakes that no official of the BPC, connected directly or indirectly with the bidding process, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the bidding process in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

1.2 The BPC will, during the bidding stage, treat all bidders alike, and will provide to all bidders the same information and will not provide any such information to any particular bidder which could afford an advantage to that particular bidder in comparison to the other bidders.

1.3 All the officials of the BPC will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the BPC with the full and verifiable facts and the same is *prima facie* found to be correct by the BPC, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BPC and such a person shall be debarred from further dealings related to the bidding process. In such a case while an enquiry is being conducted by the BPC the proceedings under the bidding process would not be stalled.

Commitments of Bidder

3. The Bidder commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre award stage in order to emerge as Selected Bidder or in furtherance to secure it and in particular commits itself to the following:-

3.1 The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BPC, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the bidding process in exchange for any

advantage in the bidding, evaluation, contracting and implementation of the bidding process.

3.2 The Bidder further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BPC or otherwise in bidding process or for bearing to do or having done any act in relation to bidding process or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the bidding process or any other contract with the Government.

3.3 The Bidder shall disclose the name and address of agents and representatives and Indian Bidder shall disclose their foreign principals or associates.

3.4 The Bidder shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid .

3.5 The Bidder further confirms and declares to the BPC that the Bidder has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BPC or any of its functionaries, whether officially or unofficially for selection of Bidder as TSP, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

3.6 The Bidder, either while presenting the bid or during pre-award negotiations or before signing the Share Purchase Agreement, shall disclose any payments he has made, is committed to or intends to make to officials of the BPC or their family members, agents, brokers or any other intermediaries in connection with the bidding process and the details of services agreed upon for such payments.

3.7 The Bidder will not collude with other parties interested in the bidding process to impair the transparency, fairness and progress of the bidding process.

3.8 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.9 The Bidder shall not use improperly, for purpose of competition or personal gain, or pass on to others, any information provided by the BPC as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

3.10 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.11 The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.12 The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BPC.

4. Previous Transgression

4.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify Bidder's exclusion from the bidding process.

4.2 sseThe Bidder agrees that if it makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. Bid Bond (Security Deposit)

5.1 Along with the technical bid, the Bidder shall submit Bid Bond for an amount of **Rs. 28 Crore (Rupees Twenty Eight Crore Only)** issued by …… [Insert Name of the Banks from the list provided in RFP Document] as Earnest Money/Security Deposit, with the BPC.

5.2 The Earnest Money/Security Deposit shall be valid & retained by the BPC for such period as specified in the RFP Document.

5.3 No interest shall be payable by the BPC to the Bidder on Earnest Money/Security Deposit for the period of its currency.

6. Sanctions for Violations

6.1 Any breach of the aforesaid provisions by the Bidder or any one employed by it or acting on its behalf (whether with or without the knowledge of the Bidder) shall entitle the BPC to take all or anyone of the following actions, wherever required:-

(i) To immediately call off the pre-award negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings

with the other Bidder (s) would continue.

(ii) The Bid Bond (in pre-award stage) shall stand forfeited either fully or partially, as decided by the BPC and the BPC shall not be required to assign any reason therefore.

(iii) To immediately cancel the award, if already awarded, without giving any compensation to the Bidder.

(iv) To cancel all or any other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the BPC resulting from such cancellation/rescission.

(v) To debar the Bidder from participation in any tender or RFP issued by any BPC for an indefinite period.

(vi) To recover all sums paid in violation of this Pact by Bidder to any middleman or agent or broker with a view to securing the award.

6.2 The BPC will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (vi) of this Pact also on the Commission by the Bidder or anyone employed by it or acting on its behalf (whether with or without the knowledge of the Bidder), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the BPC to the effect that a breach of the provisions of this Pact has been committed by the Bidder shall be final and conclusive on the Bidder. However, the Bidder can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7. Independent Monitors

7.1 The BPC has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors to be given).

7.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

7.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

7.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

7.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BPC.

7.6 The Bidder accepts that the Monitors has the right to access without restriction to all Project documentation of the BPC including that provided by the Bidder. The Monitor shall be under contractual obligation to treat the information and documents of the Bidder /Subcontractors(s) with confidentially. [As all the bid documents are with BPC only]

7.7 The BPC will provide to the Monitors sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the monitor the option to participate in such meetings.

7.8 The Monitor will submit a written report to the designated Authority of the BPC/Secretary in the Department within 8 to 10 weeks from the date of reference or intimation to him by the BPC / Bidder and, should the occasion arise, submit proposals for correcting problematic situations.

8. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BPC or its agencies shall be entitled to examine all the documents including the Books of Accounts of the Bidder and the Bidder shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

9. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BPC.

10. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the any extent law in force relating to any civil or criminal proceedings.

11. Validity

11.1 The validity of this Integrity Pact shall be from date of its signing and upto 6 months

from the date of transfer of project specific SPV i.e. signing of Share Purchase Agreement with BPC. In case Bidder is unsuccessful, this Integrity Pact shall expire after 15 days from the date of transfer of project specific SPV to successful bidder.

11.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

12. The Parties hereby sign this Integrity Pact at on _____

Bid Process Coordinator (BPC)	**BIDDER**
Name of the Officer Designation Name of the BPC with address Witness: 1._____ 2. _____	Name of Whole time Director/Authorized Signatory Name of the Bidder with address Witness: 1._____

ANNEXURE-C

Technical Specifications of Transmission System

SPECIFIC TECHNICAL REQUIREMENTS FOR TRANSMISSION LINE

A.1.0 The design, routing and construction of transmission lines shall be in accordance with Chapter V, Part-A of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, as amended from time to time.

A.2.0 Selection of tower type shall be made as per CEA Regulations, however in case lattice type towers are used, the following shall also be applicable:

A.2.1 Steel section of grade E 250 and/or grade E 350 as per IS 2062, only are permitted for use in towers, extensions, gantry structures and stub setting templates. For towers in snowbound areas, steel sections shall conform to Grade-C of IS-2062.

A.2.2 Towers shall be designed as per IS-802:2015, however the drag coefficient of the tower shall be as follows:-

Solidity Ratio	Drag Coefficient
Upto 0.05	3.6
0.1	3.4
0.2	2.9
0.3	2.5
0.4	2.2
0.5 and above	2.0

A.3.0 Transmission Service Provider (TSP) shall adopt any additional loading/design criteria for ensuring reliability of the line, if so desired and /or deemed necessary.

A.4.0 Transmission line shall be designed considering wind zones as specified in wind map given in National Building Code 2016, Vol.1. The developer shall also make his own assessment of local wind conditions and frequent occurrences of high intensity winds (HIW) due to thunderstorms, dust-storms, downburst etc. along the line route and wherever required, higher wind zone than that given in wind map shall be considered for tower design for ensuring reliability of line. Further, for transmission line sections passing within a distance of 50 km from the boundary of two wind zones, higher of the two wind zones shall be considered for design of towers located in such sections.

A.5.0 A) For power line crossing of 400 kV or above voltage level if crossed over the existing line) large angle & dead end towers (i.e. D/DD/QD) shall be used on either side of power line crossing.

B) For power line crossing of 132 kV and 220 kV voltage level, angle towers (B/C/D/DB/DC/DD/ QB/QC/QD) shall be used on either side of power line crossing

depending upon the merit of the prevailing site condition and line deviation requirement.

C) For power line crossing of 66 kV and below voltage level, suspension/tension towers shall be provided on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.

D) For crossing of railways, national highways and state highways, the rules/Regulations of appropriate authorities shall be followed.

A.6.0 The relevant conductor configuration shall be as follows: -

Type of conductor: ACSR / AAAC / AL59

Basic parameters:

Transmission line	**ACSR Conductor specified**	**Equivalent AAAC conductor based on 53.5% conductivity of Al Alloy**	**Equivalent minimum size of AL59 conductor based on 59% conductivity of AL Alloy***	**Sub-conductor Spacing**
765kV D/C (Hexa Zebra) transmission lines	Zebra: Stranding 54/3.18 mm-Al + 7/3.18 mm-Steel, 28.62 mm diameter 428 sq. mm, Aluminium area, Maximum DC Resistance at 20°C (Ω/km): 0.06868 Minimum UTS: 130.32 kN	Stranding details: 61/3.19mm, 28.71 mm diameter; 487.5 sq.mm Aluminium alloy area Maximum DC Resistance at 20°C (Ω/km) : 0.06815 Minimum UTS: 135.6 kN	Stranding details: 61/3.08mm, 27.72 mm diameter; 454 sq.mm Aluminium alloy area Maximum DC Resistance at 20°C (Ω/km) : 0.0653 Minimum UTS: 108 kN	457 mm

Note:

1. **To Select any size above the minimum, the sizes mentioned in the Indian standard IS-398(part-6) shall be followed.*
2. *The transmission lines shall have to be designed for a maximum operating conductor temperature of 85 deg C*

A.7.0 The required phase to phase spacing and horizontal spacing for 765kV line shall be governed by the tower design as well as minimum live metal clearances for 765kV voltage level under different insulator swing angles. However, the phase to phase spacing for 765kV line shall not be less than 15 m.

A.8.0 All electrical clearances including minimum live metal clearance, ground clearance and minimum mid span separation between earth wire and conductor shall be as per Central Electricity Authority (Measures Relating to Safety & Electric Supply) Regulations as amended from time to time and IS:5613. Since these clearances for 765kV are not included in CEA Regulation/ Indian Standard, following values shall be considered:

a) Minimum live metal clearances for 765 kV line:

(i) Under stationary conditions

From tower body: For 765 kV D/C: 6.1 m
For 765 kV S/C: 5.6 m

(ii) Under swing conditions

Wind pressure Condition	Minimum electrical clearance
a) Swing angle (25º)	4.4 mtrs
b) Swing angle (55º)	1.3 mtrs

b) Minimum ground clearance: 18 m

c) Minimum mid span separation between earthwire and conductor: 9.0 m

A.9.0 Shielding angle shall not exceed 10 deg for 765kV D/C Line transmission line.

A.10.0 The Fault current for design of line shall be 50kA for 1 sec for 765kV.

A.11.0 In case of 765kV voltage class lines, at least one out of two earth wires shall be OPGW and second earth wire, if not OPGW, shall be either of galvanized standard steel (GSS) or AACSR or any other suitable conductor type depending upon span length and other technical consideration.

A.12.0 Each tower shall be earthed such that tower footing impedance does not exceed 10 ohms. Pipe type or Counterpoise type earthing shall be provided in accordance with relevant IS. Additional earthing shall be provided on every 7 to 8 kms distance at tension tower for direct earthing of both shield wires. If site condition demands, multiple earthing or use of earthing enhancement compound shall be used.

A.13.0 Pile type foundation shall be used for towers located in river or creek bed or on bank of river having scourable strata or in areas where river flow or change in river course is anticipated, based on detailed soil investigation and previous years' maximum flood discharge of the river, maximum velocity of water, highest flood level, scour depth &

anticipated change in course of river based on river morphology data of at least past 20 years to ensure availability and reliability of the transmission line.

A.14.0 Transmission line route shall be finalized, in consultation with appropriate authorities so as to avoid the habitant zones of endangered species and other protected species. Bird diverters, wherever required, shall be provided on the line.

A.15.0 The raised chimney foundation is to be provided in areas prone to flooding/water stagnation like paddy field /agricultural field & undulated areas to avoid direct contact of water with steel part of tower. The top of the chimney of foundation should be at least above HFL (High Flood Level) or the historical water stagnation/ logging level (based on locally available data) or above High Tide Level or 500 mm above Natural Ground level (whichever is higher).

SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION

The proposed augmentation of **Fatehgarh-3 (AIS) substation** and **Beawar (AIS) substation** shall be generally conforming to the requirements of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, as amended from time to time.

B.1.0 Salient features of Substation Equipment and Facilities

The design and specification of substation equipment are to be governed by the following factors:

B.1.1 Insulation Coordination

The system design parameters for substations/switchyards shall be as given below:

Sl No	Description of parameters	Extn. of 765kV Fatehgarh-3 s/s	Extn. of 765kV Beawar s/s
		765 kV System	**765 kV System**
1.	System operating voltage	765kV	765kV
2.	Maximum voltage of the system (rms)	800kV	800kV
3.	Rated frequency	50Hz	50Hz
4.	No. of phase	3	3
5.	Rated Insulation levels		
i)	Lighting Impulse withstand voltage for (1.2/50 micro sec.) Transformer and Reactors for Equipment other than Transformer and Reactors for Insulator String	2100kVp 2100kVp	2100kVp 2100kVp
ii)	Switching impulse withstand voltage (250/2500 micro sec.) dry and wet	1550kVp	1550kVp
iii)	One minute power frequency dry withstand voltage (rms)	830kV	830kV
6.	Corona extinction voltage	508 kV	508 kV
7.	Max. radio interference voltage for frequency between 0.5 MHz and 2 MHz	2500 micro-volts at 508 kV rms	2500 micro-volts at 508 kV rms
8.	Minimum creepage distance for insulator string/ longrod insulators/ outdoor bushings	24800 mm (31mm/kV)	24800 mm (31mm/kV)

Sl No	Description of parameters	Extn. of 765kV Fatehgarh-3 s/s	Extn. of 765kV Beawar s/s
		765 kV System	**765 kV System**
9.	Minimum creepage distance for switchyard equipment	20000 mm (25 mm/kV)	20000 mm (25 mm/kV)
10.	Max. fault current	50 kA	50kA
11.	Duration of fault	1 sec	1 Sec

B.1.2 Switching Scheme

The switching schemes, as mentioned below, shall be adopted at various voltage levels of substation/switchyard:

Substation	765kV side
765kV Fatehgarh-3 S/s Extn	One & half breaker
765kV Beawar S/s Extn.	One & half breaker

Notes: -

(i) At 765kV voltage level, each circuit of a double circuit transmission line shall be terminated in different diameters.

(ii) Two transformers of same HV rating shall not be connected in the same diameter and similarly, two bus reactors of same HV rating shall also not be connected in the same diameter.

B.2.0 Substation Equipment and facilities:

The switchgear shall be designed and specified to withstand operating conditions and duty requirements. All equipment shall be designed considering the following capacity.

Sl. No	Description of bay	765kV Fatehgarh-3 S/s Extn	765kV Beawar S/s Extn.
		765kV	765kV
1.	Bus Bar	4000A	4000A
2.	Line bay	3150A	3150A
3.	Line Reactor Bay	3150A	3150A

B.2.1 Shunt Reactor

110 MVAR, 765/√3 kV, 1-Phase Reactor (including arrangement for 3-phase bank formation of 330 MVAR) shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above)" as amended up to date available on CEA website.

Neutral Grounding Reactor (NGR) and Surge Arrester for 765 kV Line Reactors (as applicable)

The neutral of the line reactors (wherever provided) shall be grounded through adequately rated Neutral Grounding Reactors (NGR) to facilitate single phase auto-reclosure, provided that the NGR shall be provided with bypass arrangement through a breaker so that the line reactor can be used as Bus reactor as and when required. The neutral of bus reactor shall be solidly grounded. The resistive value of NGR for each circuit at both ends of 765kV D/c Fatehgarh-3– Beawar S/s shall be 450 ohms.

NGR shall be oil filled or dry type air core for outdoor application. NGR shall conform to CEA's "Standard specifications and technical parameters of transformers and reactors (66kV and above)". Technical parameters of NGR shall be as specified in Annexure-A of abovementioned document.

The surge arresters (rated voltage of arrester in co-ordination with ohmic value of NGR shall be decided by the TSP) shall be provided & physically located between the neutral of shunt reactor (brought out at 145kV class bushing) and neutral grounding reactor. The surge arresters shall be of heavy duty station class gapless Metal oxide (ZnO) type conforming in general to IEC-60099-4. Arresters shall be hermetically sealed units, of self-supporting construction, suitable for mounting on structures.

B.2.3 765kV Substation equipment (AIS)

B.2.3.1 Circuit Breakers (AIS)

The circuit breakers and accessories shall conform with IEC: 62271-100, IEC: 62271-1 and shall be of SF6 Type. The circuit breakers shall be of class C2-M2 (as per IEC) with regard to restrike probability during capacitive current breaking and mechanical endurance. The rated break time shall not exceed 40 ms for 765kV circuit breakers. 765kV Circuit breakers shall be provided with single phase and three phase auto reclosing. The Circuit breakers controlling 765kV lines shall be provided either with pre-insertion closing resistor of about 450 ohms maximum with 9 ms minimum insertion time or with Controlled Switching Device. The short line fault capacity shall be same as the rated capacity and this is proposed to be achieved without use of opening resistors. Control switching device shall be provided in Circuit Breaker of switchable line reactor bay and in Main & Tie bay circuit breakers of line with non-switchable line reactors, Bus reactors and 765/400kV Transformers.

B.2.3.2 Isolators (AIS)

The isolators shall comply with IEC 62271-102 in general. 765kV Isolator design shall be double break or vertical break or knee-type. All Isolators and earth switches shall be motor operated. Earth switches shall be provided at various locations to facilitate maintenance. Isolator rated for 765kV shall be of extended mechanical endurance class-M2 and suitable for bus transfer current switching duty as per IEC-62271-102. Main blades and earth blades shall be interlocked and interlock shall be fail safe type. 765kV earth switch for line isolator shall be suitable for induced current switching duty as defined for Class-B.

B.2.3.3 Current Transformers (AIS)

Current Transformers shall comply with IEC 61869 in general. All ratios shall be obtained by secondary taps only. Generally, Current Transformers (CT) for 765kV shall have six cores (four for protection and two for metering). The burden and knee point voltage shall be in accordance with the requirements of the system including possible feeds for telemetry. Accuracy class for protection core shall be PX and for metering core it shall be 0.2S. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system (not more than 20VA for metering core) for better sensitivity and accuracy. The instrument security factor shall be less than 10 for CTs of 765 kV voltage class.

B.2.3.4 Capacitor Voltage Transformers (AIS)

Capacitive Voltage transformers shall comply with IEC 61869 in general. These shall have three secondaries out of which two shall be used for protection and one for metering. Accuracy class for protection cores shall be 3P and for metering core it shall be 0.2. The Capacitive voltage transformers on lines shall be suitable for Carrier Coupling. The Capacitance of CVT for 765kV shall be 8800 pF. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system (not more than 50VA for metering core) for better sensitivity and accuracy.

B.2.3.5 Surge Arresters (AIS)

624kV Station High (SH) duty gapless type Surge arresters with thermal energy (Wth) of minimum 13 kJ/kV conforming to IEC 60099-4 in general shall be provided for 765kV system. Other characteristics of Surge arrester shall be chosen in accordance with system requirements. Surge arresters shall be provided near line entrances, transformers & Reactor so as to achieve proper insulation coordination. Surge Arresters

shall be provided with porcelain/ polymer housing fitted with pressure relief devices. A leakage current monitor with surge counter shall be provided with each surge arrester.

B.2.4 Protection Relaying & Control System

The protective relaying system proposed to be provided for transmission lines, auto-transformers, reactors and bus bars to minimize the damage to the equipment in the events of faults and abnormal conditions, is dealt in this section. All main protective relays shall be numerical type with IEC 61850 communication interface and should have interoperability during integration of numerical relays to communicate over IEC61850 protocol with RTU/SAS/IEDs of different OEMs. All numerical relays shall have built in disturbance recording feature.

The protection circuits and relays of transformer and reactor shall be electrically and physically segregated into two groups each being independent and capable of providing uninterrupted protection even in the event of one of the protection groups failing, to obtain redundancy, and to take protection systems out for maintenance while the equipment remains in service.

a) Transmission Lines Protection

765kV lines shall have Main-I numerical three zone distance protection scheme with carrier aided inter-tripping feature. 765kV lines shall also have Main-II numerical distance protection scheme like Main-I but from different make that of Main-I. The Main-I and Main-II protection relays of same make may be provided only if they are of different hardware & manufacturing platform or different principle of operation.

However, Line Current Differential relay (with back up distance protection feature) as Main–I and Main-II shall be considered at both ends for short lines (line length below 30kM) having Fibre Optic communication link. Differential relay at remote end shall be provided by the TSP. Associated power & control cabling and integration with SAS at remote end shall be provided by respective bay owner.

Further, all 765kV lines shall be provided with single and three phase auto-reclosing facility to allow reclosing of circuit breakers in case of transient faults. These lines shall also be provided with distance to fault locators to identify the location of fault on transmission lines.

All 765kV lines shall also be provided with two stages over voltage protection. Over voltage protection & distance to fault locator may be provided as in-built feature of Main-I & Main-II protection relays. Auto reclose as built in function of Bay Control Unit (BCU) is also acceptable.

The Main-I and Main-II protection relays shall be fed from separate DC sources and shall be mounted in separate panels.

For 765kV transmission lines, directional IDMT earth fault relay should be provided as standalone unit or in-built feature of Main-I and Main -II feature.

b) 765kV Reactor Protection

Reactor shall be provided with the following protections:

i) Numerical Differential protection.
ii) Numerical Restricted earth fault protection
iii) Numerical Back-up impedance protection

Besides these, reactors shall also be provided with Buchholz relay, MOG with low oil level alarm, protection against oil and winding temperatures & pressure relief device, etc.

c) Bus bar Protection

The high speed low impedance type bus bar differential protection, which is essential to minimize the damage and maintain system stability at the time of bus bar faults, shall be provided for 765kV buses. Duplicated bus bar protection is envisaged for 765kV bus-bar protection. Bus bar protection scheme shall be such that it operates selectively for each bus and incorporate necessary features required for ensuring security. The scheme shall have complete bus bar protection for present as well as future bays envisaged i.e. input / output modules for future bays shall also be provided.

In case, the bus section is provided, then each side of bus section shall have separate set of bus bar protection schemes.

For existing substations, the existing bus bar protection shall be augmented as per requirement.

d) Local Breaker Back up Protection

This shall be provided for each 765kV circuit breakers and will be connected to de-energize the affected stuck breaker from both sides.

Notes:

1. LBB & REF relays shall be provided separately from transformer differential relay.

2. LBB relay may also be provided as built-in protection function of distributed bus bar protection scheme; however, in such case separate LBB relay shall be provided for tie bays (in case of One and Half breaker scheme).
3. Over fluxing & overload protection can be provided as built-in feature of differential relay.
4. In 765kV switchyard, if spare bay of half diameter is identified as future, Tie CB relay panel shall be with Auto-reclosure feature.

B.2.5 Substation Automation System

a) For all the new substations, state of art Substation Automation System (SAS) conforming to IEC-61850 shall be provided. The distributed architecture shall be used for Substation Automation system, where the controls shall be provided through Bay control units. The Bay control unit is to be provided bay wise for voltage level 220kV and above. All bay control units as well as protection units are normally connected through an Optical fibre high speed network. The control and monitoring of circuit breaker, dis-connector, re-setting of relays etc. can be done from Human Machine Interface (HMI) from the control room.

The functions of control, annunciation, disturbance recording, event logging and measurement of electrical parameters shall be integrated in Substation Automation System.

At new substations, the Substation Automation System (SAS) shall be suitable for operation and monitoring of the complete substation including proposed future bays/elements.

In existing substations with Substation automation system (SAS), augmentation of existing SAS shall be done for bays under present scope.

In existing Substations where Substation automation is not provided, control functions shall be done through control panels.

Necessary gateway & modems (as required) shall be provided to send data to RLDC/SLDC as per their requirement. Any augmentation work at RLDC/SLDC is excluded from TSP's scope. However, all the configuration work at substation end required to send data to RLDC/SLDC shall be in the scope of TSP.

b) Time synchronisation equipment

Time synchronization equipment complete in all respect including antenna, cable, processing equipment required to receive time signal through GPS or from National Physical Laboratory (NPL) through INSAT shall be provided at new substations. This equipment shall be used to synchronize SAS & IEDs etc.

B.3.0 Substation Support facilities

Certain facilities required for operation & maintenance of substations as described below shall be provided at new substation. In existing substation, these facilities have already been provided and would be extended/ augmented as per requirement.

B.3.1 AC & DC power supplies

For catering the requirements of three phase & single phase AC supply and DC supply for various substation equipment, existing facilities shall be augmented as required.

B.3.2 Fire Fighting System

Fire-fighting system for substation including transformer & reactor shall conform to CEA (Measures Relating to Safety & Electric Supply) Regulations.

Further, adequate water hydrants and portable fire extinguishers shall be provided in the substations. The main header of firefighting system shall be suitable for extension to bays covered under the future scope; necessary piping interface in this regard shall be provided.

At existing substations, the fire-fighting systems as available shall be extended to meet the additional requirements.

B.3.3 Oil evacuating, filtering, testing & filling apparatus

To monitor the quality of oil for satisfactory performance of transformers, shunt reactors and for periodical maintenance necessary oil evacuating, filtering, testing and filling apparatus would be provided at new substations. Oil storage tanks of adequate capacities for storage of transformer oil would be provided.

B.3.4 Illumination

Normal & emergency AC & DC illumination shall be provided adequately in the switchyard panel room & other buildings of the substation. The switchyard shall also be provided with adequate illumination.

Lighting of the entire switchyard panel room building and other building (if any) and switchyard shall be done by LED based low power consumption luminaries.

B.3.5 Control Room

For new substation, substation control room shall be provided to house substation work stations for station level control (SAS) alongwith its peripheral and recording equipment, AC & DC distribution boards, DC batteries & associated battery chargers, Fire Protection panels, Telecommunication panels & other panels as per requirements. Air conditioning shall be provided in the building as functional requirements. Main cable trenches from the control room shall have adequate space provision for laying of cables from control room for all the future bays also.

At existing substations, the adequacy of size of control room shall be ascertained and the same shall be augmented as per requirement.

B.3.7 Control Concept

All the EHV circuit breakers in substation/switching stations shall be controlled and synchronized from the switchyard control room/remote control center. Each breaker would have two sets of trip circuits which would be connected to separate DC supplies for greater reliability. All the isolators shall have control from remote/local whereas the earth switches shall have local control only.

B.3.8 Visual monitoring system (VMS) for watch and ward of substation premises:

Visual monitoring system for effective watch and ward of substation premises shall cover all the transformers and reactors, all other major AIS Equipment (such as CB, isolators, CT, CVT, SA etc. as applicable), GIS bays, panel room, all the gates of switchyard and all entry and exit points of control room building and accordingly the location of cameras shall be decided. The camera shall be high definition color CCD camera with night vision feature. The VMS data partly/completely shall be recorded (minimum for 15 days) at least @25fps (or better) and stored on network video recorder. The system shall use video signals from various cameras installed at different locations, process them for viewing on workstations/monitors in the control room and simultaneously record all the cameras.

Mouse/keyboard controllers shall be used for pan, tilt, zoom and other functions of the desired camera. The Visual Monitoring System shall have provision of WAN connectivity for remote monitoring.

All camera recordings shall have Camera ID & location/area of recording as well as date/time stamp. The equipment should generally conform to Electromagnetic compatibility requirement for outdoor equipment in EHV substation.

At existing substations, the visual monitoring system if available shall be augmented as per existing or better specification as required.

B.4.0 General Facilities

a) Line Gantry/Towers are envisaged for bays under present scope only. However, for adjacent future line bay, tower shall be designed for extension (considering Quad conductors for 765kV & 400kV future lines and Twin conductor for 220 kV future lines) wherever applicable.

b) Bay extension works at existing substation shall be executed by TSP in accordance with the requirement/provisions mentioned above. However, interface points shall be considered keeping in view the existing design/arrangement at the substation.

c) TSP has to arrange for construction power and water on its own.

d) All outdoor steel structures including anchor/foundation bolts shall be fully galvanized. The weight of the zinc coating shall be at least 610 gm/sq.m and 900 gm/sq.m for coastal/ creek regions (if applicable).

e) In 765kV switchyard, if spare bay of half diameter is identified as future, all the equipment for Tie & Future bay shall be designed considering the current rating of line bay i.e. 3150A.

B.5.0 EXTENSION OF EXISTING SUBSTATION

The following drawings/details of existing substation is attached with the RFP documents for further engineering by the bidder.

Sl. No.	Drawing Title	Drawing No./Details	Rev. No.
A.	**765kV Fatehgarh-3 s/s**		
1.0	Single Line Diagram	Yet to be finalized by the developer.	
2.0	General Arrangement		
3.0	Earthmat Layout		
4.0	Visual Monitoring System		
5.0	Bus Bar Protection		

Sl. No.	Drawing Title	Drawing No./Details	Rev. No.
	(765kV System)		
6.0	Substation Automation System (SAS)		
B.	**765kV Beawar s/s**		
1.0	Single Line Diagram	Developer yet to be finalized by BPC. Drawings shall be provided to TSP later once these drawings are finalized by the developer of 765kV Beawar s/s.	
2.0	General Arrangement		
3.0	Earthmat Layout		
4.0	Visual Monitoring System		
5.0	Bus Bar Protection (765kV System)		
6.0	Substation Automation System (SAS)		

Bidder is also advised to visit the substation sites and acquaint themselves with the topography, infrastructure such as requirement of roads, cable trench, drainage etc. and also the design philosophy.

SPECIFIC TECHNICAL REQUIREMENTS FOR COMMUNICATION

The communication requirement shall be in accordance to CEA (Technical Standards for Communication System in Power System Operations) Regulations, 2020, CERC (Communication System for inter-State transmission of electricity) Regulations, 2017, and CEA (Cyber Security in Power Sector) Guidelines, 2021, all above documents as amended from time to time. The Protections for transmission line and the line compensating equipment shall have hundred percent back up communication channels i.e. two channels for tele- protection in addition to one channel for speech plus data for each direction.

In order to meet the requirement for grid management and operation of substations, Transmission Service Provider (TSP) shall provide following requirements:

C.1.0 Fatehgarh-3 – Beawar 765kV D/c (2nd) line:

On Fatehgarh-3 – Beawar 765kV D/c (2nd) line, TSP shall supply, install & commission One (1) no. OPGW cable containing 24 Fibres (24F) on one E/W peak and conventional earth wire on other E/W peak.

The TSP shall install this OPGW from gantry of Fatehgarh-3 up to the gantry of Beawar S/s with all associated hardware including Vibration Dampers, mid-way & gantry Joint Boxes (called **OPGW Hardware** hereafter) and finally terminate in Joint Boxes at ends Substations. The transmission line length is 380 kms (approx.) where requirement of **repeater/s** is envisaged. TSP shall finalize the location of repeater station depending upon the actual site conditions. Further TSP shall comply to the requirements mentioned as per **Appendix-A**.

Maintenance of OPGW Cable & OPGW Hardware shall be responsibility of TSP.

C.2.0 2 no. of 765 kV line bays at Fatehgarh-3 for Fatehgarh-3 – Beawar 765kV D/c (2nd) line:

(i) TSP shall supply, install & commission **1 no. FODP (96 F)** alongwith panel and required Approach Cable (24F) with all associated hardware fittings from gantry tower to Bay Kiosk and from the Bay Kiosk to Control room.

(ii) TSP shall supply, install & commission One STM-16 (FOTE) equipment alongwith panel/s supporting **minimum three (3) directions** with MSP (Multiplex Section Protection – 1+1) with necessary interfaces to meet the voice and data communication requirement between Fatehgarh-3 & Beawar S/s. The suitable DC Power Supply and backup to be provided for communication equipment.

(iii) FOTE/FODP panel shall be installed in the new Bay Kiosk (Switchyard Panel Room (SPR)). The FOTE under present scope shall be integrated by TSP with the existing FOTE at control room of **Fatehgarh-3** which is communicating / to be communicated with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing FOTE/FODP panels in control room for integration with the existing FOTE for onwards data transmission.

In case spare optical direction is not available in the existing FOTE at the control room, the TSP shall coordinate with station owner to reconfigure the directions in existing FOTE at control room. Alternatively, the TSP may integrate the FOTE under the present scope with FOTE in the nearby Kiosk connected to the control room (if available with spare direction). For this purpose, TSP shall provide necessary FODP sub rack / Splice trays/ Patch cords etc. and suitable optical interfaces/ equipment in the existing FOTE/FODP panels in another Kiosk (SPR).

(iv) FOTE & FODP can be accommodated in same panel to optimize space.

(v) The new communication equipment under the present scope shall be compatible for integration with existing regional level centralized NMS. The local configuration of the new communication equipment shall be the responsibility of TSP. The configuration work in the existing centralized NMS for integration of new Communication equipment shall be done by Regional ULDC Team, however all the necessary support in this regard shall be ensured by TSP.

(vi) TSP shall supply, install & commission required no. of Phasor Measurement Units (PMUs) for all 400kV and above voltage line bays (under the scope of this project) at Fatehgarh-3 s/s and PMUs shall support latest IEEE C-37.118 protocols. These PMUs shall be provided with GPS clock and LAN switch and shall connect with LAN switch of control room with Fibre Optic cable. These PMUs shall be integrated with the existing PDC (Phasor Data Concentrator) located at respective RLDC. Configuration work in existing PDC at RLDC for new PMU integration is not in scope of TSP (shall be done by respective RLDC), however all the necessary support in this regard shall be ensured by TSP. TSP shall provide separate WAMS (PMU, switches etc.) required for extended bays at **Fatehgarh-3 s/s**.

(vii) The maintenance of all the communication equipment including FOTE, FODP, approach cable, repeaters, PMUs, DCPS alongwith Battery Bank shall be the responsibility of TSP.

C.3.0 2 no. of 765 kV line bays at Beawar for Fatehgarh-3 – Beawar 765kV D/c (2nd) line

(i) TSP shall supply, install & commission 1 no. FODP (96 F) alongwith panel and required Approach Cable (24F) with all associated hardware fittings from gantry tower to Bay Kiosk and from the Bay Kiosk to Control room.

(ii) TSP shall supply, install & commission One STM-16 (FOTE) equipment alongwith panel/s supporting minimum three (3) directions with MSP (Multiplex Section Protection – 1+1) with necessary interfaces to meet the voice and data communication requirement between Fatehgarh-3 & Beawar S/s. The suitable DC Power Supply and backup to be provided for communication equipment.

(iii) FOTE/FODP panel shall be installed in the new Bay Kiosk (Switchyard Panel Room (SPR)). The FOTE under present scope shall be integrated by TSP with the existing FOTE at control room of Beawar which is communicating / to be communicated with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing FOTE/FODP panels in control room for integration with the existing FOTE for onwards data transmission.

In case spare optical direction is not available in the existing FOTE at the control room, the TSP shall coordinate with station owner to reconfigure the directions in existing FOTE at control room. Alternatively, the TSP may integrate the FOTE under the present scope with FOTE in the nearby Kiosk connected to the control room (if available with spare direction). For this purpose, TSP shall provide necessary FODP sub rack / Splice trays/ Patch cords etc. and suitable optical interfaces/ equipment in the existing FOTE/FODP panels in another Kiosk (SPR).

(iv) FOTE & FODP can be accommodated in same panel to optimize space.

(v) The new communication equipment under the present scope shall be compatible for integration with existing regional level centralized NMS. The local configuration of the new communication equipment shall be the responsibility of TSP. The configuration work in the existing centralized NMS for integration of new Communication equipment shall be done by Regional ULDC Team, however all the necessary support in this regard shall be ensured by TSP.

(vi) TSP shall supply, install & commission required no. of Phasor Measurement Units (PMUs) for all 400kV and above voltage line bays (under the scope of this project) at Beawar s/s and PMUs shall support latest IEEE C-37.118 protocols. These PMUs

shall be provided with GPS clock and LAN switch and shall connect with LAN switch of control room with Fibre Optic cable. These PMUs shall be integrated with the existing PDC (Phasor Data Concentrator) located at respective RLDC. Configuration work in existing PDC at RLDC for new PMU integration is not in scope of TSP (shall be done by respective RLDC), however all the necessary support in this regard shall be ensured by TSP. TSP shall provide separate WAMS (PMU, switches etc.) required for extended bays at **Beawar s/s**.

(vii) The maintenance of all the communication equipment including FOTE, FODP, approach cable, repeaters, PMUs, DCPS alongwith Battery Bank shall be the responsibility of TSP.

C.4.0 PLCC& PABX:

Power line carrier communication (PLCC) equipment complete for tele-protection commands and data channels shall be provided on each transmission line. The PLCC equipment shall in brief include the following: -

- Coupling device, line traps, carrier terminals, protection couplers, HF cables, PABX (if applicable) and maintenance and testing instruments.
- At new substation, a telephone exchange (PABX) of 24 lines shall be provided at as means of effective communication among various buildings of the substation, remote end substations and with control centres (RLDC/SLDC) etc.
- Coupling devices shall be suitable for phase to phase coupling for 400kV Transmission lines. The pass band of coupling devices shall have sufficient margin for adding communication channel in future if required. Necessary protection devices for safety of personnel and low voltage part against power frequency voltages and transient over voltage shall also be provided.
- The line traps shall be broad band tuned suitable for blocking the complete range of carrier frequencies. Line Trap shall have necessary protective devices such as lightning arresters for the protection of tuning device. Decoupling network consisting of line traps and coupling capacitors may also be required at certain substation in case of extreme frequency congestion.
- The carrier terminals shall be of single side-band (SSB) amplitude modulation (AM) type and shall have 4 kHz band width. PLCC Carrier terminals and Protection couplers shall be considered for both ends of the line.
- PLCC equipment for all the transmission lines covered under the scheme (consisting of one set of analog PLCC channel along with circuit protection coupler and one set of Digital protection coupler for both ends) shall be provided by TSP. CVT & Wave trap for all the line bays under present scope shall be provided by TSP.V

- All other associated equipment like cabling, coupling device and HF cable shall also be provided by the TSP.
- 2 sets of 48 V battery banks for PLCC/ communication equipment shall be provided at each new Substation with at least 10 hour battery backup and extended backup, if required.

Annexure-A

Repeater Requirements

- If the repeater location is finalized in the Control Room of a nearby substation, TSP shall provide 1 no. OPGW (48F) on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and 1 no. Approach Cable (48F) with all associated hardware fittings, to establish connectivity between crossing point of main transmission line up to the repeater equipment in substation control room.
  TSP shall co-ordinate for Space & DC power supply sharing for repeater equipment.TSP shall provide FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link.

OR

- If the repeater location is finalized in the nearby substation premises, the TSP shall identify the Space for repeater shelter in consultation with station owner. Further TSP shall provide 1 no. OPGW (48F) on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and 1 no. Approach Cable (48F) / UGFO (48F) with all associated hardware fittings, to establish connectivity between crossing point of main transmission line up to the substation where the repeater shelter is to be housed.
  TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link, reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems.

OR

- If the repeater location is finalized on land near the transmission tower. TSP shall make the provisions for Land at nearby tower for repeater shelter. Further TSP shall provide 1 no. Approach Cable (48F) / UGFO (48F) with all associated hardware fittings to establish connectivity up to the location of repeater shelter.
  TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link, reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems

Maintenance of OPGW Cable and **OPGW Hardware**, repeater equipment & items associated with repeater shelter shall be responsibility of TSP.

Note: Existing Station owner/s to provide necessary support to integrate different equipment & applications of new extended bays with the existing substation e.g. Communication (through FOTE), PMUs, Voice etc. for smooth operation and monitoring of new added grid elements.

400kV shall be replaced with 765kV in the **Figure-A.1**

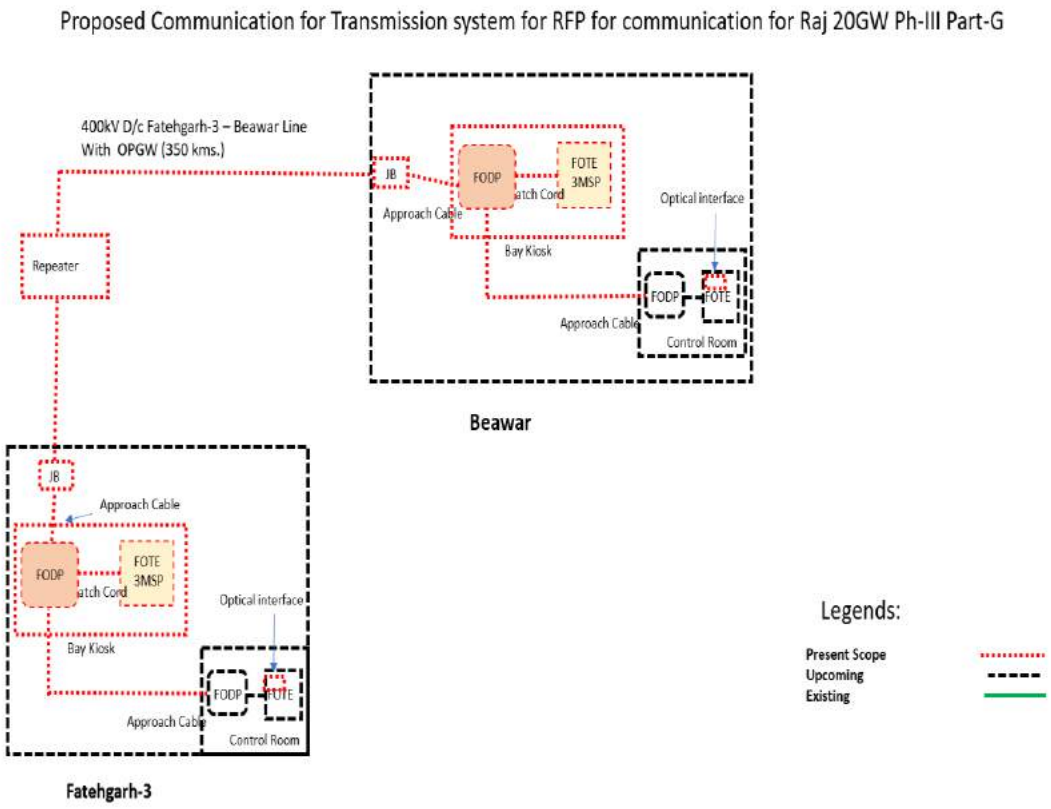


Figure-A.1

Frequently Asked Queries:

1.0 Transmission Line:

1.1 Please clarify that whether shutdowns for crossing of existing transmission lines of POWERGRID/STUs/ Power Evacuation Lines from Generation Plants/ Any other Transmission Licensee will be given to TSP on chargeable basis or free of cost.

Reply: Shutdowns for crossing of existing transmission lines of POWERGRID/ STUs/ Power Evacuation Lines from Generation Plants/ Any other Transmission Licensee will be given to TSP by the concerned owner of the lines as per their own terms & conditions.

1.2 We understand that the suggested swing angle criteria are applicable for Suspension Insulator in Suspension Tower. Further, you are requested to provide similar swing angle and clearance criteria for Pilot Insulator with Jumper & Jumper.

Reply: It is clarified that the swing angle criteria (as mentioned in RFP) for transmission lines is applicable for Suspension Insulator in Suspension Tower. Further, as per Clause 3.0 of Specific Technical Requirements for transmission lines, Transmission service Provider (TSP) shall adopt any additional loading/design criteria for ensuring reliability of the line, if so desired and /or deemed necessary.

1.3 We request you to kindly allow that use of diamond configuration at Power line crossings and the existing owner of the lines may be directed to allow the same for the successful bidders.

Reply: Power line crossing including Diamond configuration is responsibility of the TSP. TSP shall formally submit the profile of the crossing section to the owner of the existing line suggesting proposed crossing alternatives. The crossing will have to be carried out as per approval of owner of the existing line.

1.4 It is requested you to kindly provide present status of Forest Clearances if any transmission line corridor area falling in wildlife forest / reserve forest/ mangroves.

Reply: Based on the preliminary route survey, the process of initiation of forest clearance for the forest stretches, if any, enroute the proposed line alignment will be initiated by way of writing letters to the concerned authority (ies). However, it may be noted that it will be the responsibility of TSP for obtaining forest clearance for the forest stretches as provided in the survey report and also for any forest area encountered during detailed survey.

2.0 Substation

2.1 We understand that space for storage of O&M spare shall be provided by existing owner within the station boundary without any cost. Kindly confirm.

Reply: Space for storage of O&M spares shall be arranged by TSP on its own.

2.2 We presume that the O&M for the end Termination bays will be in the scope of the TSP and TSP shall not be liable for any payment towards O&M to the existing owner of the substation. Kindly confirm.

Reply: Operation and maintenance of the bays is solely responsibility of the TSP.

2.3 With reference to subject scheme of existing sub-station, we assumed following scope of work:

(a) We assumed internal road is available and need not to consider in the present scope of work.
(b) Drainage is available and need not to consider in the present scope of work.
(c) Cable trench extension in adjacent to Main cable trench only under present scope of work.
(d) Levelled area being provided by developer for bay extension.

Reply: Regarding requirement of internal road, drainage, cable trench, leveling of the bay extension area, bidder is advised to visit site and acquaint themselves with the provisions/facilities available at substation.

2.4 Kindly provide the soil investigation report of soil parameters of existing substation.

Reply: Bidder is advised to visit the substation site and ascertain the requisite parameters.

2.5 Kindly confirm, energy accounting of aux. power consumption. Whether it will be on chargeable basis or part of transmission loss.

Reply: It will be on chargeable basis.

2.6 We understand that VMS requirement is for unmanned stations only. For Manned stations VMS is not compulsory.

Reply: VMS shall be provided by TSP in line with requirements of RfP document.

2.7 It is understood that Construction water and power shall be provided free of cost to TSP by respective substation owner for construction of new bays.

Reply: Arrangement of construction power & water is in the scope of TSP.

2.8 It is understood that existing fire hydrant system shall be extended by the TSP for bay

extension.

Reply: Existing fire hydrant system shall be extended from existing system (if required)

2.9 Please clarify that Status of land acquisition for Substations. Whether the lands have been acquired by BPC and will be transferred to TSP.

Reply: The acquisition of land for substation is in the scope of TSP.

2.10 We understood that no any dedicated metering CT & CVT required for Line/feeders. Further, we understood that requisite Energy meters for various 765kV, 400kV & 220kV Feeders shall be provided & installed by CTU free of cost to TSP.

Reply: Dedicated metering CT and CVT are not required for line/feeders. Metering core of existing CT/CVT can be used provided accuracy class is matching with metering requirement. Requisite Special Energy Meters shall be provided and installed by CTU in C&P panel subject to space availability, else, in separate metering panel (to be provided by TSP at its cost).

3.0 Communication

3.1 What is the usage of OPGW, FOTE, PMU etc. under communication requirement of RFP?

Reply: User shall be responsible for providing compatible equipment along with appropriate interface for uninterrupted communication with the concerned control center and shall be responsible for successful integration with the communication system provided by CTU.

Communication systems comprising OPGW, FOTE, PMU etc. are required for grid operation through RLDC/SLDC, speech communication, tele-protection and tele-metering.

3.2 Is space for installation of communication panels are provided to TSP in existing Substations incase new bays are in the scope of TSP?

Reply: The space related issues are deliberated in the RFP itself. TSP to carry out survey of the existing substation for physical space requirement. In case space is not available in the existing substation then TSP shall accommodate the same in the respective bay SPR (Switchyard Panel Room)/Bay Kiosk/ Relay panel room in case of GIS s/s. Further, TSP to connect and integrate the proposed FOTE with the existing FOTE in the control room.

In Case 132kV Substation TSP shall accommodate the said panels either by extension of existing control room or other arrangements.

3.3 How is the OPGW laying done in case of LILO lines?

Reply: In case LILO lines are on same towers (e.g. both Line in and Line Out portion are on same towers, generally done LILO of S/C lines), then 2x24F OPGW shall be required to install by TSP on both earthwire peak on 400kV & 765kV lines where two E/W peaks are available. On 220 & 132kV lines where only one E/W peak is available TSP to install one no. 48F OPGW.

In case LILO lines are on different towers (e.g. both Line In and Line Out portion are on different towers, generally done LILO of D/C lines), then 1x24F OPGW shall be required to install by TSP on one earthwire peak, on both Line In and Line Out portions of 400kV & 765kV lines. On 220 &132kV lines where only one E/W peak is available TSP to install one no. 24F OPGW in place of conventional earthwire.

3.4 How is the OPGW laying done in case Multi circuit Towers?

Reply: In case two different lines are using common multi circuit portion for some distance (originating from different stations, may be terminating on same or on different stations), two no. 24F OPGW to be installed on both E/W peaks for common M/C portion of 765kV & 400kV lines.

In case 220/132kV lines using multi circuit portion where single E/W peak is available one no. 48F may be installed for common multi circuit portion.

PFC CONSULTING LTD.

पीएफसी कंसल्टिंग लिमिटेड
(पावर फाइनेंस कॉर्पोरेशन लिमिटेड की पूर्णतःस्वामित्वा[illegible] कंपनी)
PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN : U74140DL2008GOI175858

Ref. No. 04/21-22/ITP-50/RfP **May 10, 2022**

To,
Mr. N K Panda
M/s Sterlite Grid 19 Limited
9th Floor, Block B
Sector 20, Udyog Vihar, Phase 3,
DLF Cyber Park Gurugram – 122001

E-mail: Sterlite.bd@sterlitepower.com

Subject: Independent Transmission Project "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G" – Regarding Clarifications and Amendment No. 1 to RfP documents

Dear Sir,

This has reference to the issuance of RfP documents on 19.01.2022 for the subject transmission project with the last date of submission of bids originally scheduled on 25.03.2022 which has been extended till 25.05.2022.

The queries raised by the bidders on RFP documents have been examined and clarifications are enclosed herewith at **Annexure-I** for your information and further necessary action please.

Further, the Amendment No. 1 to the RFP documents is enclosed at **Annexure-II** for your information and necessary action.

Thanking you,

Yours faithfully,

(Sanjay Nayak)
General Manager

Encl.: As above

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
1.	**RFP** "Final Offer" shall mean the Quoted Transmission Charges, required to be submitted as part of the Financial Bid on the electronic bidding platform during the e-reverse bidding stage. In case, no Final Offer is received during the e-reverse bidding stage then the lowest "Initial Offer" shall be deemed to be the Final Offer;	Presently, details of L-1 bidder are not displayed on conclusion of e-RA if there is no receipt of counterbids. In case, two bidders have quoted the same L1, they would be under false impression of having L1 tariff of their own and may not offer further competitive offer. In such scenario, e-RA shall end resulting in premature conclusion of e-RA process. It is requested to update the e-RA platform accordingly to reflect the status of L1 bidder under the above scenario. For transparency of the competitive price discovery through eRA	The e-RA will be conducted as per SBDs and the details of the successful bidder will be intimated only after conclusion of e-Reverse Auction (e-RA) process. In e-RA, two bidders cannot have same price bid as every bid has to be necessarily less than the previous bid. In case of Initial Offer as bids are encrypted, two bidders may quote the same initial price offer. But in e-RA even if a single bid is received, two bidders cannot be at the same price offer. If the Initial Offer for two or more bidders is same and no bids are quoted in e-RA, the instant case seems to be hypothetical however in such case the decision of the competent authority shall prevail.
2.	**RFP** 1.2 Scope of the project The following is mentioned in the table below: i. Developer of Fategarh-3 S/s **to provide** space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors. ii. Developer of Beawar S/s **to provide** space for 2 nos. of 765	The phrase should be ***shall provide*** instead of **to *provide.*** 1.2. Scope of the project i. Developer of Fategarh-3 S/s **shall provide** space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors. ii. Developer of Beawar S/s **shall provide** space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors	As per RFP document, it is clear that space for 765kV line bays along with switchable line reactors shall be provided by developers of Fatehgarh-3 & Beawar S/s.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	kV line bays at Beawar S/s along with space for 765kV switchable line reactors		
3.	**RFP document** **Clause 1.5** ….The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to CTU or its successors or an agency as decided by the Central Government after 35 years from COD of project at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which CTU shall be entitled to take over the project assets Suo moto.	Treatment of tax application at the end of the life of assets. As per section 50C of Income tax act, in case sale consideration received or claimed to be received by seller on sale of land or building or both is less than value adopted by stamp valuation authority (SVA), such value adopted by SVA would become actual sale consideration received or accruing to the seller. Therefore, capital gain would be Valuation as per stamp valuation authority reduced by cost/indexed cost of acquisition. Treatment of Capital tax and applicable TDS to be clarified.	The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to CTUIL or its successors or an agency as decided by the Central Government after 35 years from COD of project at zero cost and free from any encumbrance and liability. Any taxes, stamp duties and liabilities, as may be applicable, has to be borne by the TSP.
4.	**RFP document** **Clause 1.5** ….The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to CTU or its successors or an agency as decided by the	1. Modality of transfer of assets to be defined. In case only assets to be transfered then application of stamp duty & other taxes and its treatment to be clarified.	The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to CTUIL or its successors or an agency as decided by the Central Government after 35 years from COD of project at zero cost and free from any encumbrance and liability. Any taxes, stamp duties and liabilities, as may be

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Central Government after 35 years from COD of project at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which CTU shall be entitled to take over the project assets Suo moto.		applicable have to be borne by the TSP.
5.	**RFP document** **Clause 1.5** ….The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to an agency as decided by the Government of Madhya Pradesh after 35 years from COD of project at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which Government of Madhya Pradesh shall be entitled to take over the project assets Suo moto.	Modalities for O&M, other expenditure etc. for the transition period of 90 days may be confirmed. 2. Availability calculation for the said period?	The transfer of all project assets along with substation land, right of way and clearances shall be completed at the end of 35 years from COD of the Project. All the expenditure till the transfer of all project assets along with substation land, right of way and clearances shall be borne by TSP
6.	**RFP** 1.6.2.1 (2) To obtain approval for laying of	It is the responsibility of the BPC to provide approval for laying of overhead transmission lines under section 68 of Electricity Act.	The prior approval under Section 68 shall be shared with the successful bidder.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	overhead transmission lines under Section 68 of Electricity Act, from the Government at least twenty (20) days prior to Bid Deadline.	However, it is noted that approval under section 68 is furnished without incorporating the amendments in scope of the project. It is requested to provide section 68 approval incorporating all the amendments. Incomplete approved section-68 leads to delay in execution of project	
7.	**RFP** 1.6.2.1 … 4) To initiate process of seeking forest clearance, if required ….	Development of the project is largely dependent on obtaining the RoW through these forest stretches. Details of the status of the process initiated, the outcome and the feasibility of obtaining clearances without derailing the indicated project schedule may be furnished. To estimate the feasibility of the project in the timeline and the quantum of activity to be discharged by the bidder	Based on the route survey, the process of initiation of forest clearance for the forest stretches, if any, enroute the proposed line alignment will be initiated by way of writing letters to the concerned Authority (ies). However, it may be noted that it will be the responsibility of TSP for obtaining forest clearance for the forest stretches, if any, in the Survey Report.
8.	**RFP** 1.6.2.1 5) The BPC shall intimate to the Bidders, the Acquisition Price payable by the Selected Bidder to the PFC Consulting Limited for the acquisition of one hundred percent (100%) of the equity	Based on the past experience, it is noted that the acquisition price claimed is higher than the amount informed prior to bidding. Any variation in the Acquisition price post bid submission should be avoided. Further, it also noted that mandatory 20 days is not being adhered to by the BPC after furnishing the acquisition price.	The tentative acquisition price of the SPV shall be provided as per the provisions of the RFP document.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	shareholding of SPV [which is under incorporation],, along with all its related assets and liabilities at least twenty (20) days prior to the Bid Deadline .	Based on the past experience, it is noted that the acquisition price claimed is higher than the amount informed prior to the bidding. Further, it also noted that mandatory 20 days is not being adhered to by the BPC after furnishing the acquisition price. Even for the current RE projects floated, the acquisition price has not been furnished by the BPC within the prescribed time limits	
9.	**RFP** 1.6.2.1 6) The BPC shall ensure issuance of all finalized RFP Project Documents, at least fifteen (15) days prior to the Bid Deadline. 2.4.2. All modifications shall become part of the terms and conditions of this RFP. No interpretation, revision or communication regarding this RFP is valid, unless made in writing.	BPC is requested to kindly provide the signed TSA incorporating all the amendments / clarifications. Since TSA is the base document for reference for more than 35 years, the TSA should be complete incorporating all the amendments issued by BPC to avoid any intentional and unintentional references to TSA. It is the responsibility of the BPC to provide finalized RfP Project Documents. However, it is noted that amendments in the bidding documents are not incorporated in signed TSA and are merely appended to the TSA. It is requested to BPC to kindly provide signed TSA incorporating all the amendments and also confirm that no changes other than the notified amendments have been incorporated.	As per revised TBCB Guidelines and SBDs issued by MoP, GoI, TSP on the date of acquisition of SPV from the BPC will enter into a Transmission Service Agreement (TSA) with the Nodal Agency.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
10.	**RFP** 1.9 A company under the Companies Act, 2013 by the name SPV [which is under incorporation] has been incorporated to initiate the activities for execution of the Project. The said ……..	The statement may be corrected as the SPV is under incorporation Typographical error	Please refer **Amendment No. 1** in this regard.
11.	**RFP** Clause 1.12 Once the Successful Bidder is selected, the details and documents as may be obtained by the BPC/ project specific SPV in relation to the Project, shall be handed over to the Successful Bidder on as is where basis, so that it may take further actions to obtain all necessary Consents, Clearances and Permits and the TSP shall not be entitled for any extensions in the Scheduled COD of the Project except as provided for in the TSA	BPC is requested to provide the list of details & documents to be handed over to the Successful Bidder.	BPC will provide all the requisite documents/ certifications under the Guidelines and the Standard Bidding Documents to the Successful Bidder at the time of transfer of SPV.
12.	**RFP** **Clause 2.1.2** **"…(i)** Experience of development	Technical qualification as per **developer route** is considered from **last five years**, whereas for **construction experience**, the technical qualification	This is as per the Standard Bidding Documents. No change is envisaged.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	of projects in the Infrastructure Sector in the **last five (5) years** with aggregate capital expenditure of not less than…**"** **Or** **"…** Experience in construction of project in infrastructure sector: The Technically Evaluated Entity should have received aggregate payments not less than Rs. 1400 Crore or equivalent USD (calculated as per provisions in Clause 3.4.1) from its client(s) for construction works fully completed during the **last 5(five) financial years…."**	is considered from **last five Financial Year**s. The both technical qualifications should be considered from the same period for equity. Therefore, it is requested to align the timeline for both technical qualifications criteria.	
13.	**RFP** 2.5.2 … 14. Bid Bond, as per the prescribed format at Annexure 14 or Bid Security Declaration as per prescribed format at Annexure-14A (as applicable);	It is observed that the hard copy and soft copy of the bidding documents are in variance with respect to the referred clause. It is requested to clarify the applicable provision of the clause. Further, it is also requested to kindly confirm if there are no further variations in other provisions between the soft copy and hard copy of the	Bid Security Declaration is applicable for projects for which RFP has been issued before 31.12.2021.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		versions. Inconsistency in the soft and hard copy of the bidding documents.	
14.	**RFP** Clause 2.5.3 "….	What if two or more bidders quote the same Initial offer which turns out to be prevailing lowest levellized tariff and no further discount is offered by any bidder during e-reverse auction event? For clarity and transparency.	If the Initial Offer for two or more bidders is same and no bids are quoted in e-RA, the instant case seems to be hypothetical however in such case the decision of the competent authority shall prevail.
15.	**RFP** Clause 2.7.2	The important timelines are mentioned in the table including proposed date of issuance of LoI, transfer of SPV etc. It is observed in the past that in case, there is extension in bid submission date, the revised timelines are not being provided regarding issuance of LoI, transfer of SPV etc. It is requested to kindly provide the updated table in case of extension in bid submission date. For clarity	The important timelines are mentioned in the Clause 2.7.2 of RFP document. Further, in case of any extension in bid submission date, it is understood that the timelines of all the subsequent events is being extended accordingly.
16.	**RFP** Clause 2.7.2	The important timelines are mentioned in the table including shortlisting and announcement of Qualified bidder etc. In case, there is delay in shortlisting of qualified	The timelines for shortlisting of qualified bidders and subsequent conduction of e-RA shall be done as per timelines stipulated in the RfP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		bidders, it is requested to provide the updated dates of conduction of e-RA etc. to enable bidders to prepare for e-Reverse auction. For clarity	
17.	**RFP** 2.8.1 The Bid shall remain valid for a period of one hundred and eighty (180) days from the Bid Deadline.	As per 2.7.2, the Share Purchase Agreement is scheduled to be signed by within about 34 days from submission of Bid. Therefore the validity of bids may be stipulated to be upto 2 months.	This is as per the Standard Bidding Documents. No change is envisaged.
18.	**RFP** 2.15.3 After the date of acquisition of the equity shareholding of **SPV [which is under incorporation],** along with all its related assets and liabilities, by the Selected Bidder, i. the authority of the BPC in respect of this Bid Process shall forthwith cease and any actions to be taken thereafter will be undertaken by the Nodal Agency,	Role of BPC has to be complete. i. the authority of the BPC in respect of this Bid Process shall forthwith cease and any actions to be taken thereafter will be undertaken by the Nodal Agency, save for those which are related to and consequent to the bidding process adopted by the BPC The BPC shall not relinquish its role after the acquisition but shall have to undertake all activities including providing the certification from the Bid Evaluation Committee etc., and other requirements to enable the Bidder to obtain Transmission license and adoption of Transmission charges. Furthermore, any activity which has an origin traced to the BPC activity/process has to be owned by BPC and the TSP	The role of BPC ends with the transfer of SPV to the successful bidder. However, it may be noted that the BPC shall fulfill its responsibility of providing the certification from the Bid Evaluation Committee to enable the TSP to obtain Transmission license and adoption of Transmission charges.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		/ LTTC is neither aware nor can be made responsible.	
19.	**RFP** 2.15.3 iii. all rights and obligations of SPV [which is under incorporation], shall be of the TSP,.	Kindly provide, in detail, the rights and obligations of SPV [which is under incorporation] To avoid unknown obligations / liabilities.	The provision of RFP is amply clear.
20.	**RFP** 2.15.3 iv. contractual obligations undertaken by the BPC shall continue to be fulfilled by the TSP.	What are the obligations that the BPC has undertaken which needs to be fulfilled by the TSP? 2.15.3 iv. contractual obligations undertaken by the BPC shall continue to be fulfilled by the TSP if only such contractual obligations have been made available to the bidders 15 days prior to the bid deadline. Nature of contractual obligations cannot be left open as the same is to be fulfilled by the TSP.	The details of the contractual obligations (if any) of BPC to be fulfilled by the TSP shall be intimated as per the provisions of RFP.
21.	**RFP,** 2.15.3 v. Further, the TSP shall execute the Agreement(s) required, if any, under Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations as amended from time to time	The agreements to be executed are required to be informed to the bidder prior to the bid submission date. Any such changes shall be treated as Change in Law To avoid unknown obligations / liablities.	This is as per the Standard Bidding Documents. The provisions of RFP documents shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
22.	**RFP** 2.15.4 Within five (5) working days of the issue of the acquisition of the SPV by the Successful Bidder, the TSP shall apply to the Commission for grant of Transmission License and make an application to the Commission for the adoption of Transmission Charges, as required under Section – 63 of The Electricity Act 2003	We request you to consider at least 30 days' time for completion of these activities. Within thirty (30) working days of the issue of the acquisition of the SPV by the Successful Bidder, the TSP shall apply to the Commission for grant of Transmission License and make an application to the Commission for the adoption of Transmission Charges, as required under Section – 63 of The Electricity Act 2003	This is as per the Standard Bidding Documents. No change is envisaged.
23.	**RFP** 2.15.6 If the TSP fails to obtain the Transmission License from the Commission, it will constitute sufficient grounds for-annulment of award of the Project	In case TSP fails to obtain the Transmission License the reasons for the same have to be examined. 2.15.6 If the TSP fails to obtain the Transmission License from the Appropriate Commission, the treatment shall be as per provisions 3.3 of the TSA. Provisions of 3.3 of TSA provides for consequences for non-fulfilment of conditions subsequent. The provisions of RFP as such have to be reflective of TSA.	This is as per the Standard Bidding Documents. The provisions of RFP documents shall prevail.
24.	**RFP** Annexure 11A:	As against the category of "Bidder himself for 100% equity", it is stated that applicable Board Resolutions are 1,2 and 4 (of Format 1 Annexure-11)	It is amply clear that the resolution is required in case of consortium only.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		However, it is observed that Resolution 2 is not applicable since the same pertains to a Consortium. Accordingly, the applicable Board Resolutions be stated as 1 and 4 only (Format 1 of Annexure 11) and a suitable amendment be issued. Improper Board resolutions	
25.	**RFP** **General**	Kindly confirm: i) whether the Project / Elements are covered under "Generation linked Project" or "System Strengthening Project"	Transmission scheme is a part of Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III.
26.	**RFP** **General**	Kindly confirm: i) Whether the Project/ Elements are eligible for early commissioning incentive as per MoP, GoI order dated 15.07.2015.	The project is required for evacuation of power from RE generations getting connected at Fatehgarh-3 and/or Fatehgarh-4 and required in matching time frame.
27.	**RFP** General	Kindly confirm, whether clearance for Transmission System under subject project are required from Supreme Court nominated committee as per the order of Hon'ble Supreme Court dated 19.4.2021 in IA No.85618/2020 in WP (Civil) No. 838 of 2019. In case, the same is applicable, the status of the requisite clearance may be furnished. For clarity	Approvals are responsibility of TSP. Bidders are required to familiarize themselves with all relevant Rules/ Regulations/ Guidelines issued by the Central Government, CERC, CEA or any relevant Authority and amendments thereof. Further, please refer Clause No. 2.5.7.2 of RFP Document.
28.	**RFP** General	Financial Bid opening date is specified in the RFP document. However, in most of the cases, the date	The timelines for shortlisting of qualified bidders and subsequent conduction of e-RA shall be done as per

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		is shifted beyond the schedule without any intimation to participant bidders. In such situations, BPC is required to inform the revised date for Financial Bid Opening at least 1 week before the bid opening to enable bidders to take appropriate action for participation in e-RA For compliance with SBD	timelines stipulated in the RfP.
29.	**RFP and TSA** Transmissions License fee has to be paid during the entire validity of the Transmission Service Agreement	The Transmissions License fee which has to be paid during the entire validity of the Transmission Service Agreement is also not stated in the Regulations / Govt. Orders. The same may be furnished. To assess the risk and cost of the Project.	Bidders are advised to ascertain themselves with all the applicable fees, charges, etc. Further, please refer Clause No. 2.5.7.2 of RFP Document.
30.	**RFP and TSA** **The definition of Contract Year in RFP is as under:** "Contract Year" shall mean the period beginning on the **Scheduled COD**, and ending on the immediately succeeding March 31 and thereafter each period of 12 …: And the definition of Contract	As per RFP, the Contract Year shall start from the Scheduled CoD whereas as per TSA, the Contract Year shall start the CoD. As such, both the definitions are contradictory in nature. It is requested to clarify the correct definition of Contract Year. To avoid ambiguity	The provisions of RFP and TSA are amply clear.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Year in TSA is as under: "Contract Year", for the purpose of payment of Transmission Charges, shall mean the period beginning on the COD, and ending on the immediately …"		
31.	**TSA** Definitions: "Project Assets" shall mean all physical and other assets relating to and forming part of the Project including: (a) rights over the Site for substations, ROW for transmission lines; (b) tangible & intangible assets such as civil works and equipment including foundations, embankments, pavements, electrical systems, communication systems, relief centres, administrative offices, Substations, software, tower and sub-stations designs etc;	There could be delay in receipt of payment against receivables. Further, the TSP might have some pending claims against insurance company. How shall TSP receive these legitimate pending claim or charges after transfer of asset to CTU? For clarity	Definition of Project Assets is amply clear. The insurance proceeds will also be transferred by TSP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	(c) project facilities situated on the Site; (d) all rights of the TSP under the project agreements; **(e) financial assets, such as receivables, security deposits etc;** **(f) insurance proceeds; and** (g) Applicable Permits and authorisations relating to or in respect of the Transmission System;" **2.2.2** Post the Expiry Date of this Agreement, the TSP shall ensure transfer of Project Assets to CTU or its successors or an agency as decided by the Central Government at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days of expiry of this Agreement failing which CTU shall be entitled to take over the Project Assets Suo moto		
32.	**TSA** "Project Assets" shall mean all	Please confirm that any taxes or charges or cost to be borne by the TSP at the transfer time including	Definition of Project Assets is amply clear. The Projects Assets have to be transferred by TSP at zero cost and

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	physical and other assets relating to and forming part of the Project including: (a) rights over the Site for substations, ROW for transmission lines; (b) tangible & intangible assets such as civil works and equipment including foundations, embankments, pavements, electrical systems, communication systems, relief centres, administrative offices, Substations, software, tower and sub-stations designs etc; (c) project facilities situated on the Site; (d) all rights of the TSP under the project agreements; **(e) financial assets, such as receivables, security deposits etc;** **(f) insurance proceeds; and** (g) Applicable Permits and authorisations relating to or in respect of the Transmission System;"	sale at value lower than fair value shall be reimbursed to the TSP. These cost are not known at this point of time and might be significant in amount. TSP cannot be exposed such charges. For clarity	free from any encumbrance and liability.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	2.2.2 Post the Expiry Date of this Agreement, the TSP shall ensure transfer of Project Assets to CTU or its successors or an agency as decided by the Central Government at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days of expiry of this Agreement failing which CTU shall be entitled to take over the Project Assets Suo moto		
33.	**TSA** A) In accordance with the Bidding Guidelines, the Bid Process Coordinator (hereinafter referred to as BPC) had initiated a competitive e-reverse bidding process through issue of RFP for selecting a Successful Bidder to build, own, operate and transfer the Project comprising of the Elements mentioned in Schedule 1 (hereinafter referred to as the Project)	Role of selected bidder and TSP needs to be clear. A) In accordance with the Bidding Guidelines, the Bid Process Coordinator (hereinafter referred to as BPC) had initiated a competitive e-reverse bidding process through issue of RFP for selecting a Successful Bidder who shall acquire the TSP. The TSP shall build, own, operate and transfer the Project comprising of the Elements mentioned in Schedule 1 (hereinafter referred to as the Project) TSP is the entity to build, own, operate and transfer the project and not the selected 'Successful Bidder'. The anomaly is to be corrected / redrafted. Provisions have to be properly aligned to reflect the desired course of action.	This is as per the Standard Bidding Documents. No change is envisaged.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
34.	**TSA** B) Pursuant to the said e-reverse bidding process, the BPC has identified the Successful Bidder, who will be responsible to set up the Project on build, own, operate and transfer basis to provide Transmission Service in accordance with the terms of this Agreement and the Transmission License.	Role of selected bidder and TSP needs to be clear. B) Pursuant to the said e-reverse bidding process, the BPC shall identify the Selected Bidder who shall acquire the TSP. The TSP will be responsible to set up the Project on build, own, operate and transfer basis and to provide Transmission Service on long term basis on the terms and conditions contained in this Agreement and the Transmission License. TSP is the entity to build, own, operate and transfer the project and not the selected 'Successful Bidder'. The anomaly is to be corrected / redrafted. Provisions have to be properly aligned to reflect the desired course of action.	This is as per the Standard Bidding Documents. No change is envisaged.
35.	**TSA** Cl. 2.2.2 Post the Expiry Date of this Agreement, the TSP shall ensure transfer of Project Assets to CTU or its successors or an agency as decided by the Central Government at zero cost and free from any encumbrance and	Modalities for O&M, other expenditure etc. for the transition period of 90 days may be confirmed.	The transfer of all project assets along with substation land, right of way and clearances shall be completed at the end of 35 years from COD of the Project. All the expenditure till the transfer of all project assets along with substation land, right of way and clearances shall be borne by TSP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	liability. The transfer shall be completed within 90 days of expiry of this Agreement failing which CTU shall be entitled to take over the Project Assets Suo moto.		
36.	**TSA** Clause no 2.3: Conditions prior to the expiry of the Transmission License 2.3.1 In order to continue the Project beyond the expiry of the Transmission License, the TSP shall be obligated to make an application to the Commission at least two (2) years before the date of expiry of the Transmission License, seeking the Commission's approval for the extension of the term of the Transmission License up to the Expiry Date. 2.3.2 The TSP shall timely comply with all the requirements that may be laid down by the Commission for extension of the term of the Transmission License beyond the initial term of twenty-five (25)	There should be a provision in the TSA to cover the revenue loss that may be incurred by the TSP, in the case of the Appropriate Commission not granting extension of the Transmission License beyond the period of 25 years. The Transmission Charges to be quoted by the bidders would be based on the cash flow generated from the Project for 35 years and if, for any reason not attributable to the TSP (including any change in law), the Transmission License is not extended by the Appropriate Commission beyond 25 years the TSP will suffer significant losses. The RFP / TSA should be suitably modified to provide security of continuation of the transmission business for at least 35 years.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	years & upto the Expiry Date and the TSP shall keep the Nodal Agency fully informed about the progress on its application for extension of the term of the Transmission License.		
37.	**TSA** 3.1.1 Within ten (10) days from the date of issue of Letter of Intent, the Selected Bidder, shall, Provide the Contract Performance Guarantee, and… Acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of SPV Name…..	Given the past experience, after the issuance of LoI, the clearance for signing the SPA by the BPC itself takes about one month (30 days). During this period approvals have to be obtained from the competent authority for furnishing inputs to signing of the SPA. The timeline of 10 days is unworkable and as such at least 30 days have to be provided. 3.1.1 Within thirty (30) days from the date of issue of Letter of Intent, the Selected Bidder, shall, Provide the Contract Performance Guarantee, and… Acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of SPV Name. Non fulfilling of the conditions have ramifications on the selected bidder as per the TSA and accordingly, the time period has to be realistic.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail. However, the provision for extension provided in clause 2.15.2 of RfP shall be applicable.
38.	**TSA** 3.1.1…….The TSP shall, within five (5) working days from the date of	Definition of working day is not defined in the TSA. Therefore, it is requested to define working day to avoid ambiguity and litigation later on.	The definition working day shall be as per Department of Personnel & Training, GoI.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	acquisition of SPV by the Selected Bidder, undertake to apply to the Commission for the grant of Transmission License and for the adoption of tariff as required under section-63 of the Electricity Act	For clarity and avoiding ambiguity & litigation	
39.	**TSA** 3.1.3 The TSP agrees and undertakes to duly perform and complete the following activities **within six (6) months** from the Effective Date (except for c) below), …….. c) To submit to the Nodal Agency, CEA & Independent Engineer, the Project Execution Plan, immediately **after award of contract(s)** and maximum within **one hundred and twenty (120)** days from the Effective Date. …. h) **To award the Engineering, Procurement and Construction**	As per clause 3.1.3 h, the EPC contracts to be awarded in 6 months. Whereas as per clause 3.1.3 c, TSP is required to submit Project Execution Plan after awards of Contracts within 120 days. TSP shall not be in a position to submit project plan within 120 days from effective date if the award of EPC contract is awarded after 120 days, but before 6 months period. As such, the timelines mentioned in above clauses are contradictory and the same may be reviewed. For clarity	Section 3.1.3 is clearly states that period of 6 months is not applicable to clause (c).

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	contract ("EPC contract") for the design and construction of the Project and shall have given to such Contractor an irrevocable notice to proceed; an		
40.	**TSA** Clause 3.3.1: If any of the conditions specified in Article 3.1.3 is not duly fulfilled by the TSP even within three (3) Months..... in accordance with the provisions of this Agreement	Suggested text to be added at the end of this Article: "..... The additional Contract Performance Guarantee, if any provided by the TSP for delay in fulfilment of condition subsequent, shall be returned by the CTUIL on fulfilment of conditions subsequent by the TSP" The additional CPG is for specific default(s) and once such default(s) cease to exist, this additional amount of CPG should be returned. Additional CPG cannot be held back by the CTUIL till COD of the Project.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
41.	**TSA** Clause no 3.3.4: In case of inability of the TSP to fulfil the conditions specified in Article 3.1.3 due to any Force Majeure Event, the time period for fulfilment of the condition subsequent as	The terms and conditions for termination of the TSA under this Article, including the termination payment and status of the SPV, need to be provided in the TSA. In case the Force majeure event continues, the TSA will be terminated and the CPG will be returned. Other expenses that would have been incurred till the date of termination of the TSA including the	In such cases, provisions of Article 3.3.5 and Article 13.6.1 of TSA shall apply.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	mentioned in Article 3.1.3, may be extended for a period of such Force Majeure Event. Alternatively, if deemed necessary, this Agreement may be terminated by the Nodal Agency by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement and the Contract Performance Guarantee shall be returned as per the provisions of Article 6.5.1. ……	Acquisition Price paid for Acquiring the SPV and other incurred costs shall also be explicitly stated. There should be an explicit provision for refund of the Acquisition Price, along with the other expenses incurred by the TSP / Selected Bidder till such date of termination.	
42.	**TSA** 3.3.4 …… Provided, that due to the provisions of this Article 3.3.4, ……. If the Scheduled COD is extended beyond a period of one hundred eighty (180) days due to the provisions of this Article 3.3.4, the	In case project suffers from Force Majeure event for a period less than 6 months, interest cost during construction may be considered. For project viability.	Force Majeure provisions under the TSA are amply clear and shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	TSP will be allowed to recover the interest cost during construction corresponding to the period exceeding one hundred eighty (180) days by adjustment in the Transmission Charges in accordance with Schedule 9 11.7 (e) Available Relief for a Force Majeure Event For avoidance of doubt, the TSP acknowledges that for extension of Scheduled COD a period up to one hundred eighty (180) days due to Force Majeure event, no compensation on the grounds such as interest cost,…..		
43.	**TSA** 4.6 Interconnection Facilities: 4.6.1 Subject to the terms and conditions of this Agreement, the TSP shall be responsible for connecting the Project with the interconnection point(s) specified in Schedule 1 of this Agreement. The Interconnection	It is understood that if interconnection facilities at the interconnection point is not available, whereas TSP has completed rest of the scope of the project, the project shall be considered as deemed COD and TSP shall be entitled to all the benefits envisaged under the TSA. For clarity.	The provisions of TSA are amply clear and shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Facilities shall be developed as per the scope of work and responsibilities assigned in Schedule 1 of this Agreement. The Nodal Agency shall be responsible for coordinating to make available the Interconnection Facilities. 4.6.2 In order to remove any doubts, it is made clear that the obligation of the TSP within the scope of the project is to construct the Project as per Schedule-1 of this Agreement and in particular to connect it to the Interconnection Facilities as specified in this Agreement.		
44.	**TSA** **6.1 Connection with the Inter-connection Facilities:** 6.1.1 The TSP shall give the RLDC(s), CTU, / STU, as the case may be, and any other agencies as required, at least sixty (60) days advance written notice of the date	Reference is drawn to the Order of CERC 4/ADP/2016 dated 23.03.2016. Relevant extract of the Order is reproduced hereunder: "In the event the inter-connection facilities are not ready by SCOD or by revised SCOD (as may be revised by the petitioner and the LTTCs for the purpose of availing incentive as per MOP Policy) on account of non-readiness of the upstream or	This shall be treated as per applicable CERC Regulations/Orders/TSA.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	on which it intends to connect an Element of the Project, which date shall not be earlier than its Scheduled COD or Schedule COD extended as per Article 4.4.1 & 4.4.2 of this Agreement, unless mutually agreed to by Parties. Further, any preponing of COD of any element prior to Scheduled COD must be approved by the Nodal Agency. 6.2.1 An Element of the Project shall be declared to have achieved COD twenty four (24) hours following the connection of the Element with the Interconnection Facilities pursuant to Article 6.1 or seven (7) days after the date on which it is declared by the TSP to be ready for charging but is not able to be charged for reasons not attributable to the TSP subject to Article 6.1.2. Provided that an Element shall be declared to have achieved COD	downstream transmission assets while the petitioner`s transmission system is ready for commissioning, the COD of the transmission assets of the petitioner may be declared in accordance with the provisions of Article 6.2 of the TSA (to be known as „deemed COD") and the LTTCs/developers of the upstream and downstream assets shall be liable to pay the transmission charges from the deemed COD till the transmission assets are put into actual use." From above, it is seen that even in case of SCOD when the systems are declared deemed COD as per Article 6.2 of TSA, till the transmission assets are put into actual use, the transmission charges are liable to be paid by DICs/developers of the upstream and downstream assets. In such situations, it shall be construed that BPC has obtained consent of the DICs/ Upstream / Downstream / Generators (as applicable) for payment of transmission charges. Further, as per CERC order no. 104/MP/2018 dated 18th September 2018, downstream was directed to pay transmission charges to TSP. Order of CERC 4/ADP/2016 dated 23.03.2016.	

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	only after all the Element(s), if any, which are pre-required to have achieved COD as defined in Schedule 2 of this Agreement, have been declared to have achieved their respective COD. 6.2.2 Once any Element of the Project has been declared to have achieved deemed COD as per Article 6.2.1 above, such Element of the Project shall be deemed to have Availability equal to the Target Availability till the actual charging of the Element and to this extent, TSP shall be eligible for the Monthly Transmission Charges applicable for such Element.		
45.	**TSA** 6.1.3 b) it meets the Grid Code, Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 as amended **from time to time** and all other Indian legal requirements, and.	It is understood that the connectivity regulations at the time of bidding stage shall be complied with by the TSP, whereas any amendments, if any after bid submission having impact on tariff shall be construed under change in law For clarity	Provisions of TSA are amply clear in this regard.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
46.	**TSA** **Clause 6.3.1 (b)** In case of delay due to Indirect Non-Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency, TSP is entitled for payment for debt service which is due under the Financing Agreements, subject to a maximum of Transmission Charges calculated on Target Availability, for the period of such events in excess of three (3) continuous or non-continuous Months in the manner provided in (c) below.	Clause 6.3.1 (b) covers the loss on debt amount which includes, due to Indirect Non-Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency, TSP is entitled for payment for debt service which is due under the Financing Agreements. However, any loss on the equity is not covered in the above clause. In order to compensate for the loss due to Indirect Non-Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency, compensation to both equity as well as debt to be covered as per clause 6.3.1 (a).	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
47.	**TSA** 7.1 The TSP shall be responsible for ensuring that the Project is operated and maintained in accordance with the regulations made by the **Commission** and **CEA from time to time** and provisions of the Act.	It is understood that the regulations of Commission and CEA at the time of bidding stage shall be complied with by the TSP, whereas any amendments, if any **after bid submission having impact on tariff shall be construed under change in law** For Clarity	Provisions of TSA are amply clear in this regard.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
48.	**TSA** 10 BILLING AND PAYMENT OF TRANSMISSION CHARGES 10.3 Rebate & Late Payment Surcharge	Any changes in CERC regulations, which have an implication on Billing cycle and/or cost implication to the TSP due to change in rebate and late payment surcharge, the same shall be allowed to be recovered under Change in law.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
49.	**TSA** Clause no. 10.1: Subject to provisions of this Article 10, the Monthly Transmission Charges shall be paid to the TSP, in Indian Rupees, on monthly basis as per the provisions of the Sharing Regulations, from the date on which an Element(s) has achieved COD until the Expiry Date of this Agreement, unless terminated earlier and in line with the provisions of Schedule 4 of this Agreement.	Subject to provisions of this Article 10, the Monthly Transmission Charges shall be paid to the TSP, in Indian Rupees, on monthly basis as per the provisions of the Sharing Regulations, from the date on which an Element(s) has achieved COD **or deemed to have achieved COD** until the Expiry Date of this Agreement, unless terminated earlier and in line with the provisions of Schedule 4 of this Agreement. As per clause 6.2 of the TSA, the TSP is eligible for payment of Transmission charges from the date of deemed COD.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
50.	**TSA** 11.4 Force Majeure Exclusions 11.4.1 (g) Any error or omission in the	The survey report furnished by BPC has to be accurate and any error or omission has to be owned by the BPC. Professional fees including fees for survey report is also claimed by BPC.	As per the provisions of RFP, BPC prepares the Survey Report and furnish the same to bidders. The provisions of Force Majeure Exclusions in TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	survey report provided by BPC during the bidding process.		
51.	**TSA** 12.1.1 Change in law	Any change in acquisition price is a cost to the TSP and needs to be compensated under change in law. Alternatively, BPC should refrain from increasing the Acquisition price after bid submission.	The change in acquisition price to the extent as per Provisions under Clause No. 3.5 of Tariff Based Competitive Bidding Guidelines for Transmission Service issued on 10.08.2021 shall prevail.
52.	TSA Clause 12.1.1 Clause 12.1.1 Change in Law means the occurrence of any of the following **after the Bid Deadline** resulting into any additional recurring / non-recurring expenditure by the TSP or any savings of the TSP….	It is mentioned that in case any change in law event occurs on bid submission date or just prior to bid submission date, the bidders shall not have adequate time to understand the cost implication of such change in law event. Bidders cannot be exposed to such uncertainties and thereafter it is requested to consider any event **after 7 days prior to bid deadline as Change in Law event.** Furthermore, the bid submission is fixed at 12 noon. Whereas change in event could happen during the day even after 12 noon. Such clause can have series implications on the viability of the project.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
53.	**TSA** 12.1.2 Notwithstanding anything contained in this Agreement, Change in Law shall not cover any change: a. Taxes on corporate income; and; and	Any tax applied on the income or profits of the TSP need to be covered under change in law. Tax is an element beyond the control of the TSP. Change in tax or introduction of any tax is covered under change in law. Tax rate applicable on the income or profits of the TSP is beyond the control of the TSP and to assume	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail. Further, please refer Clause No. 2.5.7 of RFP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	b. Withholding tax on income or dividends distributed to the shareholders of the TSP.	the same for 35 years shall be a risk which is best assumed by the LTTCs accordingly this is to be reviewed.	
54.	**TSA** **Clause 13.7** If Agreement is terminated on account of Force Majeure Events, nonrequirement of any Element or Project during Construction, Nodal Agency's non-fulfilment of Role & TSP's Event of Default, the TSP shall be entitled for Termination Payment equivalent to valuation of Project Assets. Upon payment, the Nodal Agency shall take over the Project Assets	Kindly furnish the methodology of calculation of valuation of project asset. For clarity	Valuation of project assets shall be done as per the prevailing industry practices. Further, please refer Clause 18.2.e. of TSA.
55.	**TSA** 14.3 Monetary Limitation of liability	In the new PoC regime what should be this limit and how is it implemented?	This shall be governed by applicable CERC Regulations.
56.	**TSA** Connection Agreement	A draft copy of the Connection Agreement may be furnished.	Connection Agreement is available on the website of CTUIL and same may be referred.
57.	**TSA**	Kindly inform when shall be TSA be signed?	As per revised TBCB Guidelines and SBDs issued by MoP, GoI, TSP on the date of acquisition of SPV from

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	General	Is it signed before Bid submission (pre-signed TSA) or before the signing of SPA or after the signing of SPA For clarity	the BPC will enter into a Transmission Service Agreement (TSA) with the Nodal Agency
58.	**RFP (TECHNICAL REQUIREMENTS FOR TRANSMISSION LINE)** Transmission line route shall be finalized, in consultation with appropriate authorities so as to avoid the habitant zones of endangered species and other protected species. Bird diverters, wherever required, shall be provided on the line	Since the SPV is with BPC, Bidder can't finalize the route in consultation with the concerned authorities so as to avoid the habitant zones of endangered species and other protect species because it shall not be entertained at the time of bidding stage. Accordingly, BPC is requested to initiate all such actions for the route provided by BPC as part of Survey Report. For realistic bid estimation	BPC shall complete its responsibilities as listed in the RFP documents. Further, please refer Clause No. 2.5.7 of RFP document.
59.	**RfP document Cl. no. C.4.0** PLCC& PABX: ------ ----- 2 sets of 48 V battery banks for PLCC/ communication equipment shall be provided at each new Substation with at least 10 hour battery backup and extended backup, if required.	As per CEA Regulations 2010, AC & DC supply system of substation shall be designed for 3hours/6 hours of steady & continuous load based on availability of standby battery. Generally, 3 hour of battery backup is envisaged for 48V battery bank. We understand that 48V battery bank with 3-hour battery backup shall be provided. Kindly confirm.	TSP to comply with the requirements of RfP document.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
60.	**RfP document Cl. no. B.3.2** Fire Fighting System Fire-fighting system for substation including transformer & reactor shall conform to CEA (Measures Relating to Safety & Electric Supply) Regulations. Further, adequate water hydrants and portable fire extinguishers shall be provided in the substations. The main header of firefighting system shall be suitable for extension to bays covered under the future scope; necessary piping interface in this regard shall be provided. At existing substations, the fire-fighting systems as available shall be extended to meet the additional requirements.	We assume that there is adequate provisions in the existing Fire Fighting Annunciation Panel to integrate the Fire alarm signals associated with 765kV Line Reactors and Switchyard Panel Room/Kiosk for the bay extension works under TSP's scope. Kindly confirm.	Necessary Fire Fighting Annunciation Panel including any integration for the present scope shall be provided by the TSP.
61.	**RfP document Cl. no. B.3.1** AC & DC power supplies For catering the requirements of three phase & single phase AC supply and DC supply for various	We understand that existing AC/DC Distribution Boards shall have adequate nos. of MCB/MCCB with suitable rating available, which shall be utilized for AC & DC power supply for the bays under present scope. No modification/extension of exiting AC/DC Distribution Boards are envisaged for the bays under	Modules for all future AC/DC feeders is kept under the scope of Beawar s/s developer. Also, Modules for all future AC/DC feeders is envisaged under scope of Fatehgarh-3 s/s developer.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	substation equipment, existing facilities shall be augmented as required.	TSP's scope. Kindly confirm.	
62.	**RfP document Cl. no. B.3.5** Control Room For new substation, substation control room shall be provided to house substation work stations for station level control (SAS) along with its peripheral and recording equipment, AC & DC distribution boards, DC batteries & associated battery chargers, Fire Protection panels, Telecommunication panels & other panels as per requirements. Air conditioning shall be provided in the building as functional requirements. Main cable trenches from the control room shall have adequate space provision for laying of cables from control room for all the future bays also. At existing substations, the adequacy of size of control room shall be ascertained and the same	We understand existing control room has adequate space to accommodate the communication equipment required for bays under present scope. No extension of control room is envisaged. Kindly confirm our understanding.	As per RFP communication Scope TSP to install Communication Equipment at their Bay Kisok and to be integrated with FOTE at control room using suitable optical interfaces.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	shall be augmented as per requirement.		
63.	**RfP document Cl. no. B.2.1** Neutral Grounding Reactor (NGR) and Surge Arrester for 765 kV Line Reactors (as applicable) The neutral of the line reactors (wherever provided) shall be grounded through adequately rated Neutral Grounding Reactors (NGR) to facilitate single phase auto-reclosure, provided that the NGR shall be provided with bypass arrangement through a breaker so that the line reactor can be used as Bus reactor as and when required. The neutral of bus reactor shall be solidly grounded. The resistive value of NGR for each circuit at both ends of 765kV D/c Fatehgarh-3– Beawar S/s shall be 450 ohms.	The value of 450 ohms for NGR shall be defined in terms of Rated Impedance value rather than resistive value, as specified in the RfP document. Kindly confirm. The rated impedance value of NGR for each circuit at both ends of 765kV D/c Fatehgarh-3– Beawar S/s shall be 450 ohms. Bidder needs information for proper estimation	It is clarified that "The **Ohmic** value of NGR for each circuit at both ends of 765kV D/c Fatehgarh-3– Beawar S/s shall be 450 ohms."
64.	**RfP document Sl. no. 2** Scope of work	Under present scope, TSP needs to provide 2nos. of 330MVAR Switchable line reactor at both 765kV Beawar s/s end & 765kV Fatehgarh-3 s/s end along with associated 765kV switching equipment. In this	01 no. 765kV 1-phase 110MVAR spare reactor has been considered under the scope of developer of 765kV Fatehgarh-3 s/s. The same reactor shall be utilized as spare for the switchable 330 MVAR

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		regard, it is understood that: The 765kV 1-Phase 110MVAR spare Reactor unit is not included under TSP's scope. 1-Phase Circuit Breaker for spare Reactor is not included & hence not considered under TSP's present scope. Same shall be provided by respective site developers. The Spare Reactor (i.e. 1no. of 765kV,110MVAR Reactor) & associated 1-Phase Circuit Breaker existing at the respective Substations (i.e. at Beawar extension S/s & Fatehgarh-3 extension S/s) shall be utilized for switching of Reactors under present scope. Kindly confirm. Bidder needs information for proper estimation	(3X110MVAR) line Reactor for 765 kV Beawar - Fatehgarh-3 D/C line. All necessary arrangement including 1-phase circuit breaker for such switching scheme shall be under the scope of present TSP. For Beawar s/s, all necessary arrangement including 1-phase circuit breaker for such switching scheme for utilizing 01 no. 765kV 1-phase 110MVAR existing spare reactor shall be under the scope of present TSP.
65.	**General for Beawar & Fatehgarh-3 S/s** Technical	We understand that 765kV bus work has to be extended for bays under present scope and existing main bus towers are suitable for main bus extension to cater the bays under present scope. Kindly confirm.	It is envisaged that 765kV busbar shall be such that it can cater the bays under present scope.
66.	**General for Beawar & Fatehgarh-3 S/s**	We understand that the auxiliary system viz. LT Transformer, DG set, Battery, Battery chargers, LT	Confirmed.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Technical	switchgear Panels are adequate for the bays under present scope. TSP need not to consider above.	
67.	**General on Technical Requirements**	Vide order ref: 22-2001/2/2021-OM dtd 19.05.2021, Ministry of Power has directed to include provisions regarding Planning and Designing in purview of Vulnerability Atlas of India. We understand that the same shall be applicable for subject project also. Kindly confirm.	All orders of MoP, as applicable, shall be followed.
68.	**General on Technical Requirements**	Vide order ref: 12/34/2020-T&R dtd-08.06.2021, in continuation to earlier order ref: 25-L7 /6/2O18-PG dtd-02.07.2020 (copies of orders attached), Ministry of Power has notified the nodal agency/designated laboratories, products, protocols, testing criteria and details of type tests for testing of power system equipment for cyber security conformance on payment of applicable test charges. We understand that the same shall be applicable for subject project also. Kindly confirm.	All orders of MoP, as applicable, shall be followed.
69.	**General on Technical Requirements**	We understand that TSP has to follow 'Guidelines for the Validity Period of Type Test(S) conducted on Major Electrical Equipment in Power Transmission'	In supersession to the guidelines quoted by the bidder in its query, "Guidelines for the Type Tests for Major Equipment in Power Sector" has been issued by CEA in

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		issued by CEA in May 2020 (copy attached). Kindly confirm.	March 2022 and shall be followed.
70.	**RFP & TSA** General	We request you to clarify whether there are any deviations/addition in the RFP/TSA documents from the Standard Bidding documents (SBD) and if any, whether approval for the same has been taken or not. Please provide the list of the same, if any.	The RFP/ TSA Documents are as per the Standard Bidding Documents (SBDs) and subsequent amendments issued by the Ministry of Power, GoI.
71.	RPF General	Please let us know the status of Regulatory Approvals for the project. SPV Acquisition is linked to regulatory approval and it is very important to get the clearance before RFP Submission as this will impact the initiation of projects.	Transmission system is approved as per MoP Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules, 2021. Regulatory approval would not be required for implementation of any ISTS project after approval by MoP.
72.	RPF General	We request you to let us know the status of TSA signing. SPV Acquisition is linked to TSA Signing and it is very important to get the clearance before RFP Submission as this will impact the initiation of projects	As per revised TBCB Guidelines and SBDs issued by MoP, GoI, TSP on the date of acquisition of SPV from the BPC will enter into a Transmission Service Agreement (TSA) with the Nodal Agency
73.	RPF **Clause 1.6.2.1 (2):** To obtain approval for laying of	It is requested you to kindly provide present status of process initiated by BPC with regard to section 68 approval.	The prior approval under Section 68 shall be shared with the successful bidder.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	overhead transmission lines under Section 68 of Electricity Act, from the Government at least twenty (20) days prior to Bid Deadline.		
74.	RPF **Clause 1.6.2.1 (4):** To initiate process of seeking forest clearance, if required.	It is requested you to kindly provide present status of Forest Clearances if any transmission line corridor area falling in wildlife forest / reserve forest/ mangroves.	Based on the route survey, the process of initiation of forest clearance for the forest stretches, if any, enroute the proposed line alignment will be initiated by way of writing letters to the concerned authority (ies). However, it may be noted that it will be the responsibility of TSP for obtaining forest clearance for the forest stretches, if any, in the Survey Report.
75.	RPF **Clause 1.6.2.1 (6):** The details and documents as may be obtained by the BPC/ project specific SPV in relation to the Project shall be handed over to the TSP on an as-is-where-is basis, so that it may take further actions to obtain Consents, Clearances and Permits.	Please provide copy of all such document available with you from the State Government and/or Ministry of Power and/or kindly facilitate for State Support Agreement.	The necessary support shall be provided on case to case basis.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
76.	RPF Clause 1.10 The Ministry of Power and the appropriate state government(s) shall provide their support to the TSP, on best endeavor basis, in enabling the TSP to develop the Project.	We request you to share all such documents or correspondence happened with MOP and State Government, this will help the TSP is taking further approvals for the project.	The necessary support shall be provided on case to case basis.
77.	RPF Clause 1.12 Once the Successful Bidder is selected, the details and documents as may be obtained by the BPC/ project specific SPV in relation to the Project, shall be handed over to the Successful Bidder on as is where basis, so that it may take further actions to obtain all necessary Consents, Clearances and Permits and the TSP shall not be entitled for any extensions in the Scheduled COD of the Project except as provided for in the TSA.	BPC is requested to provide the list of details & documents to be handed over to the Successful Bidder.	BPC will provide all the requisite documents/ certifications under the Guidelines and the Standard Bidding Documents to the Successful Bidder at the time of transfer of SPV.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
78.	RPF Clause 2.15.2 Within ten (10) days of the issue of the Letter of Intent, the Selected Bidder shall: a) provide the Contract Performance Guarantee in favour of the Nodal Agency as per the provisions of Clause 2.12 b) execute the Share Purchase Agreement and the Transmission Service Agreement c) acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of SPV [which is under incorporation] from PFC Consulting Limited, who shall sell to the Selected Bidder, the equity shareholding of SPV [which is under incorporation], along with all	BPC will appreciate that the completion of said activities by the Selected Bidder within ten (10) days after issuance of LoI is very stringent. Also, execution of SPV / signing of share purchase agreement is not within the control of TSP as it is dependent on certain regulatory approvals as well. We therefore request to consider at least 30 day's time for completion of these activities as well as provide a carve out for consequences if the delay is not on account of TSP.	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	its related assets and liabilities;		
79.	RPF Clause 2.15.2 Stamp duties payable on purchase of one hundred percent (100%) of the equity shareholding of SPV [which is under incorporation], along with all its related assets and liabilities, shall also be borne by the Selected Bidder.	We request you to provide Applicable Stamp Duty Charges and Amount of Stamp Paper for the following agreements : i. Transmission Service Agreement ii. Share Purchase Agreement iii. Power of Attorney iv. Share Transfer Form It will be helpful if you can specify the name of 1st party and 2nd party for purchase of stamp papers.	The value of stamp paper/stamp duty along with party for the following is given below: i) Transmission Service Agreement – Rs. 100/- (1st Party : LTTCs, 2nd Party : SPVs) ii) Share Purchase Agreement- Rs. 100/- (1st Party : BPC, 2nd Party : SPV, 3rd Party, TSP) iii) Power of Attorney – Rs. 100/- Share Transfer Form – 0.25% of Share Value at par of Rs. 1,00,000/-
80.	RPF Clause 2.15.4 Within five (5) working days of the issue of the acquisition of the SPV by the Successful Bidder, the TSP shall apply to the Commission for grant of Transmission License and make an application to the Commission for the adoption of Transmission Charges, as	Clause 2.15.4 may be reworded as below - Within ten (10) working days of the issue of the acquisition of the SPV by the Successful Bidder, the TSP shall apply to the Commission for grant of Transmission License and make an application to the Commission for the adoption of Transmission Charges, as required under Section – 63 of The Electricity Act 2003. The condition to apply for grant of transmission license and make application for adoption of	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail. Further, the provision for extension provided in Clause 2.15.2 of RFP document shall be applicable.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	required under Section – 63 of The Electricity Act 2003.	transmission charges within 5 days is onerous. Request to please change the relevant provisions as per the suggested text in RFP and TSA	
81.	RPF, Clause 2.15.5 If the Selected Bidder / TSP fails or refuses to comply with any of its obligations under Clauses 2.15.2, 2.15.3 and 2.15.4, and provided that the other parties are willing to execute the Share Purchase Agreement and PFC Consulting Limited is willing to sell the entire equity shareholding of SPV [which is under incorporation], along with all its related assets and liabilities, to the Selected Bidder, such failure or refusal on the part of the Selected Bidder shall constitute sufficient grounds for cancellation of the Letter of Intent. In such cases, the BPC / its authorized representative(s) shall be entitled to invoke the Bid Bond of the Selected Bidder.	It is requested to kindly clarify as to what will be the consequences if the Selected Bidders fails to comply with any of Its obligations under 2.15.2, 2.15.3 and 2.15.3 due to reasons beyond the control of or not attributable to Selected Bidder / TSP. As the consequences for failure to comply the obligations under 2.15.2, 2.15.3 and 2.15.3 is the cancellation of Letter of Intent (LOI). We request you to reconsider the same as it would be unfair if LOI of selected bidder is cancelled due to reasons beyond its control.	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail. Further, the provision for extension provided in Clause 2.15.2 of RFP document shall be applicable.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
82.	RPF **Clause 2.4.3** The amendment to the RFP shall be notified to all the Bidders through the electronic bidding platform and shall be binding on them.	We understand that the BPC will also continue to share amendments / corrigendum through emails as per the current practice.	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail.
83.	RPF **Clause 3.6.1** However, if no bid is received during the e-reverse bidding stage then the Bidder with lowest quoted initial transmission charges ("Initial Offer") during e-bidding stage shall be declared as the Successful Bidder, ……	We request you to clarify, if two or more bidders quote the same initial offer which turns out to be prevailing lowest levelized tariff and no further discount is offered by any bidder during e-reverse auction. In such case what will be the modility BPC will follow for award of project. BPC to confirm	If the Initial Offer for two or more bidders is same and no bids are quoted in e-RA, the instant case seems to be hypothetical however in such case the decision of the competent authority shall prevail.
84.	RPF General	We request you to kindly accept the Board resolutions passed by Management Committees formed by the Board of Directors of Bidding Company and TEE / affiliate respectively and duly authorized by the Board of Directors for participation in various tenders issued by Govt. authorities in response to the RFP submission. The board meeting of Bidding Company / TEE may	The Board Resolutions passed by the Management Committee with duly authorized from the Board of Directors may be considered as per the provisions of RFP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		not be scheduled till RFP submission. Thus, we request you to kindly consider the board resolution passed by the management committee formed by the board of directors' w.r.t. Authorization from Bidding Company and TEE.	
85.	RPF ANNEXURE 22 – FORMAT FOR AFFIDAVIT	We understand that the declaration and details with respect to conviction and investigation is to be provided for Affiliate / Parent company of the Bidding company only if such an Affiliate / Parent company is being used for meeting financial / technical qualification requirements.	The declaration and details with respect to Clause 2.1.9 of RFP is to be provided by the bidding company including Affiliate / Parent company of the Bidding company being used for meeting financial / technical qualification requirements as per Annexure 22 of the RFP document.
86.	**TSA, Article 3.3.1** If any of the conditions specified in Article 3.1.3 is not duly fulfilled by the TSP even within three (3) Months after the time specified therein, then on and from the expiry of such period and until the TSP has satisfied all the conditions specified in Article 3.1.3, the TSP shall, on a monthly basis, be liable to furnish to Central Transmission Utility of India Limited (being the Nodal Agency) additional Contract Performance Guarantee of Rs 7.00 Crore (Rupees Seven Crore Only)	In view of the rationale provided here, it is requested to amend the provision regarding refund of additional CPG on fulfillment of Conditions Subsequent. Additional CPG shall be recovered for the non-fulfillment of Conditions Subsequent. However, this additional CPG is then forming part of CPG and is being retained by Nodal Agency. Considering the fact that additional CPG is consequential guarantee for performance related to condition subsequent, it is requested to review the provision and amend the provision to refund the additional CPG on fulfillment of Conditions Subsequent.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	within two (2) Business Days of expiry of every such Month. Such additional Contract Performance Guarantee shall be provided to Central Transmission Utility of India Limited (being the Nodal Agency) in the manner provided in Article 3.1.1 and shall become part of the Contract Performance Guarantee and all the provisions of this Agreement shall be construed accordingly. Central Transmission Utility of India Limited (being the Nodal Agency) shall be entitled to hold and / or invoke the Contract Performance Guarantee, including such additional Contract Performance Guarantee, in accordance with the provisions of this Agreement		
87.	**TSA** **Clause 1.6.1.5** The TSP shall seek approval under Section 164 of Electricity Act, from CEA after acquisition of SPV [which is under incorporation]. The approval shall be granted by	It is requested you to kindly clarify whether process of obtaining authorization U/s 164 of Electricity Act, 2003 would be initiated by B*P*C. It is suggested that BPC may initiate the process for obtaining approval U/s 164 based on the survey undertaken by BPC.	Approval under Section 164 is in the scope of TSP. Further, please also refer Clause No. 2.5.6 (m) & 2.5.7 of the RFP document.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	CEA generally within 30 days but in no case later than 45 days from the date of receipt of application (complete in all aspects).	It may be appreciated that obtaining approval U/s 164 takes considerable time. In the interest of timely completion of project, it is suggested that BPC may initiate the process U/s 164.	
88.	**TSA** **Article 4.4 Extension of Time**	TSP is required to obtain certain clearances/ approval such as authorization u/s 164, Forest clearance, Grant of Transmission License and approval for adoption of tariff etc. In case if there is any delay in these approvals beyond stipulated time, such delay shall be considered for extension of SCOD of the project and any consequential increase in cost shall be allowed through appropriate adjustment in the tariff. Clearances/ approval such as authorization u/s 164, Forest clearance, Grant of Transmission License and approval for adoption of tariff are not within the control of TSP once it has been applied after fulfilling all the necessary compliance, any consequential delay is required to be allowed.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
89.	**TSA** **Article 5.1.2** The TSP acknowledges and agrees that it shall not be relieved from any of its obligations under this Agreement or be entitled to any extension of time or any	TSP cannot be burdened with impact of unsuitability of the site or transmission line route due to reasons beyond control. Therefore, suitable revision may be carried out in clause 5.1.2. There may be number of reasons for unsuitability of the site or transmission line route which are beyond	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	compensation whatsoever by reason of the unsuitability of the Site or Transmission Line route(s).	control of the TSP. For such instances, suitable extension of time and appropriate adjustment in tariff shall be provided.	
90.	**TSA, Article 5.6** **Site regulations and Construction Documents** The TSP shall abide by the Safety Rules and Procedures as mentioned in Schedule 3 of this Agreement The TSP shall retain at the Site and make available for inspection at all reasonable times copies of the Consents, Clearances and Permits, construction drawings and other documents related to construction.	Inspection of Construction drawings and other documents related to construction may be deleted from clause no. 5.6. Construction drawings and few specific documents may be proprietary/ confidential and is against commercial interest of the TSP.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
91.	**TSA** **Article. 6.4.1** Liquidated Damages for Delay in achieving COD of Project by TSP.	If the TSP fails to achieve COD for any Element of the Project or for the Project by SCOD, then the TSP is required to pay liquidated damages. It is noted that, Clause 6.4.1 of the TSA does not exclude delays caused due to a Force Majeure or Nodal Agency's default . This may well be a drafting oversight and may be clarified. The TSP should also not be liable to pay liquidated damages in the event the delay is not attributable to the TSP. Accordingly, it may be clarified that no	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		damages will be payable in the event the delay is on account of Force Majeure or Nodal Agency's default.	
92.	**TSA** **Article 11.3 Force Majeure** A 'Force Majeure' means any event or circumstance or combination of events and circumstances including those stated below that wholly or partly prevents or unavoidably delays an Affected Party in the performance of its obligations/ roles under this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:	Underlined text may be added under Article 11.3 : A 'Force Majeure' means any event or circumstance or combination of events and circumstances including those stated below that wholly or partly prevents or unavoidably delays an Affected Party or **makes performance of obligation commercially unviable for the Affected Party** in the performance of its obligations/ roles under this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
93.	**TSA & RFP** **<u>Provisions in TSA</u>** *(Provision related to non fulfilment of condition subsequent)*	The blacklisting of TSP for a period of 5 years for default, failure to complete conditions subsequent & annulment of award, and for indefinite period for error in online and physical submission is onerous and harsh on TSP.	This is as per the Standard Bidding Documents. The provisions of RFP & TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	3.3.6 The Nodal agency, on the failure of the TSP to fulfil its obligations, if it considers that there are sufficient grounds for so doing, apart from invoking the Contract Performance Guarantee under para 3.3.3 may also initiate proceedings for blacklisting the TSP as per provisions of Article 13.2 of TSA. *(Termination procedure for TSP event of default)* **13.2** Further, the Nodal Agency may also initiate proceedings to blacklist the TSP & its Affiliates from participation in any RFP issued by BPCs for a period of 5 years. **<u>Provisions in RFP</u>** *(Non fulfilment of Obligations by TSP post issuance of LoI and post acquisition of SPV)*	TSP's event of default covers a lot of activities, and if TSP fails to comply with even one activity, TSP is at risk of getting blacklisted. Further, TSA provides discretionary right to Nodal agency to decide whether TSP would be blacklisted. In case of discrepancy in submission, it is requested that BPC shall seek clarification from bidder and upon failure to provide clarification and complete investigation only, should construe such activity as fraudulent practice. Hence it is requested to include blacklisting only in extreme cases and provide definite guidelines on Nodal Agency's right to blacklist bidders. Also in RFP, blacklisting for annulment of project award would be done by government, while in other cases it would done by Nodal Agency. It is requested that blacklisting rights shall only reside with government.	

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	2.15.8 The annulment of the award, under Clause 2.15.5 or 2.15.6 of this RFP, shall be sufficient grounds for blacklisting the bidder, whose award has been annulled, for a period of five years or more, as decided by the National Committee on Transmission, provided that the blacklisting shall be done only after giving the bidder an opportunity for showing cause. (*Discrepancy in online and physical submission of selected bidder)* 3.6.1 In case, there is a discrepancy between the online submission and physical documents, the bid would be out rightly rejected and the bidder shall be construed to have engaged in the fraudulent practice as defined in Clause 2.19.3 with consequences as mentioned in Clause 2.19.2. Further, in such a case, the provisions of Clause 2.5.6 (j) shall apply.		

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
94.	**TSA** **13.3 Procedure for Nodal Agency's non-fulfilment of Role** a. Upon the Nodal Agency not being able to fulfil its role under Article 4.2. the TSP may serve notice on the Nodal Agency, with a copy to CEA and the Lenders' Representative (a ''TSP's Preliminary Notice"), which notice shall specify in reasonable detail the circumstances giving rise to such non-fulfillment of role by the Nodal Agency.	**13.3 Procedure for Nodal Agency's non-fulfilment of Role** a. Upon the Nodal Agency not being able to fulfil its role under Article 4.2. the TSP may serve **TERMINATION** notice on the Nodal Agency, with a copy to CEA and the Lenders' Representative (a ''TSP's Preliminary **Termination** Notice"). The contract clauses as per TSA favors the Nodal Agency. All the termination rights are provided to Nodal Agency and the agreement does not provide the other party (TSP) right to terminate in case of default of Nodal Agency. In absence of termination right, TSP is at risk commercially, if Nodal agency fails to fulfill its assigned responsibilities, for example failure of Nodal Agency to pay the quoted transmission charges. Also, the methodology for computation of compensation to TSP, in case of mutual agreement to terminate, should be defined upfront.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
95.	**TSA** 3.3.4 In case of inability of the TSP to fulfil the conditions specified in Article 3.1.3 due to any Force Majeure Event, the time period	3.3.4 In case of inability of the TSP to fulfil the conditions specified in Article 3.1.3 due to any Force Majeure Event, the time period for fulfilment of the condition subsequent as mentioned in Article 3.1.3, may be extended for a period of such Force Majeure	Provisions of Clause No. 11.7 (e) of the TSA are clear in this regard.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	for fulfilment of the condition subsequent as mentioned in Article 3.1.3, may be extended for a period of such Force Majeure Event. Alternatively, if deemed necessary, this Agreement may be terminated by the Nodal Agency by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement and the Contract Performance Guarantee shall be returned as per the provisions of Article 6.5.1. 4.4.2 In the event that an Element or the Project cannot be commissioned by its Scheduled COD on account of any Force Majeure Event as per Article11, the Scheduled COD shall be extended, by a 'day to day' basis for a period of such Force Majeure	Event. I**n case the Force Majeure Event continues even after a period of one hundred and eighty (180) days if deemed necessary, the Nodal Agency or TSP, upon mutual agreement may terminate the Agreement as** per the provisions of Article 13.4 by giving a Termination Notice to **the other party**, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement and the Contract Performance Guarantee shall be returned as per the provisions of Article 6.5.1. 4.4.2 In the event that an Element or the Project cannot be commissioned by its Scheduled COD on account of any Force Majeure Event as per Article11, the Scheduled COD shall be extended, by a 'day to day' basis for a period of such Force Majeure Event. I**n case the Force Majeure Event continues even after a period of one hundred and eighty (180) days if deemed necessary, the Nodal Agency or TSP, upon mutual agreement may terminate the Agreement as** per the provisions of Article 13.4 by giving a Termination Notice to **the other party**, in writing, of at least seven (7) days, with a copy to CEA	

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Event. **Alternatively, if deemed necessary, the Nodal Agency may terminate the Agreement as** per the provisions of Article 13.4 by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement. 13.4 Termination due to Force Majeure 13.4.1 In case the Parties could not reach an agreement pursuant to Articles 3.3.4 and 4.4.2 of this Agreement and the Force Majeure Event or its effects continue to be present, the Nodal Agency shall have the right to cause termination of the Agreement. In case of such termination, the Contract Performance Guarantee shall be returned to the TSP as per the provisions of Article 6.5.1.	and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement. In case of delay in SCOD due to FM event, the provision gives discretionary right to Nodal Agency to terminate TSA after occurrence of FM event. There should be gestation period of at least 6 months after start of FM event. Post completion of 6 months, both parties may decide to terminate the contract on mutual agreement. In case of FM, there should not be any unilateral right to terminate. Also, the methodology for computation of compensation to TSP, in case of mutual agreement to terminate, should be defined upfront.	

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
96.	**TSA** Clause 5.8 "Remedial Measures: The TSP shall take all necessary actions for remedying the shortfall in achievement of timely progress in execution of the Project, if any, as intimated by the Independent Engineer and/ or CEA and/ or the Nodal Agency. However, such intimation by the Independent Engineer and/ or CEA and/ or the Nodal Agency and the subsequent effect of such remedial measures carried out by the TSP shall not relieve the TSP of its obligations in the Agreement. Independent Engineer and/ or CEA and/ or the Nodal Agency may carry out random inspections during the Project execution, as and when deemed necessary by it. **If the shortfalls as intimated to the TSP are not remedied to the satisfaction of the CEA and/ or the Nodal Agency, this Agreement may be terminated by**	This is very stringent clause and provides for agreement termination at the subjective discretion of Nodal Agency. Request to modify the clause as: **…… If the shortfalls as intimated to the TSP are not remedied to the satisfaction of the CEA and/ or the Nodal Agency, it may refer the same to the Appropriate Commission for appropriate action.**	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	the Nodal Agency by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement ."		
97.	**TSA** 1.6.1.1 ….. Further, the actual location of substations, switching stations or HVDC terminal or inverter stations in the scope of TSP shall not be beyond 1 Km radius of the location proposed by the BPC in the survey report.	Further, the actual location of substations, switching stations or HVDC terminal or inverter stations in the scope of TSP shall not be beyond **5 Km** radius of the location proposed by the BPC in the survey report. As mentioned in RFP, BPC & Nodal Agency do not make any warranty or representation on the accuracy of survey report. That being said, if the substation land location proposed by BPC is unfeasible due to some reason like geological, or it is marked as protected land, TSP would have to bear that additional risk, due to which project may get delayed and TSP may be blacklisted. It may be appreciated that this will increase the bargaining power of the Sellers, which will increase the project cost and will ultimately affect the beneficiaries adversely.	The location of substation is limited to be within 1 km radius of boundary of the plot (1 km from any of the corners) furnished by the BPC in their survey report. This is as per Standard Bidding Documents.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		Further, in revised TSA, any error or omission in survey report provided by BPC would not be considered as Force Majeure. BPC should not be absolved from its responsibilities and any such error or omission should form part of the FM, as it is clearly beyond the control of the TSP.	
98.	**TSA** 13.7 Termination Payment 13.7.1 If Agreement is terminated on account of Force Majeure Events, nonrequirement of any Element or Project during Construction, Nodal Agency's non-fulfilment of Role & TSP's Event of Default, the TSP shall be entitled for Termination Payment equivalent to valuation of Project Assets. Upon payment, the Nodal Agency shall take over the Project Assets.	Guidelines on valuation of project assets conducted should be provided to ensure there is no ambiguity. Further if TSA is terminated during operating period of project, guidelines on valuation of assets in such event to be provided.	Valuation of project assets shall be done as per the prevailing industry practices. Please refer Clause No. 18.2.e. of TSA.
99.	**TSA** 13.5 Termination or amendment due to non-requirement of any Element or Project during construction 13.5.1 In case any Element or	Guidelines on amendment of TSA in case of non-requirement of any element during construction should be clearly specified, especially the treatment of Quoted Transmission Charges and capital cost of element no longer required.	Valuation of project assets shall be done as per the prevailing industry practices. Please refer Clause No. 18.2.e. of TSA.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Project, which is under construction, is no longer required due to any reason whatsoever, the Nodal Agency may issue a notice to this effect to the TSP. 13.5.2 Nodal agency may also issue notice to the TSP seeking their response to the proposed termination/ amendment (as the case may be) of the Agreement. The Nodal Agency shall issue copy of such notice to Lenders. In the notice, Nodal Agency shall also include an assessment of the physical progress made by TSP in the Element/ Project (as the case may be) that is no longer required. 13.5.3 The TSP shall neither carry out further Investment nor carry out any work on the Element/ Project (as the case may be) that is no longer required after delivery of the notice. 13.5.4 After taking into account the comments of the TSP, the Nodal Agency may terminate the Agreement or amend it if both	For example, if 50% construction of an element is completed and that element is not required, how would the TSP be compensated for the capital cost of the element.	

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Parties agree to the amendment.		
100.	**TSA** 12. Change in Law	Inclusion of change in acquisition price in Change in Law As SPV acquisition price is part of capital cost of project, any change in Acquisition price after bidding would directly affect the bidder commercially and it is totally beyond the control of TSP. Hence, it is requested to kindly allow change in acquisition price under CIL event.	The change in acquisition price to the extent as per Provisions under Clause No. 3.5 of Tariff Based Competitive Bidding Guidelines for Transmission Service issued on 10.08.2021 shall prevail.
101.	**TSA** D)The TSP has agreed to make an application for a Transmission License to the Commission for setting up the Project on **build, own, operate and transfer basis.**	D)The TSP has agreed to make an application for a Transmission License to the Appropriate Commission for setting up the Project **on build, own, operate and maintain basis**. As per revised TSA, asset to be transferred to Nodal agency post 35 years (BOOT). The assets created would be **Financial assets instead of Fixed assets**. Under IndAS accounting rules, **depreciation** of financial assets is **not allowed**. Further, TSP would be at risk of authorities levying 18% GST upfront on construction revenue recognized on COD. **Higher taxation** would impact the project economics eventually leading to higher tariff for the Consumers.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		Under BOOT model, **asset condition may degrade** towards end of concession period due to lack of incentive for developer to maintain the asset by incurring some capex. Hence it is requested to continue with the BOOM model.	
102.	**TSA** 5.5.6 For any delay in commissioning any critical Element(s), as identified in Schedule 1 & Schedule 2 of this Agreement, **beyond a period of 45 days** shall lead to a sequestration of 10% of the Contract Performance Guarantee. 6.4.5 For avoidance of doubt, it is clarified that amount payable by TSP under this Article is over and above the penalty payable by TSP under Article 5.5.6 of this Agreement.	5.5.6 For any delay in commissioning any critical Element(s), as identified in Schedule 1 & Schedule 2 of this Agreement, **beyond a period of 6 months (as per clause 13.1.b) unless extended by Nodal Agency due to FM/CIL as per provisions of this agreement,** shall lead to a sequestration of 10% of the Contract Performance Guarantee. Clause 13.1.b of TSA allows upto 6 months delay in commissioning of element after SCOD. 10% sequestration clause does not cover any delay due FM or CIL event. If in case all the elements of projects are declared as "critical elements", TSP is liable for 10% CPG sequestration. It is requested to kindly extend period beyond which CPG sequestration shall occur to 6 months. Further, TSP should not be made liable for LD payments on account of delay in project / element commissioning more than as identified under clauses 6.4.1 and 6.4.2	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
103.	**TSA** AA- Actual Availability ; MTC- Monthly transmission charges; Tmn = transmission charges for month "m" in contract year "n" *For incentive* *a. If 98%< AA < 98.5%; MTC= Tmn*1;* *b. If 98.5% < AA < 99.75% ;* *MTC= Tmn* (AA / 98.5 %);* *c. If AA> 99.75%;* *MTC = Tmn* (99.75 % /98.5 %);* *For Penalty* *d. If 95 % < AA < 98 %* *MTC = Tmn* (AA / 98 %);* *e. If AA < 95 %* *MTC = Tmn* (AA/98 %) – 0.02* (Tmn* (AA/98%))*	*Incentive = 0.02 x Annual Transmission Charges x (Actual Annual Availability – Target Availability)* Target Availability: AC -98% & HVDC -95% *Incentive = 0.02 x Annual Transmission Charges x (Actual Annual Availability – Target Availability)* Target Availability: AC -98% & HVDC -95% The tariff for projects under TBCB has seen a reduction of 30%-50% as compared to RTM projects. The incentive for maintaining availability above target availability aids in increasing reliability of the transmission system. As the incentive is reduced as per revised provisions, developers may increase the Quoted tariffs to compensate which may result in increased cost of electricity to end consumer. Further there is no incentive for maintaining actual availability between 98% and 98.5%. Hence it is requested to continue with existing provisions for penalty and incentive calculation.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
104.	**TSA** 3.3.4 Provided, that due to the provisions of Article 3.3.4, any increase in the time period for completion of conditions subsequent mentioned under Article 3.1 .3, shall lead to an equal increase in the time period for the Scheduled COD. **If the Scheduled COD is extended beyond a period of one hundred eighty (180) days due to the provisions of this Article 3.3.4, the TSP will be allowed to recover the interest cost during construction corresponding to the period exceeding one hundred eighty (180) days by adjustment in the Transmission Charges in accordance with Schedule 9.**	3.3.4 Provided, that due to the provisions of Article 3.3.4, any increase in the time period for completion of conditions subsequent mentioned under Article 3.1 .3, shall lead to an equal increase in the time period for the Scheduled COD. **The TSP will be allowed to recover the interest cost during construction corresponding for the period of FM/CIL event by adjustment in the Transmission Charges in accordance with Schedule 9.** In event of FM/CIL event, provisions under revised TSA do not provide for any adjustment in transmission charges for a period of 180 days. TSP is allowed to recover interest cost during construction for period exceeding 180 days. As large portion (70%) of project cost is funded through debt, repayment of which does not start till COD, any delay in SCOD leads to higher interest built up. This severely affects the project economics of developer. Hence it is requested to allow for recovery of interest cost during construction for entire period of FM/CIL event.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
105.	**TSA** 18. 1 The Nodal Agency shall appoint an agency/ company as Independent Engineer (IE)…….	It is requested to not appoint an external agency (Independent Engineer-IE) and the Nodal Agency to execute the functions such as progress monitoring, quality assurance, determination of works/services,	Nodal Agency shall appoint the Independent Engineer as per the provisions of TSA.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Responsibilities of IE include progress monitoring, ensuring quality, determine costs of works/services, determine valuation of project assets, assist parties in dispute resolution.	valuation of projects assets. Any delay in appointment of IE would delay the project execution. Further addition of an external agency would also be an additional expense which would eventually result in tariff increase.	
106.	**TSA** 3.1 Satisfaction of Conditions Subsequent by the TSP c. Execute this Agreement;	Since the execution of TSA will require coordination with the CTU, it is requested that the TSA be executed before project acquisition by the project SPV in the interest of saving time. This will also facilitate early completion of the project critical activities	As per revised TBCB Guidelines and SBDs issued by MoP, GoI, TSP on the date of acquisition of SPV from the BPC will enter into a Transmission Service Agreement (TSA) with the Nodal Agency
107.	**TSA** 3.1.3 The TSP agrees and undertakes to duly perform and complete the following activities within six (6) months from the Effective Date …… To obtain the Transmission License for the Project from the Commission;	While the TSP will apply to the respective commission for grant of license, time required for the issuance is beyond the control of TSP once the application is made. We request to modify the clause suitably to incorporate the above.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
108.	**SPA** Clause 3.5 The Selected Bidder hereby	We understand that acquisition price towards acquisition of one hundred percent (100%) of the equity shareholding of the Company, communicated to bidder would include all liabilities pertaining to	The Acquisition Price includes all the assets and liabilities pertaining to SPV and details of the same will be intimated by the BPC as per the provisions of RFP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	acknowledges and agrees that after the date of acquisition of one hundred percent (100%) of the Shares of the Company by the Selected Bidder as per Clause 3.3, (a) the authority of the BPC in respect of the Bid Process shall forthwith cease and any actions to be taken thereafter regarding the Bid Process will be undertaken by the Central Transmission Utility of India Limited themselves, (b) all rights and obligations of the BPC shall cease forthwith, (c) all other rights and obligations of the Company shall be of the TSP and (d) any decisions taken by the BPC on behalf of the Company prior to the date of acquisition, shall continue to be binding on the Company and/or Central Transmission Utility of India Limited as the case may be.	SPV prior to closing date. Please confirm	
109.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	BPC to Confirm the scope of work for TSP, It is understood that 2 Nos of Line Bay along with Switchable line reactor only is in scope of bidder. Tie	**<u>Fatehgarh-3 s/s extension:</u>** Indicative SLD of 765kV Fatehgarh-3 s/s (DRG No. C/ENGG/SS/FATEHGARH-3/SLD/01 Rev-00) (copy

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		bay is not in present scope of work.	attached at **Annexure A**). It may be observed from the drawing that the present two nos. of line bays alongwith switchable line reactor shall be in the diameter where the tie bay would be available. **<u>Beawar s/s extension:</u>** Considering the bay configuration of 765kV system under the scope of the developer of Beawar s/s, Tie bays may also be required for the present two nos. of 765kV line bays alongwith switchable line reactor. TSP shall coordinate with the developer of Beawar s/s for the same.
110.	**RFP** General Scope of Work	BPC to confirm any spare connection arrangement for reactor to be considered or not in present scope of work	All necessary spare connection arrangement for the Reactor is in the scope of TSP.
111.	**RFP** AC & DC Supply	It is understood that spare feeder with module is available in existing ACDB & DCDB for bays under present scope of work. TSP need not to consider separate panel for the same. BPC to confirm 2/39	Modules for all future AC/DC feeders is kept under the scope of Beawar s/s developer. Also, Modules for all future AC/DC feeders is envisaged under scope of Fatehgarh-3 s/s developer.
112.	**RFP**	It is understand that existing equipment such as DG Set, LT Transformer, Battery & Battery charger have	Confirmed.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Aux Supply	sufficient capacity to cater the requirements of bay under present scope of work, hence no need to consider new DG Set, LT Transformer, Battery & Battery charger in the existing substations. BPC to confirm the same. 2/39	
113.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	BPC to confirm that existing FFPH system shall have sufficient capacity to cater the present scope of works. TSP to extend the existing Hydrant system and HVWS for Reactors. No need to consider the new pump house along with water reservoir. 3/39	Refer clause B.3.2 of technical specification of substation of RfP where it is mention that *"at existing substations, the fire-fighting systems as available shall be extended to meet the additional requirements."*
114.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	BPC to provide the existing details of Visual Monitoring System. Further TSP to consider the present scope of work area for VMS. BPC to confirm.	TSP shall consider VMS as per clause B.3.8 of technical specification of substation of RfP.
115.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	BPC to provide the Layout, earth mat layout, cable trench drawing and location of kiosks for both pooling stations.	Refer clause B.5.0 of technical specification of substation of RfP.
116.	**RFP**	BPC to furnish the SCADA architecture drawings and also bus bar protection details of existing	Refer clause B.5.0 of technical specification of substation of RfP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	substations for both pooling stations.	
117.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	BPC to confirm, whether the area under present scope is levelled/developed or yet to be levelled/developed?	Survey Report is under finalization and shall be issued shortly.
118.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	BPC to provide the details of existing bus bar scheme i.e. centralized or distributed type. BPC to also provide the make of the existing Bus bar relay.	Refer clause B.2.4 (C) of technical specification of substation of RfP where it is mention that " *For existing substations, the existing bus bar protection shall be augmented as per requirement."*
119.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	BPC to confirm whether existing kiosk/BCR/SPR shall be used for housing relay panel for new line Bay or bidder has to, construct new kiosk/BCR/SPR for housing the relay panel for same.	The same is in the scope of the TSP.
120.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	Since it's a bay extension works within existing premises, BPC to provide the scope of boundary wall & development of other infrastructures if any within plot.	Boundary wall is not envisaged for the case of s/s extension. However, development of required infrastructures for present bay extension area is in present scope of the TSP
121.	**RFP** 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	it is understood that existing busbar protection have provision for future bays and also PUs are available for future bays. For SCADA, it is understood that necessary process I/O shall available for future bays and accordingly license for same. BPC to confirm.	Bus bar modules for the present bays has been kept under the scope of developer of Beawar & Fathehgarh-3 s/s. All other necessary associated works for the bay extensions shall be carried out by the TSP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
122.	**RFP** General	Since it's a bay extension works it is understood that main bus is available, and TSP need not to extend any Main Bus under present scope of work	The same shall be in the scope of the TSP
123.	**RFP** **Section -1** **Clause 1.6.1.1** Further, the actual location of substations, switching stations or HVDC terminal or inverter stations in the scope of TSP shall **not be beyond 1 Km radius** of the location proposed by the BPC in the survey report.	Location within the radius mentioned under clause 1.6.1.1 is difficult to acquire. Please allow TSP to acquire the land within 5 Km radius of the location proposed by the BPC in the survey report. Clarity in the provisions of document	The location of substation is limited to be within 1 km radius of boundary of the plot (1 km from any of the corners) furnished by the BPC in their survey report. This is as per Standard Bidding Document.
124.	**RFP** **Section -1** **Clause 1.6.1.1** TSP shall do all necessary Consents, Clearances and Permits (way leave, environment & forest, civil aviation, railway/ road/river/canal/power crossing/PTCC, etc.),	Recently, Supreme court has suspended all the work of transmission line which is falling under the potential area of GIB. As per our understanding, Transmission line can be construct in potential area. Please confirm This is required to ascertain the regulatory aspects of the project	Approvals are responsibility of TSP. Bidders are required to familiarize themselves with all relevant Rules/ Regulations/ Guidelines issued by the Central Government, CERC, CEA or any relevant Authority and amendments thereof. Further, please refer Clause No. 2.5.7.2 of RFP Document.
125.	**RFP**	Please clarify the way out if the entire bid process is cancelled without any fault of the Bidder and for the	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Cl.11 p. no 6 BPC reserves the right to reject all Bid and/or annul the process of tariff based competitive bidding for selection of Bidder as TSP to execute the Project without assigning any reason. BPC shall not bear any liability, whatsoever, in this regard.	reasons attributable to the BPC only We suggest to clarify in which condition BPC shall annul the project This is required to ascertain the regulatory aspects of the project	
126.	**RFP** Section -1 Clause 1.6 1.6.2 Scope of Bid Process Coordinator (BPC) Bidders a Survey Report for the Project at least forty five (45) days prior to the Bid Deadline.	BPC shall issue Bidders a Survey Report for the Project at least forty five (45) days prior to the Bid Deadline. We request you to please share status of survey work. Clarity in the provisions of document	Survey Report for the Project shall be provided as per the provisions of the RFP document.
127.	**RFP** Section -1 Clause 1.6 1.6.2 Scope of Bid Process	We request you to please share status of approval of scheme under Section 68 of Electricity Act. Clarity in the provisions of document	The prior approval under Section 68 shall be shared with the successful bidder.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Coordinator (BPC) To obtain approval for laying of overhead transmission lines under Section 68 of Electricity Act, from the Government at least twenty (20) days prior to Bid Deadline.		
128.	**RFP** Request For Proposal Notification: Sr. No. 6 on Page no. 4 ……. Acquisition Price to be intimated by the BPC, twenty (20) days prior to the Bid Deadline.	Based on the past experience, it is observed that mandatory 20 days is not being adhered to by the BPC after furnishing the acquisition price. We request you to kindly consider extension on day to day basis for any delay in providing acquisition price In the recent RE projects floated, the acquisition price has not been furnished by the BPC within the prescribed time limits	The tentative acquisition price of the SPV shall be provided as per the provisions of the RFP document.
129.	**RFP** Request for Proposal Page no.117 & Annexure B (Draft Pre-Award Integrity Pact) Immediately after issuance of RFP document, the Bidder shall submit the Pre-Award Integrity Pact in the format as prescribed in **Annexure**	In order to prepare and submit the required pre-award integrity pact, We request BPC to kindly share Name & designation of representative of BPC whose name is to be mentioned in the agreement Clarity in the provisions of document	The authorized signatory for signing of the Pre-Award Integrity Pact on behalf of BPC shall be communicated separately.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	B.. Draft Pre-Award Integrity Pact ……, between, on one hand, [Insert Name & designation of representative of BPC]..		
130.	**Technical Specifications of Transmission System** Clause no 6.0 Conductor selection TSP may use either of ACSR/AAAC/AL59 conductor:	We understand that TSP may choose ACSR/AAAC/AL59 conductor. Please advise further based on system study done by CTU/RLDC for which type of conductor best suited for 765 KV D/C line This is required for system stability purpose	TSP may select type of conductor from the options specified in clause A.6.0 of technical specification of Transmission Line of RfP.
131.	**RFP** Section -1 Clause 1.6 1.6.2 Scope of Bid Process Coordinator (BPC) To initiate process of seeking forest clearance, if required	We request you to please share i. Details of forest land involved ii. Status of forest clearance / approval of scheme. Clarity in the provisions of document	i. Survey Report is under finalization and shall be issued shortly. ii. Based on the route survey, the process of initiation of forest clearance for the forest stretches, if any, enroute the proposed line alignment will be initiated by way of writing letters to the concerned authority (ies). However, it may be noted that it will be the responsibility of TSP for obtaining forest clearance for the forest stretches, if any, in the Survey Report.
132.	**RFP** Space and power sources	We understand that existing substation shall provide the space and power sources for PLCC and FOTE for bay extension at both end	For present scope of bay extension work, TSP to provide PLCC & FOTE at their Bay Kiosk. TSP shall extend the power from AC & DC distribution

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		Please confirm This is required for timely execution of the project.	board of the s/s.
133.	**RFP** Section 1	Please provide coordinate of termination point at both ends (i.e. Fatehgarh-3 & Beawar S/s Gantry) For preparation of Bid	Survey Report is under finalization and shall be issued shortly.
134.	**RFP** Section-1 Clause 1.2	Please inform if only bays are to be provided by TSP and respective tie bays are already existing at both Bewar and Fatehgarh - 3 end. For proper cost and time schedule estimation	**Fatehgarh-3 s/s extension:** Indicative SLD of 765kV Fatehgarh-3 s/s (DRG No. C/ENGG/SS/FATEHGARH-3/SLD/01 Rev-00) (attached at **Annexure A**). It may be observed from the drawing that the present two nos. of line bays alongwith switchable line reactor shall be in the diameter where the tie bay would be available. **Beawar s/s extension:** Considering the bay configuration of 765kV system under the scope of the developer of Beawar s/s, Tie bays may also be required for the present two nos. of 765kV line bays alongwith switchable line reactor. TSP shall coordinate with the developer of Beawar s/s for the same.
135.	**RFP** Section-1 Clause 1.2	Please provide substation layout indicating space allocated for the reactors and bays For proper cost and time schedule estimation	Refer Indicative GA drawing (DRG. No.: C/ENGG/SS/FATEHGARH-3/GA/01, REV 00) of Fatehgarh-3 s/s (attached at **Annexure B**)

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
136.	**RFP** Section-1 Clause 1.6: Brief Scope of work	Since proposed line may likely to involve potential GIB area, please clarify that any additional measures required for laying line in potential GIB area. For proper estimation of Project Cost	Bidders are required to familiarize themselves with all relevant prevailing Rules/ Regulations/ Guidelines issued by the concerned authorities, Central Government, the CERC and the CEA and amendments thereof. Further, please refer Clause No. 2.5.7.2 of RFP document.
137.	**RFP** Specific Technical Requirements for Substation Section B.5.0 Extension of existing substation	We understand that the drawings/ details of existing substations as mentioned will be provided well in advance before last date of bid submission. Please confirm. For proper estimation of Project Cost.	i. Indicative SLD of 765kV Fatehgarh-3 s/s (DRG No. C/ENGG/SS/ FATEHGARH-3/SLD/01 Rev-00) (copy attached at **Annexure A**). ii. Indicative GA drawing (DRG. No.: C/ENGG/SS/FATEHGARH-3/GA/01, REV 00) of Fatehgarh-3 s/s (attached at **Annexure B**) Further, TSP shall coordinate with the developer of Beawar s/s for the same.
138.	**RFP** **DEFINITIONS, "Infrastructure sector", Page No. 12**	Coverage of type of works within infrastructure sector. Add: Including Mining, Building and Urban Infrastructure projects. Govt. of India, Ministry of Finance has published a document on 31st January 2020 describing Infra investment of Rs. 102 Lakh crores in FY 2020-2025	Provisions of the RFP document are amply clear in this regard and shall apply.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		(**Copy Attached herewith as Annexure 1**). The document says that this Infra investment relates to Railways, Road Transport, Civil Aviation, Shipping, telecom, Petroleum and Natural Gas, Power, Mining, Housing and Urban Infrastructure. It may be noted that certain categories like Mining, Housing and urban infrastructure are not defined appropriately in the Gazette notification referred in the definition of infrastructure sector in tender document (**Copy of Gazette notification Attached herewith as Annexure 2**). It is therefore requested to kindly add the above notification of Ministry of Finance dated 31st January 2020 in the definition of infrastructure accordingly an amendment may be issued in this regard.	
139.	RFP SECTION – 2, Experience in construction of project in infrastructure sector:	To also consider substantially completed works. Add: Substantially completed projects The criteria asks to consider fully completed construction works. Since substantially completed works are being considered in general by all clients, we request substantially completed works may also be considered where payments has been received for more than 95% of the contract value.	Provisions of the RFP document are amply clear in this regard and shall apply.
140.	**RFP** General	We understand TSP has to follow RFP requirement only. Existing station owner practice and	Implementation of the transmission scheme shall be executed by TSP in accordance with the

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		requirement is not binding on TSP. Bidder needs the information for proper estimation	requirement/provisions of RFP document and subsequent clarifications.
141.	RFP, section-1, Clause 1.5, Para 3 "The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to CTU or its successors or an agency as decided by the Central Government after 35 years from COD of project at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which CTU shall be entitled to take over the project assets Suo moto".	1) Please note that there is no clarity about the liability of the TSP post Transfer of asset. We request BPC to define the process of Transfer. 2) As the project is BOOT basis, we request BPC to provide Transfer Agreement for bidder's review and assessment. 3) As the project is BOOT basis, what will be the Liability of TSP in case of any Default post Transfer to CTU. 4) As per the RFP, the transfer shall be completed within 90 days after 35 years from COD of project failing which CTU shall be entitled to take over the project assets Suo moto. We request BPC to confirm whether the Project is required to be given on as is where is basis or if CTU can ask for certain refurbishments to be done? 5) IT is requested to BPC to confirm will there be an obligation of the TSP to obtain re obtain the clearance at the time of Transfer, in case of NHAI, Road, Highways etc. Bidder needs the information for proper estimation.	1. In instant case, the project assets along with substation land, right of way and clearances shall be transferred to CTUIL or its successors or an agency as decided by the Central Government after 35 years from COD of project at zero cost and free from any encumbrance and liability and no elaborate process is required to be laid down. Further, other issues, if any, shall be dealt as per prevailing laws & regulations. 2. Transfer Agreement, if required, may be mutually agreed between the parties at that point of time. 3. In case there is any liability due to an event that has occurred prior to transfer of project assets same shall have to be discharged by TSP. 4. The project assets will be transferred in working condition subject to observations of CTUIL in the examination to be carried out three (3) years prior to the expiry of the project to assess the need of upgradation of the system or renovation and modernization of the existing system. 5. Project Assets including 'applicable permits and authorisations relating to or in respect of the Transmission System' shall be transferred.
142.	RFP, Section-2 Clause 2.6, Note "Note: List of Element(s) along	We understand that of List of Element(s) along with the critical Element(s) are defined under clause no	Please refer Schedule 2 of the TSA.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	with the critical Element(s) to be provided by CEA"	2.6.1. and there will no separate list of Elements(s) to be provided by CEA. Bidder needs the information for proper estimation.	
143.	RFP, Section-2 Clause no. 1.6.1.5 – Grant of Section 164 Approval - The TSP shall seek approval under Section 164 of Electricity Act, from CEA after acquisition of ER NER Transmission Limited. The approval shall be granted by CEA generally within 30 days but in no case later than 45 days from the date of receipt of application (complete in all aspects).	We request BPC to confirm that in case of delay in grant of section 164 approval beyond 45 days by CEA, will this qualify as Force Majeure (FM) event under TSA, and we can get relief as per TSA. Bidder needs the information for proper estimation.	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail.
144.	**RFP** Request for Proposal Notification, Disclaimer This RFP may be withdrawn or cancelled by the BPC at any time without assigning any reasons thereof. BPC further reserves the right, at its complete discretion to reject any or all of the Bids without assigning any reasons whatsoever."	We would like to mention that it will be unreasonable on part of BPC to reject a bid without assigning any reason. Since the BPC can be construed as 'state' under the Constitution, conduct of BPC ought to have transparent and as such BPC cannot take any decision without assigning proper reason/ justification. Bidder needs the information for proper estimation.	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail.
145.	**RFP** Definition: Conflict of Interest" A	It needs to be noted that this definition is vague and wide in as much as it only requires that an entity is	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Bidder shall be considered to be in a Conflict of Interest with one or more Bidders in the same bidding process if they have a relationship with each other, directly or through a common company, that puts them in a position to have access to information about or influence the Bid of another Bidder	able to have access; it is immaterial whether information was accessed or not, just the fact that a party is in a position to access information or influence bid of another party is enough. As far as this aspect is concerned, this definition should be amended. This should further cover any conflict-of-interest situation between the BPC and any of the bidder Bidder needs the information for proper estimation.	
146.	**RFP** Pre Award Integrity Pact: Clause 3.3 provides that "the Bidder shall disclose the name and address of agents and representatives and Indian Bidder shall disclose their foreign principals or associates". Clause 3.4 states that "the Bidder shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid".	BPC is requested to clarify the rationale for having this clause? We understand that The Bidder is free to engage any consultant as long as it is under the purview of applicable law.	This is as per the Standard Bidding Documents. The provisions of RFP shall prevail.
147.	**TSA: Clause F** The TSP has agreed to execute the agreement(s) required, if any,	Please note that the Sharing Regulations only provides for Supplementary TSA and Revenue Sharing Agreement with CTU.	Please refer Clause No. 2.5.7 of RFP document.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	under Sharing Regulations within fifteen (15) days from the date of grant of Transmission License from the Commission.	Kindly confirm is there any other Agreement which is also required to be signed? Bidder needs the information for proper estimation.	
148.	**TSA: Clause H** The billing, collection, and disbursement of the Transmission Charges by the CTU to the ISTS Licensee shall be governed as per Sharing Regulations.	In case of the default in the payment by the DIC, BPC is requested to clarify following a) How will the Transmission charges be recovered? b) what is the assurance for recovery of Transmission charges in view of the repeal of the Regulation of the power supply 2010 by the CERC. Bidder needs the information for proper estimation.	The billing, collection, and disbursement of the Transmission Charges by the CTU to the ISTS Licensee shall be governed as per CERC Sharing Regulations, as amended from time to time.
149.	**TSA ARTICLE: 1** **Definitions and Interpretations** Independent Engineer" shall mean an agency/ company, appointed by Nodal Agency in accordance with the Guidelines for Encouraging Competition in Development of Transmission Projects **TSA ARTICLE: 18** 18.3 Remuneration of Independent Engineer	We understand that as the Independent Engineer to be appointed by Nodal Agency (CTU), The fee and charges of the Independent Engineer shall be paid by CTU and TSP does not have to consider any fee and charges of the Independent Engineer in its bid. Bidder needs the information for proper estimation.	Provisions of the TSA are amply clear in this regard and shall apply.
150.	**TSA ARTICLE: 1** **Definitions and Interpretations** Definition of Nodal Agency	The provision to the definition states that while taking major decisions, CTU shall consult CEA on technical matters and any other matter if it feels	Nodal Agency will consult the CEA on case to case basis as per the provisions of the Standard Bidding Documents.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Nodal Agency" shall mean CTU, which shall execute and implement the Transmission Service Agreement (TSA);	necessary. BPC is requested to provide clarity on what would constitute 'major decisions'; further, what would be the nature of consultation is not clear, whether such consultation would be binding or just advisory in nature? Further, there is an element of discretion as well on the part of CTU, which should be done away with. Bidder needs the information for proper estimation.	
151.	**TSA ARTICLE: 5** **Clause no. 5.5.6 -** For any delay in commissioning any critical Element(s), as identified in Schedule 1 & Schedule 2 of this Agreement, beyond a period of 45 days shall lead to a sequestration of 10% of the Contract Performance Guarantee.	We understand that of List of Element(s) along with the critical Element(s) are defined under clause no 2.6.1. and there will no separate list of Elements(s) to be provided by CEA. Bidder needs the information for proper estimation.	Please refer Schedule 2 of the TSA.
152.	**TSA ARTICLE: 6** **Clause no. 6.1.1** The TSP shall give the RLDC(s), CTU, / STU, as the case may be, and any other agencies as	BPC is requested to clarify in case of preponement of COD, whether the agreement will be effective for a period of 35 years from the date of such COD, or will there be extra period that will be granted to TSP as an incentive for declaring the	Provisions under Schedule 4 of TSA are amply clear in this regard and shall be applicable.

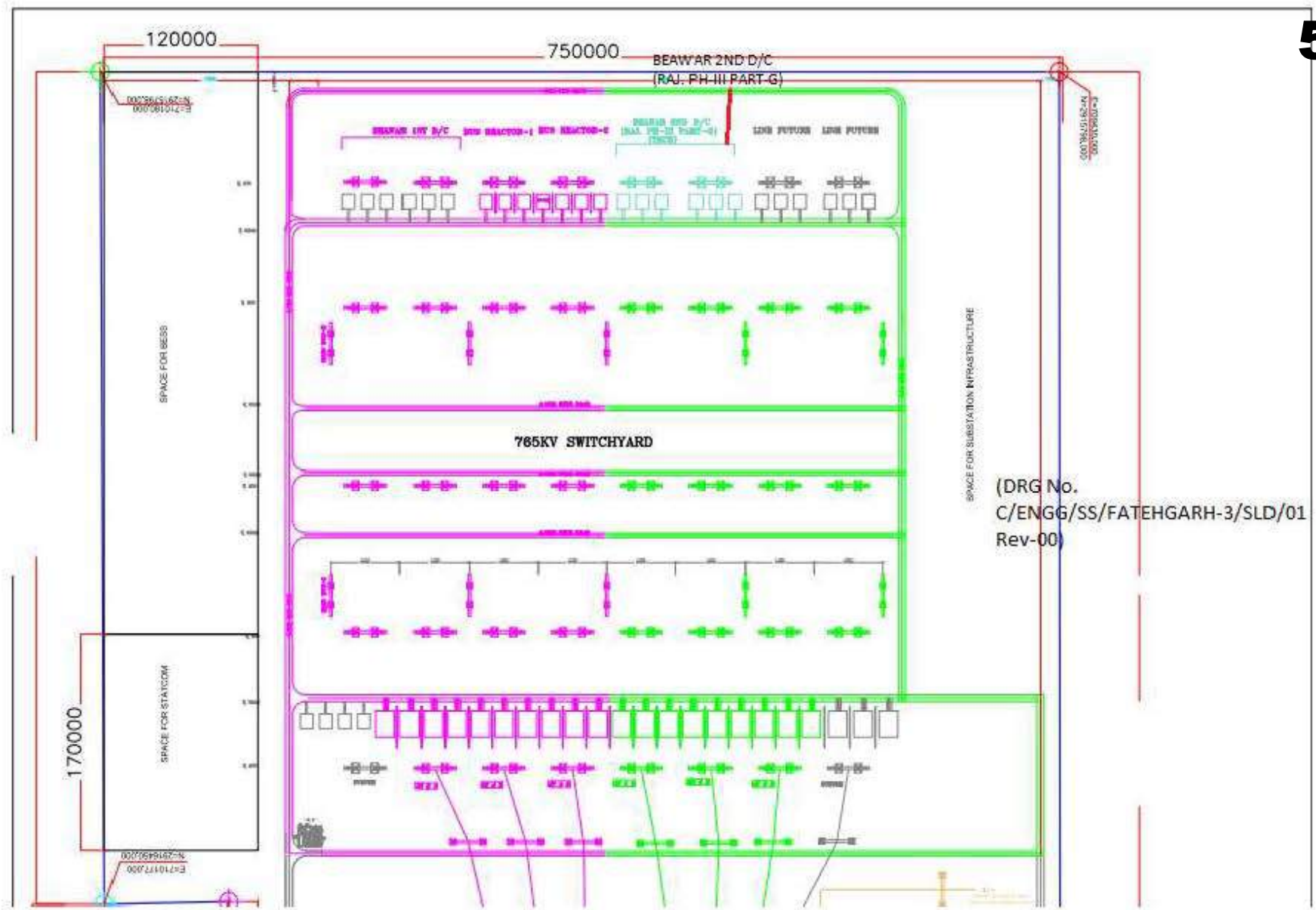
Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	required, at least sixty (60) days advance written notice of the date on which it intends to connect an Element of the Project, which date shall not be earlier than its Scheduled COD or Schedule COD extended as per Article 4.4.1 & 4.4.2 of this Agreement, unless mutually agreed to by Parties. Further, any preponing of COD of any element prior to Scheduled COD must be approved by the Nodal Agency.	commissioning earlier than the SCOD? Bidder needs the information for proper estimation.	
153.	**TSA ARTICLE: 11** Clause no. 11.4.1 …… (g) Any error or omission in the survey report provided by BPC during the bidding process	We request BPC to remove the point no g form the Force Majeure Exclusions. Bidder needs the information for proper estimation.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.
154.	**TSA ARTICLE: 13** **Clause no.13.7** **Termination Payment -** If Agreement is terminated on account of Force Majeure Events, nonrequirement of any Element or Project during Construction, Nodal Agency's non-fulfilment of Role &	As there is no mechanism for termination payment. We request BPC to provide the mechanism for compensating the cost incurred by the TSP for construction of asset, in case of non-requirement of any element during construction stage. Bidder needs the information for proper estimation.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	TSP's Event of Default, the TSP shall be entitled for Termination Payment equivalent to valuation of Project Assets. Upon payment, the Nodal Agency shall take over the Project Assets.		
155.	**TSA ARTICLE: 3** **Clause No. 3.3.4** Provided, that due to the provisions of this Article 3.3.4, any increase in the time period for completion of conditions subsequent mentioned under Article 3.1.3, shall lead to an equal increase in the time period for the Scheduled COD. If the Scheduled COD is extended beyond a period of one hundred eighty (180) days due to the provisions of this Article 3.3.4, the TSP will be allowed to recover the interest cost during construction corresponding to the period exceeding one hundred eighty (180) days by adjustment in the Transmission Charges in accordance with Schedule 9.	What is the rationale for only IDC recovery and no other expenditure like project cost overrun (such as overheads & price variation etc.) Bidder needs the information for billing purpose.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
156.	**TSA ARTICLE: 8** **8.2 Target availability** The Target Availability of each Element and the Project shall be 98%.	As per previous TSA, target availability was at project level not for each element. We request BPC to maintain target availability at Project level only. Bidder needs the information for proper estimation.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail
157.	**TSA ARTICLE: 12** **Relief for change in law 12.2.3 -** 12.2.3 For any claims made under Articles 12.2.1 and 12.2.2 above, the TSP shall provide to the Nodal Agency documentary proof of such increase / decrease in cost of the Project / revenue for establishing the impact of such Change in Law.	Please note that No timelines defined for response by CTU in case of CIL event. We request BPC to define timeline in which CTU will respond to the TSP. Bidder needs the information for proper estimation.	Provisions of TSA are amply clear in this regard and shall apply.
158.	**TSA ARTICLE: 12** **Payment on account of Change in Law 12.4.1** The payment for Change in Law shall be through a separate Bill. However, in case of any change in Monthly Transmission Charges by reason of Change in Law, as determined in accordance with this Agreement, the Bills to be raised by the Nodal Agency after such change in Transmission	BPC is requested to provide the format and timeline for submission of sperate bill of sperate bill for settlement of CIL events? Bidder needs the information for proper estimation.	Provisions of TSA are amply clear in this regard and shall apply.

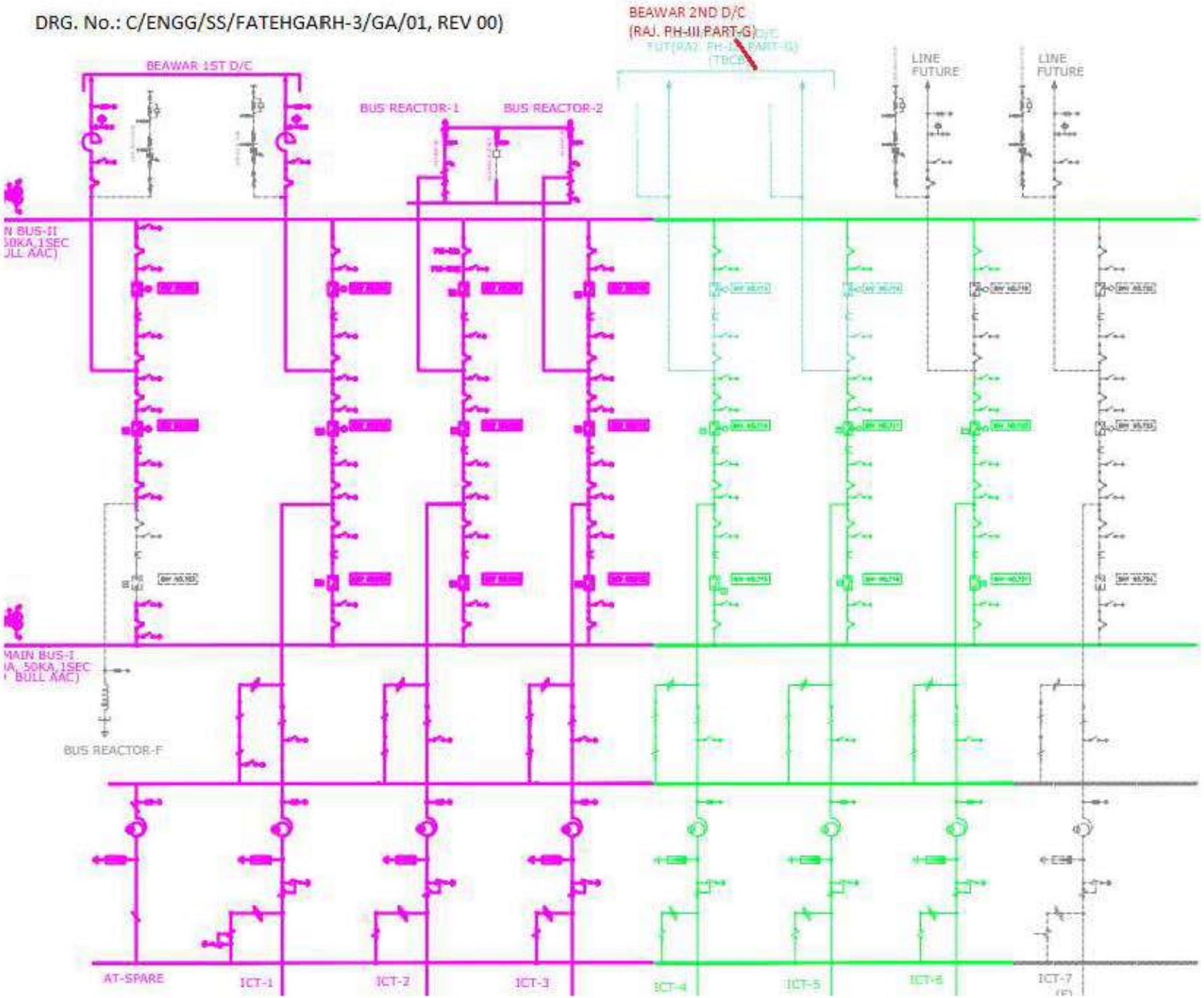
Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Charges shall appropriately reflect the changed Monthly Transmission Charges.		
159.	**TSA** **Schedule 2** The payment of Transmission Charges for any Element, irrespective of its successful commissioning on or before its Scheduled COD, shall only be considered after successful commissioning of the Element(s), which are prerequired for declaring the commercial operation of such Element as mentioned in the above table.	BPC is requested to clarify that in case an element is successfully commissioned and is put to use/power flows, but the pre-required element is not successfully commissioned. Will TSP be eligible for getting Tariff? Bidder needs the information for proper estimation.	Provisions of RFP are amply clear in this regard and shall apply.
160.	**TSA** **Schedule 9** **Methodology for determining the Relief Under Force Majeure Event & Change in Law during Construction Period** The relief in the form of revision in tariff due to Force Majeure Event leading to extension of Scheduled COD for a period beyond one hundred eighty (180) days and/ or	What is the rationale for the increase in Transmission Charges as stated above shall be applicable only if the value of increase in Transmission Charges as calculated above exceeds 0.30% (zero-point three percent) of the quoted Transmission Charges of the TSP. Bidder needs the information for proper estimation.	This is as per the Standard Bidding Documents. The provisions of TSA shall prevail.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
	Change in Law during the construction period shall be as under: ΔT = [(P x d)]÷[1-(1+ d)^(-n)]		
161.	General	Please let us know, will there be any impact due to Great Indian Bustard (GIB) area. Bidder needs information for proper estimation.	Bidders are required to familiarize themselves with all relevant Rules/ Regulations/ Guidelines issued by the Central Government, CERC, CEA or any relevant Authority and amendments thereof. Further, please refer Clause No. 2.5.7.2 of RFP Document.
162.	General	BPC is requested to provide the survey report alongwith coordinates of substations at Beawar and Fatehgarh 3. Bidder needs the information for proper estimation	Survey Report is under finalization and shall be issued shortly.



(DRG No. C/ENGG/SS/FATEHGARH-3/SLD/01 Rev-00)

DRG. No.: C/ENGG/SS/FATEHGARH-3/GA/01, REV 00)



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(पावर फाइनेंस कॉर्पोरेशन लिमिटेड की पूर्णतःस्वामित्वाधीन सहायक कंपनी)
PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN : U74140DL2008GOI175858

Ref. No. 04/21-22/ITP-50/RfP

June 21, 2022

To,
Mr. N K Panda
M/s Sterlite Grid 19 Limited
9th Floor, Block B
Sector 20, Udyog Vihar, Phase 3,
DLF Cyber Park Gurugram – 122001

E-mail: Sterlite.bd@sterlitepower.com

Subject: Independent Transmission Project "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G" – Regarding Additional Clarifications and Amendment No. 2 to RfP documents

Dear Sir,

This is in continuation to PFCCL letter dated 10.05.2022 regarding issuance of clarifications and Amendment No. 1 to RFP documents for the subject transmission project.

The additional queries raised by the bidders on RFP documents have been examined and additional clarifications are enclosed herewith at **Annexure-I** for your information and further necessary action please.

Further, the Amendment No. 2 to the RFP documents is enclosed at **Annexure-II** for your information and necessary action.

Thanking you,

Yours faithfully,

(Sanjay Nayak)
General Manager

Encl.: As above

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
1.	**RFP** General	It is requested to BPC to provide the following information & drawings for **Fatehgarh-III & Beawar** Sub-stations. 1) Existing SDH equipment type, make & mode. 2) Please confirm availability of optical direction existing SDH equipment for present project link. 3) Plan layout with scope marked whether tie bay is required or not. 4) Earthing layout 5) Cable trench layout 6) SAS Make & Model 7) Existing busbar protection details 8) Soil test report Bidder needs the information for proper estimation	1) Fatehgarh-III is under implementation (construction) stage and Beawar is under implementation (tendering) stage therefore SDH make & model can be provided later on. 2) TSP to provide the FOTE at their bay Kiosk at Fatehgarh-III & Beawar S/s with suitable optical interfaces to meet link budget requirement of Fatehgarh-III -Beawar link. TSP to integrate their FOTE with the FOTE at Control Room of Fatehgarh-3 & Beawar S/s with suitable optical interfaces as per RFP document with the directions available in the FOTE of Control Room of Beawar & Fatehgarh-III. 3,4,5,6&7: Refer clause B.5 of specific technical requirement of s/s of RfP.
2.	**RFP** General	It is requested to BPC to provide the following information & drawings for **Fatehgarh-III & Beawar** Sub-stations. 1) Availability of AC & DC Feeders 2) Details of existing Fire-fighting system. Bidder needs the information for proper estimation	1) Modules for all future AC/DC feeders are kept under the scope of Beawar s/s developer. Also, Modules for all future AC/DC feeders is envisaged under scope of Fatehgarh-3 s/s developer. *2)* Fire-fighting system for both the s/s is yet to be finalized by the developer.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
3.	**RFP** SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION/ B.2.4 Protection Relaying & Control System d) Bus bar Protection Page 132/149	For existing substations, the existing bus bar protection shall be augmented as per requirement. Details of existing bus bar protection system are requested. Bidder needs the information for proper estimation	The same is yet to be finalized by the developer of the s/s.
4.	**RFP** SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION/ B.2.5 Substation Automation System Page 134/149	At existing substations with Substation automation system (SAS), augmentation of existing SAS shall be done for bays under present scope. Details of existing SAS system are requested. Bidder needs the information for proper estimation	Augmentation of SAS for bays extension shall be done as per RfP. Further, the SAS of the new s/s is yet to be finalized by the developer of the s/s.
5.	**RFP** SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION/ B.2.5 Substation Automation System Page 134/149	For bay extension in existing substation, BPC is requested to clarify following points on SAS augmentation: i. Do bidder require to consider separate SCADA system (HMI, Server, gateways and associated communication link) for bay extensions, or bay level signals can be integrated into existing substation SCADA system. If extended bay signals to be integrated into existing SCADA, then will bidder's O&M personnel be permitted to operate extended bays from existing	Separate SCADA system is not envisaged. However, augmentation of existing SAS shall be done for bays under present scope as per clause B.2.5 of technical specification of s/s of RfP document. Bidder can use existing gateways for data communication to RLDC. TSP to integrate their PMU with the FOTE of Control Room using Fibre Optic cable, LAN cable, Switches etc.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		SCADA. Do bidder require to consider separate Gateways for data communication to RLDC or existing gateways can be used for it. Similarly, do existing WAMS ring can be used for PMU data communication or separate WAMS is required to be created separately for extended bays. Kindly confirm. Bidder needs the information for proper estimation.	No separate LAN is required for extended bays PMUs.
6.	**RFP** Page no-136 of 149 B.3.8 Visual monitoring system	1. **For Greenfield SS** Since projects are to be implemented on BOOT basis and it is the responsibility of TSP to build own and operate the substation for 35 years, we request BPC that TSP should be allowed to select the best suitable option at his discretion and do not bind TSP with specific requirements in RFP amendment. With reference to above we understand that TSP is allowed to choose VMS system best suitable for the operation. **2. For Existing substation** Since the bay extension work in the existing substation shall be TSP's responsibility including operation and maintenance therefore provision of VMS system only limited to present scope of bays	VMS system shall be provided as per RfP.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		should be left with the TSP. We understand existing owner's specifications should not be binding on TSP. Bidder needs the information for proper estimation.	
7.	**RFP** Page no-142 of 149 / Specific technical requirement for communication. / C.4.0 PLCC PLCC equipment for all the transmission lines covered under the scheme (consisting of one set of analog PLCC channel along with circuit protection coupler and one set of Digital protection coupler for both ends) shall be provided by TSP. CVT & Wave trap for all line bays, under present scope shall be provided by TSP.	We understand that one set of analog circuit protection coupler shall be for PLCC and another set for Digital protection coupler for FOTE. Kindly confirm. Bidder needs the information for proper estimation.	PLCC equipment for all the transmission lines covered under the scheme (consisting of one set of analog PLCC channel along with circuit protection coupler and one set of Digital protection coupler for both ends) shall be provided by TSP.
8.	Special Technical requirement for Transmission Line	For transmission line, no special requirement is specified for type of Insulator and creepage in RFP document. Hence it is understood that bidder can decide the type of insulator along with creepage requirement based on	The minimum specific creepage distances shall be decided for the pollution condition in the area of installation. It shall be as per CEA regulations and relevant standards.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		general CEA regulations and relevant standards. Kindly confirm. Bidder needs information for proper estimation.	

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PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN : U74140DL2008GOI175858

Ref. No. 04/21-22/ITP-50/RfP **July 27, 2022**

To,
Mr. N K Panda
M/s Sterlite Grid 19 Limited
9th Floor, Block B
Sector 20, Udyog Vihar, Phase 3,
DLF Cyber Park Gurugram – 122001

E-mail: Sterlite.bd@sterlitepower.com

Subject: Independent Transmission Project "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G" – Regarding Additional Clarifications to RfP documents.

Dear Sir,

This is to inform that the due date for submission of online RfP bids (Technical & Financial) through the electronic bidding platform for the subject mentioned project has been extended from July 27, 2022 till 15:00 hrs (IST) to **August 17, 2022 till 15:00 hrs (IST)**. The RfP (Technical) bids shall be opened at **15:30 hrs (IST) on August 17, 2022.**

Further, the additional queries raised by the bidders on RFP documents have been examined and additional clarifications are enclosed herewith at **Annexure-I** for your information and further necessary action please.

Thanking you,

Yours faithfully,

(Sanjay Nayak)
General Manager

Encl.: As above

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
1.	Clarifications dated 10.05.2022 **Reply from BPC at Sl. No. 64** 01 no. 765kV 1-phase 110MVAR spare reactor has been considered under the scope of developer of 765kV Fatehgarh-3 s/s. The same reactor shall be utilized as spare for the switchable 330 MVAR (3X110MVAR) line Reactor for 765 kV Beawar -Fatehgarh-3 D/C line. All necessary arrangement including 1-phase circuit breaker for such switching scheme shall be under the scope of present TSP. For Beawar s/s, all necessary arrangement including 1-phase circuit breaker for such switching scheme for utilizing 01 no. 765kV 1-phase 110MVAR existing spare reactor shall be under the scope of present TSP.	Under present scope, TSP needs to provide 2nos. of 330MVAR Switchable line reactor Bank (Consist of 6X110 MVAR Single phase Reactor) at both 765kV Beawar s/s end & 765kV Fatehgarh-3 s/s end along with associated 765kV switching equipment for 765 kV Beawar -Fatehgarh-3 D/C **(2nd) line**. Further, it is also understood that 2nos. of 330MVAR Switchable line reactor Bank (Consist of 6X110 MVAR Single phase Reactor) at both 765kV Beawar s/s end & 765kV Fatehgarh-3 s/s end along with associated 765kV switching equipment for 765 kV Beawar-Fatehgarh-3 D/C **(1st) line** is coming under "Transmission System Strengthening scheme for evacuation of power from solar energy zones in Rajasthan (20 GW) under Phase III Part-F" In this regard, it is understood that: 1. 1-Phase 765kV Circuit Breaker for Spare Reactor is being included under "Transmission System Strengthening scheme for evacuation of power from solar energy zones in Rajasthan (20 GW) under Phase III Part-F" associated for both 765kV Beawar s/s end & 765kV Fatehgarh-3 s/s end. Accordingly, 1-Phase 765kV Circuit Breaker is not required for existing Spare Reactor at both 765kV Beawar s/s end & 765kV Fatehgarh-3 s/s end under Transmission	It is clarified that 1-phase circuit breaker for Spare Reactor (110 MVAR Spare Reactor is supplied by developer of Fatehgarh-III s/s with 7X110 MVAR bus Reactor) is covered under *"Transmission System Strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase III Part-F"* at Fatehgarh-III end. Further, For Beawar s/s, all necessary arrangement for such switching scheme for utilizing 01 no. 765kV 1-phase 110MVAR reactor including 1-phase circuit breaker shall be covered under the scope of *"Transmission System Strengthening scheme for evacuation of power from solar energy zones in Rajasthan (20 GW) under Phase III Part-F"*

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		System Strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase III Part-G. Kindly confirm. Bidder requires information for proper estimation.	
2.	Clarifications dated 10.05.2022 **Reply from BPC at Sl. No. 69** In supersession to the guidelines quoted by the bidder in its query, "Guidelines for the Type Tests for Major Equipment in Power Sector" has been issued by CEA in March 2022 and shall be followed**.**	In the "Guidelines for the Type test for major equipment in Power Sector" issued by CEA in March 2022, It is observed that Validity of type tests is specified only for some of Equipment's at Annex-I (For transmission sector). we understand that, type test once conducted shall be valid for life long for all other Equipment's which are applicable in Transmission Sector. Kindly confirm. Bidder requires information for proper estimation.	Type test Validity for equipment other than those mentioned in 'Guidelines for the type test for major equipment in Power Sector" issued by CEA in March 2022 may be decided by TSP as per its requirement.
3.	**RFP** Page no-135 of 149 **B.3.1 AC & DC power supplies**	We understand that the said clause is not applicable for extension stations as the existing station has sufficient capacity/feeders available in AC & DC power supply Kindly confirm. Bidder needs the information for proper estimation.	Any augmentation (if required) in AC and DC system with respect to the suitability of equipment under present scope shall be done by the present TSP.
4.	Amendment 1/Clarifications RFP clarification sl. no- 109 & 134 2 no. of 765 kV line bays each at Fatehgarh-III and Beawar for Phase-III Part G	As the Beawar substation is also under bidding in a different package. Hence its quite essential to explicitly specify whether present RFP scope of 2 nos. 765kV line bays at Beawar shall be terminated in existing half diameter where Tie Bay is already available, or TSP of current package need to consider tie bays along with the line bays for line	Associated tie bays are under the scope as clarified vide Sr. no. 109 & 134 of clarification dated 10.05.2022 for Beawar s/s extension.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		termination under present scope As these are very high-cost items, so bidder needs utmost clarity on the scope of work before bid submission. BPC to clarify the same with clear scope of work. Bidder needs the information for proper estimation	
5.	RFP General	As O&M of substation bays are also responsibility of TSP, so we understand TSP can do the operation & maintenance of their scope of bays by their own staff without any charges paid to existing substation owner. Alternatively, TSP can get the O&M done by existing station owner in mutually agreed rate with existing station owner. BPC to confirm our understanding. Bidder needs the information for proper estimation	O&M of bays is the responsibility of TSP.
6.	RFP ANNEXURE 22 – FORMAT FOR AFFIDAVIT	We would like to mention that with reference to the RFP Clause 2.1.9 Bidders shall confirm a notarized affidavit as per Annexure 22. Please note for large conglomerates signing on behalf of all the affiliates can run into hundreds of numbers and different geographies, is practically impossible. We request you to allow Annexure-22 to be signed by the Authorized signatory of the **Bidding company on behalf of Bidding entity only**. Bidder needs the information for preparation of techno-commercial bid.	The declaration and details with respect to Clause 2.1.9 of RFP is to be provided by the bidding company including Affiliate / Parent company of the Bidding company being used for meeting financial / technical qualification requirements as per Annexure 22 of the RFP document.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
7.	TSA Schedule: 9 Methodology for determining the Relief Under Force Majeure Event & Change in Law during Construction Period	As per Schedule 9 of the TSA, the Discount rate as notified by the CERC would be applicable for calculation of relief under occurrence of Change in Law and Force Majeure event. CERC notified 'Discount rate for computation of levelized transmission charges' is 8.09% on 30th March, 2022, please confirm if this Discount rate for computation of levelized transmission charges is to be considered for this calculation under schedule-9. Bidder needs information for proper estimation.	Please refer the methodology mentioned at Schedule-9 which is amply clear.
8.	RFP Transmission Service Agreement" or "TSA" shall mean the agreement entered into between Nodal Agency and the TSP, pursuant to which the TSP shall build, own, operate and transfer the Project and make available the assets of the Project on a commercial basis.	As per the bidding documents TSA shall be signed between Nodal agency and TSP only. We request BPC to clarify role of Designated ISTS Customers and linkage of Designated ISTS Customers to TSA. Bidder needs the information for proper estimation.	Provisions of RFP documents are amply clear in this regard.
9.	RFP Annexure C/Special Technical requirement for Transmission Line/clause no. A.17.0 Routing of transmission line through protected areas of India shall be avoided to the extent possible…	As per the RFP documents if the Routing of transmission line passing through protected areas and same is not avoidable then the towers of the transmission line upto 400 kV level which are installed in protected areas shall be designed for Multicircuit (4 circuits) configuration of same voltage level considering reliability level of at least two (2). We request BPC to provide definition of Protected area i. e. Protected area covers only the core zone of wildlife sanctuary, National Park etc or includes its	Bidders may refer to website of Wildlife Institute of India (www.wiienvis.nic.in) wherein all the information regarding Protected area is available.

Sl. No.	Clause No. and Existing provision	Clarification required	Clarification
		eco sensitive zone as well. As per our understanding, there is no requirement of multi-circuit towers for this project, Please confirm. Bidder needs information for proper estimation.	Further, bidders are advised to refer the provisions of RfP in this regard.

Ref. No. 04/21-22/ITP-50/RfP **September 19, 2022**

To,
Mr. N K Panda
M/s Sterlite Grid 19 Limited
9th Floor, Block B
Sector 20, Udyog Vihar, Phase 3,
DLF Cyber Park Gurugram – 122001

E-mail: sterlite.bd@sterlitepower.com

Subject: Independent Transmission Project "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G" – Regarding GA drawing for Fatehgarh-3 Pooling Station.

Dear Sir,

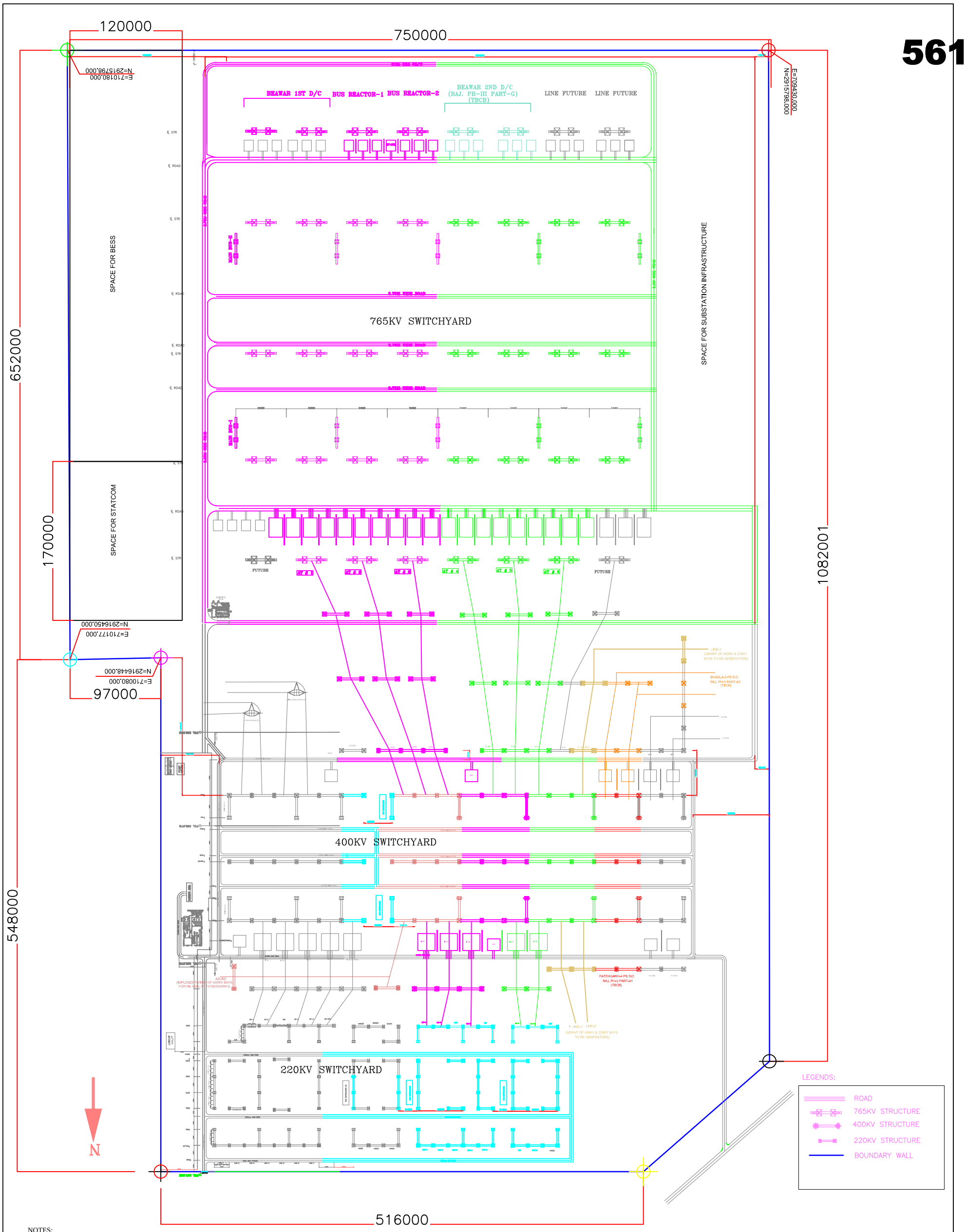
This is in continuation to PFCCL letter dated 27.07.2022 regarding issuance of additional clarifications to RFP documents for subject transmission project. The GA drawing (Drg. no. C/ENGG/SS/ FATEHGARH- 3/GA/01, Rev 00) of Fatehgarh-3 PS for bay location at Fatehgarh-3 for emanating the "Fatehgarh-3 – Beawar 765 kV D/c line" is enclosed at **Annexure A** for your information and further necessary action please.

Thanking you,

Yours sincerely,

(Sanjay Nayak)
General Manager

Encl.: As Above



NOTES:

1. AS PER "CEA MANUAL ON TRANSMISSION PLANNING CRITERIA 2013", BUS SECTIONALIZER IS TO BE CONSIDERED AFTER 8 NOS. OF 220KV FEEDERS. ACCORDINGLY, 2 SETS OF 220KV BUS SECTIONALIZER BAYS HAS BEEN CONSIDERED UNDER "GRANT OF 400 & 220KV BAYS TO RE GENERATORS AT FATEHGARH-III" AGAINST 1 SET MENTIONED IN MOP OM DTD-01.12.0221.
2. THIS DRAWING HAS BEEN PREPARED BASED ON THE FUTURE SCOPE MENTIONED IN RFP DOCUMENT FOR ESTABLISHMENT OF 400/220KV FATEHGARH-III PS (ERSTWHILE RAMGARH-II PS), UNDER RAJASTHAN SEZ PH II PART-A SCHEME THROUGH TBCB ROUTE, TO BE READ IN CONJUNCTION WITH CTUIL EMAILS DTD-18.10.2021, 16.12.2021, 20.12.2021 & 17.01.2022 WHEREIN THE ORIGINALLY SPECIFIED FUTURE SCOPE HAVE BEEN MODIFIED TO ACCOMMODATE BESS AND STATCOM AT FATEHGARH-III PS SUBSTATION.
3. ALL DIMENSIONS ARE IN mm
4. DESTINATION OF FEEDERS MARKED AS FUTURE ARE INDICATIVE ONLY.
5. LOCATIONS OF ROADS, RAIL CUM ROAD, RAIL TRACKS INSIDE THE SUBSTATION ARE TENTATIVE AND SHALL BE FINALIZED DURING DETAILED ENGINEERING

LEGENDS:

- TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E1 ----- SCOPE OF WORKS UNDER SS86
- TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E2
- GRANT OF 400KV AND 220KV BAYS TO RE GENERATORS (3x400KV LINES)

SCOPE OF WORKS UNDER SS87

- GRANT OF 400KV AND 220KV BAYS TO RE GENERATORS (6x220KV LINES + 220kV & 400KV BUS SECTION)
- IMPLEMENTATION OF 400KV BAYS FOR RE GENERATORS AT FATEHGARH-3 (ERSTWHILE RAMGARH-II PS)

SCOPE OF WORKS UNDER SS88

- FUURE/EXISTING

POWER GRID CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT:
1. GRANT OF 400KV AND 220KV BAYS TO RE GENERATORS AT FATEGARH -III (ERSTWHILE RAMGARH-II) PS UNDER ISTS
2. TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E1
3. TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E2
4. IMPLEMENTATION OF 400KV BAYS FOR RE GENERATORS AT FATEHGARH-III (ERSWHILE RAMGARH-II) PS

SUBSTATION: 765/400/220kV FATEHGARH-3 PS SUBSTATION

TITLE: GENERAL ARRANGEMENT DRAWING

DATE	DRAWN	SCALE	DRG.NO.	REV
JAN 2021		NTS	C/ENGG/SS/FATEHGARH-3/GA/01	00

PFC CONSULTING LTD.

आजादी का अमृत महोत्सव

पीएफसी कंसल्टिंग लिमिटेड
(पावर फाइनेंस कॉर्पोरेशन लिमिटेड की पूर्णतःस्वामित्वाधीन सहायक कम्पनी)
PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN U74140DL2008GOI175858

Ref. No. 04/21-22/ITP-50/RfP **January 06, 2023**

To,
Mr. N K Panda
M/s Sterlite Grid 19 Limited
9th Floor, Block B
Sector 20, UdyogVihar, Phase 3,
DLF Cyber Park Gurugram – 122001

E-mail: Sterlite.bd@sterlitepower.com

Subject: Independent Transmission Project "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part G" – Regarding additional clarifications.

Dear Sir,

This has reference to the clarifications and amendments to RFP documents issued by PFCCL for subject transmission scheme till date.

In this regard, the additional queries raised by the bidders on RFP documents have been examined and additional clarifications are enclosed herewith at **Annexure-I** for your information and further necessary action please.

Thanking you,

Yours faithfully,

(Sanjay Nayak)
General Manager

Encl.: As above.

Additional Clarifications dated 06.01.2023 on RFP documents for selection of bidder as Transmission Service Provider (TSP) to establish Inter State Transmission system for "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part 563

S. No.	Clause No. and Existing provision	Clarification required	Clarification
1.	Hon'ble Supreme Court appointed Committee letter dated 29.12.2022	1. We presume that the BPC survey report is in compliance with the Supreme Court Committee guidance as mentioned above. In case there are any changes required in the BPC survey report based on the above guidance, we request BPC to provide the revised survey report in compliance to the committee guidance. 2. Please note that there are multiple lines under development/ operations in and around the area and belong to different TSPs, therefore we request BPC to provide the exact information including Route KMZ files for these existing / under construction lines in its revised survey report along which the route for the subject package needs to be aligned. 3. We presume that the BPC route alignment within the GIB area shall be fixed and binding on all the bidders and no additional approval will be required on the route from Supreme Court Committee during the execution stage. However, bidders shall be allowed to optimize the tower spotting & profile for the line without altering the overall route alignment (within GIB). 4. Further to above, sharing the ROW with existing line will be a challenge to new developers, as it will create a compliance issue of maintaining the falling distance with the existing lines. Therefore, new TSP can only align the route along the existing line (If applicable) to the extent possible maintaining the falling distance. 5. Since all the prospective bidders for these bids have substantially completed their field survey and ground assessment long back. Please note that, considering SC committee recommendation (as referred above), realignment of the transmission routes shall be required, and bidders have to revisit their bid assessment along with field survey works. 6. Considering the above, we request BPC to provide revised survey report for the project In compliance with the SC Committee guidance and provide bidders with at least 45 days of timeline for RFP submission as per RFP clause no 1.2.6.1 of Section-1.	Bidders may note the followings: 1. PFCCL submitted the application dated 02.11.2022 to the Hon'ble SC Committee Members for approval for laying of overhead transmission lines passing through GIB Potential area along with survey report and kmz file, which is already shared with the bidders. 2. The Hon'ble SC Committee Members vide its letter dated 29.12.2022 has ratified the overhead laying of transmission lines in the GIB area which was forwarded to the bidders on 30.12.2022, which is self-explanatory. Further, the following is clarified: i) Approval provided by the Hon'ble SC appointed Committee for laying of overhead transmission lines passing through GIB Potential area is final and no further approval from Hon'ble SC appointed Committee is required by TSP. ii) For optimal ultilization of RoW, TSP may align the route keeping it away from the priority GIB area and along the existing line(s) to the extent possible, as applicable.

S. No.	Clause No. and Existing provision	Clarification required	Clarification
2.	Hon'ble Supreme Court appointed Committee letter dated 29.12.2022	1. This has reference to the GIB approval for laying of 765 KV transmission line under Phase III Part G in Rajasthan wherein BPC has obtained approval from GIB Committee formed by the Honourable Supreme Court. In this regard, BPC has adopted a specific route for 765 KV Fatehgarh III to Beawar D/C line. Please clarify that in case the developer adopts a more optimized route/ lesser involvement of GIB Potential area than the one proposed by the BPC, whether a fresh approval from the committee would be required for the said transmission line or the one obtained by BPC would suffice in that case. 2. Please specify the basis of determining the route of the T/L for which the approval from the committee has been taken by BPC and whether there are any guidelines to be adopted such as minimum distance from the priority area, use of existing transmission corridors/ RoW, etc. by the developer for routing of the T/L from the GIB priority area. 3. Please confirm whether GIB Committee Approval may be treated as the final approval and the developer will not have to approach GIB committee again for commencing work on the transmission line. 4. Since BPC has already obtained approval from the Committee for a specific route for the said project, please confirm whether the developer can change the route for the line after winning the bid and seek a fresh approval from the Committee. 5. In case the developer opts for a route other than the one proposed by BPC, what is the typical time frame of obtaining the clearance from the GIB Committee.	Please refer reply at S. No. 1.

Amendment No. 1 dated 10.05.2022

to

RFP documents for selection of Transmission Service Provider through tariff based competitive bidding process to establish transmission system for "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part G"

Sl. No.	Existing Provisions	Revised Provisions
1	**ANNEXURE B of RFP** **Draft Pre-Award Integrity Pact** **5. Bid Bond (Security Deposit)** 5.1 Along with the technical bid, the Bidder shall submit Bid Bond for an amount of Rs. 28 Crore (Rupees Twenty Eight Crore Only) issued by …… [Insert Name of the Banks from the list provided in RFP Document] as Earnest Money/Security Deposit, with the BPC.	**ANNEXURE B of RFP** **Draft Pre-Award Integrity Pact** **5. Bid Bond (Security Deposit)** 5.1 Along with the technical bid, the Bidder shall submit Bid Bond for an amount of Rs. 28 Crore (Rupees Twenty Eight Crore Only) issued by **any** Banks from the list provided in RFP Document] as Earnest Money/Security Deposit, with the BPC.
2	**Clause 2.12.1 of RFP** **Contract Performance Guarantee** Within ten (10) days from the date of issue of the Letter of Intent, the Selected Bidder, on behalf of the TSP, will provide to the Nodal Agency the Contract Performance Guarantee for an amount of **Rs 70 Crore (Rupees Seventy Crore Only)**. The Contract Performance Guarantee shall be initially valid for a period up to three (3) months after the Scheduled COD of the Project and shall be extended from time to time to be valid for a period up to three (3) months after the COD of the Project and thereafter shall be dealt with in accordance with the provisions of the Transmission Service Agreement. The Contract Performance Guarantee shall be issued by any of the banks listed in Annexure-17.	**Clause 2.12.1 of RFP** **Contract Performance Guarantee** Within ten (10) days from the date of issue of the Letter of Intent, the Selected Bidder, on behalf of the TSP, will provide to the Nodal Agency the Contract Performance Guarantee for an amount of **Rs 42 Crore (Rupees Forty Two Crore Only)**. The Contract Performance Guarantee shall be initially valid for a period up to three (3) months after the Scheduled COD of the Project and shall be extended from time to time to be valid for a period up to three (3) months after the COD of the Project and thereafter shall be dealt with in accordance with the provisions of the Transmission Service Agreement. The Contract Performance Guarantee shall be issued by any of the banks listed in Annexure-17.

Sl. No.	Existing Provisions	Revised Provisions
3	**Clause 3.1.1 of ARTICLE: 3 of TSA** The Selected Bidder, on behalf of the TSP, will provide to the Central Transmission Utility of India Limited (being the Nodal Agency) the Contract Performance Guarantee for an amount of **Rs 70 Crore (Rupees Seventy Crore Only).**	**Clause 3.1.1 of ARTICLE: 3 of TSA** The Selected Bidder, on behalf of the TSP, will provide to the Central Transmission Utility of India Limited (being the Nodal Agency) the Contract Performance Guarantee for an amount of **Rs 42 Crore (Rupees Forty Two Crore Only).**
4	**Clause 3.3.1 of ARTICLE: 3 of TSA** 3.3.1 If any of the conditions specified in Article 3.1.3 is not duly fulfilled by the TSP even within three (3) Months after the time specified therein, then on and from the expiry of such period and until the TSP has satisfied all the conditions specified in Article 3.1.3, the TSP shall, on a monthly basis, be liable to furnish to Central Transmission Utility of India Limited (being the Nodal Agency) additional Contract Performance Guarantee of **Rs 7 Crore (Rupees Seven Crore Only)** within two (2) Business Days of expiry of every such Month. Such additional Contract Performance Guarantee shall be provided to Central Transmission Utility of India Limited (being the Nodal Agency) in the manner provided in Article 3.1.1 and shall become part of the Contract Performance Guarantee and all the provisions of this Agreement shall be construed accordingly. Central Transmission Utility of India Limited (being the Nodal Agency) shall be entitled to hold and / or invoke the Contract Performance Guarantee, including such additional Contract Performance Guarantee, in accordance with the provisions of this Agreement.	**Clause 3.3.1 of ARTICLE: 3 of TSA** 3.3.1 If any of the conditions specified in Article 3.1.3 is not duly fulfilled by the TSP even within three (3) Months after the time specified therein, then on and from the expiry of such period and until the TSP has satisfied all the conditions specified in Article 3.1.3, the TSP shall, on a monthly basis, be liable to furnish to Central Transmission Utility of India Limited (being the Nodal Agency) additional Contract Performance Guarantee of **Rs 4.20 Crore (Rupees Four Crore Twenty Lakh Only)** within two (2) Business Days of expiry of every such Month. Such additional Contract Performance Guarantee shall be provided to Central Transmission Utility of India Limited (being the Nodal Agency) in the manner provided in Article 3.1.1 and shall become part of the Contract Performance Guarantee and all the provisions of this Agreement shall be construed accordingly. Central Transmission Utility of India Limited (being the Nodal Agency) shall be entitled to hold and / or invoke the Contract Performance Guarantee, including such additional Contract Performance Guarantee, in accordance with the provisions of this Agreement.
5	**Clause 3.3.3 of ARTICLE: 3 of TSA** 3.3.3 If the Nodal Agency elects to terminate this Agreement as per the provisions of Article 3.3.2, the TSP shall be liable to pay to	**Clause 3.3.3 of ARTICLE: 3 of TSA** 3.3.3 If the Nodal Agency elects to terminate this Agreement as per the provisions of Article 3.3.2, the TSP shall be liable to pay to

Sl. No.	Existing Provisions	Revised Provisions
	the Nodal Agency an amount of **Rs 70 Crore (Rupees Seventy Crore Only)** as liquidated damages. The Nodal Agency shall be entitled to recover this amount of damages by invoking the Contract Performance Guarantee to the extent of liquidated damages, which shall be required by the Nodal Agency, and the balance shall be returned to TSP, if any. It is clarified for removal of doubt that this Article shall survive the termination of this Agreement.	the Nodal Agency an amount of **Rs 42 Crore (Rupees Forty Two Crore Only)** as liquidated damages. The Nodal Agency shall be entitled to recover this amount of damages by invoking the Contract Performance Guarantee to the extent of liquidated damages, which shall be required by the Nodal Agency, and the balance shall be returned to TSP, if any. It is clarified for removal of doubt that this Article shall survive the termination of this Agreement.
6	**Clause 6.5.1 of ARTICLE: 6 of TSA** 6.5.1 The Contract Performance Guarantee as submitted by TSP in accordance with Article 3.1.1 shall be released by the Nodal Agency within three (3) months from the COD of the Project. In the event of delay in achieving Scheduled COD of any of the Elements by the TSP (otherwise than due to reasons as mentioned in Article 3.1.3 or Article 11) and consequent part invocation of the Contract Performance Guarantee by the Nodal Agency, Nodal Agency shall release the Contract Performance Guarantee, if any remaining unadjusted, after the satisfactory completion by the TSP of all the requirements regarding achieving the Scheduled COD of the remaining Elements of the Project. It is clarified that the Nodal Agency shall also return / release the Contract Performance Guarantee in the event of (i) applicability of Article 3.3.2 to the extent the Contract Performance Guarantee is valid for an amount in excess of **Rs 70 Crore (Rupees Seventy Crore Only)**, or (ii) termination of this Agreement by the Nodal Agency as mentioned under Article 3.3.4 of this Agreement.	**Clause 6.5.1 of ARTICLE: 6 of TSA** 6.5.1 The Contract Performance Guarantee as submitted by TSP in accordance with Article 3.1.1 shall be released by the Nodal Agency within three (3) months from the COD of the Project. In the event of delay in achieving Scheduled COD of any of the Elements by the TSP (otherwise than due to reasons as mentioned in Article 3.1.3 or Article 11) and consequent part invocation of the Contract Performance Guarantee by the Nodal Agency, Nodal Agency shall release the Contract Performance Guarantee, if any remaining unadjusted, after the satisfactory completion by the TSP of all the requirements regarding achieving the Scheduled COD of the remaining Elements of the Project. It is clarified that the Nodal Agency shall also return / release the Contract Performance Guarantee in the event of (i) applicability of Article 3.3.2 to the extent the Contract Performance Guarantee is valid for an amount in excess of **Rs 42 Crore (Rupees Forty Two Crore Only)**, or (ii) termination of this Agreement by the Nodal Agency as mentioned under Article 3.3.4 of this Agreement.

Sl. No.	Existing Provisions	Revised Provisions
7	**Clause 14.3.1 of ARTICLE: 14 of TSA** 14.3.1 A Party ("Indemnifying Party") shall be liable to indemnify the other Party ("Indemnified Party") under this Article 14 for any indemnity claims made in a Contract Year only up to an amount of **Rs 4.67 Crore (Rupees Four Crore Sixty Seven Lakh Only).**	**Clause 14.3.1 of ARTICLE: 14 of TSA** 14.3.1 A Party ("Indemnifying Party") shall be liable to indemnify the other Party ("Indemnified Party") under this Article 14 for any indemnity claims made in a Contract Year only up to an amount of **Rs 2.80 Crore (Rupees two Crore Eighty Lakh Only).**
8	All the relevant clauses of RfP, TSA and SPA **"SPV [which is under incorporation]"**	All the relevant clauses of RfP, TSA and SPA **"SPV [which is under incorporation]"** in the subject RfP, TSA and SPA may be read as "**FATEHGARH III BEAWAR TRANSMISSION LIMITED**"

Amendment No. 2 dated 21.06.2022

to

RFP documents for selection of Transmission Service Provider through tariff based competitive bidding process to establish transmission system for "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part G"

Sl. No.	Existing Provisions	Revised Provisions
1	**ANNEXURE 14 - FORMAT OF THE BID BOND** **FORMAT OF THE UNCONDITIONAL AND IRREVOCABLE BANK GUARANTEE FOR BID BOND** **(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)** In consideration of the .....[Insert name of the Bidder] submitting the Bid inter alia for establishing the Inter-State transmission system for **SPV [which is under incorporation]** on build, own, operate and transfer basis, in response to the RFP dated January 19, 2022 issued by PFC Consulting Limited, and the Bid Process Coordinator (hereinafter referred to as BPC) agreeing to consider such Bid of .....[Insert the name of the Bidder] as per the terms of the RFP, the [Insert name and address of the bank issuing the Bid Bond, and address of the Head Office] (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to PFC Consulting Limited or its authorized representative at _____[Address of BPC] forthwith on demand in writing from PFC Consulting Limited or any representative authorized by it in this behalf, any amount up to and not exceeding Rupees_____ Only (Rs _____ Crore),on behalf of M/s.....[Insert name of the Bidder]. ……	**ANNEXURE 14 - FORMAT OF THE BID BOND** **FORMAT OF THE UNCONDITIONAL AND IRREVOCABLE BANK GUARANTEE FOR BID BOND** **(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)** In consideration of the .....[Insert name of the Bidder] submitting the Bid inter alia for establishing the Inter-State transmission system for ..... **[Name of Project]** on build, own, operate and transfer basis, in response to the RFP dated January 19, 2022 issued by PFC Consulting Limited, and the Bid Process Coordinator (hereinafter referred to as BPC) agreeing to consider such Bid of ....[Insert the name of the Bidder] as per the terms of the RFP, the [Insert name and address of the bank issuing the Bid Bond, and address of the Head Office] (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to PFC Consulting Limited or its authorized representative at _____[Address of BPC] forthwith on demand in writing from PFC Consulting Limited or any representative authorized by it in this behalf, any amount up to and not exceeding Rupees_____ Only (Rs _____ Crore),on behalf of M/s.....[Insert name of the Bidder]. ….

PFC CONSULTING LIMITED
(A wholly owned subsidiary of PFC Ltd.)

March 23, 2022

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from March 25, 2022 till 15:00 hrs (IST) to **April 25, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **April 25, 2022 15:30 hrs (IST)**.

PFC CONSULTING LIMITED
(A wholly owned subsidiary of PFC Ltd.)

April 25, 2022

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part G"

The due date for submission of online RFP bids (Technical & Financial) through the electronic bidding platform for the subject project has been extended from April 25, 2022 till 15:00 hrs (IST) to **May 25, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **May 25, 2022 at 15:30 hrs (IST)**.

PFC CONSULTING LIMITED
(A wholly owned subsidiary of PFC Ltd.)

May 24, 2022

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from May 25, 2022 till 15:00 hrs (IST) to **June 27, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **June 27, 2022 at 15:30 hrs (IST)**.

PFC CONSULTING LIMITED

(A wholly owned subsidiary of PFC Ltd.)

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from July 27, 2022 till 15:00 hrs (IST) to **August 17, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **August 17, 2022 at 15:30 hrs (IST)**.

PFC CONSULTING LIMITED

(A wholly owned subsidiary of PFC Ltd.)

August 16, 2022

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from August 17, 2022 till 15:00 hrs (IST) to **August 29, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **August 29, 2022 at 15:30 hrs (IST)**.

PFC Consulting Limited

PFC CONSULTING LIMITED

(A wholly owned subsidiary of PFC Ltd.)

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from August 29, 2022 till 15:00 hrs (IST) to **September 13, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **September 13, 2022 at 15:30 hrs (IST)**.

PFC Consulting Limited

PFC CONSULTING LIMITED

(A wholly owned subsidiary of PFC Ltd.)

September 08, 2022

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from September 13, 2022 till 15:00 hrs (IST) to **September 27, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **September 27, 2022 at 15:30 hrs (IST)**.

PFC Consulting Limited

PFC CONSULTING LIMITED

(A wholly owned subsidiary of PFC Ltd.)

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from September 27, 2022 till 15:00 hrs (IST) to **October 11, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **October 11, 2022 at 15:30 hrs (IST)**.

PFC Consulting Limited

PFC CONSULTING LIMITED
(A wholly owned subsidiary of PFC Ltd.)

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from October 11, 2022 till 15:00 hrs (IST) to **November 11, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **November 11, 2022 at 15:30 hrs (IST)**.

PFC Consulting Limited

PFC CONSULTING LIMITED
(A wholly owned subsidiary of PFC Ltd.)

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical &Financial) through the electronic bidding platform for the subject project has been extended from November 11, 2022 till 15:00 hrs (IST) to **December 12, 2022 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **December 12, 2022 at 15:30 hrs (IST)**.

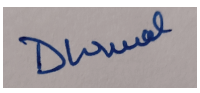
PFC Consulting Limited

PFC CONSULTING LIMITED
(A wholly owned subsidiary of PFC Ltd.)

Subject: Notice for extension of RFP bid submission for the Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"

The due date for submission of online RFP bids (Technical & Financial) through the electronic bidding platform for the subject project has been extended from December 12, 2022 till 15:00 hrs (IST) to **January 12, 2023 till 15:00 hrs (IST)**. The RFP (Technical) Bids will be opened on same day i.e. **January 12, 2023 at 15:30 hrs (IST)**.

PFC Consulting Limited



True Copy

Annexure-6 (Colly.)

EVALUATION REPORT
OF
RFP (FINANCIAL) BIDS
FOR
"TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ IN RAJASTHAN (20 GW) UNDER PHASE III–PART G"

Prepared by

PFC Consulting Ltd. (Bid Process Coordinator)

Sachin Arora	Nirmala Meena	Megha Bansal
(Company Secretary)	(Chief Manager)	(Deputy Manager)
(Legal)	(Project)	(Finance)

GM (PE-III)

Bid Evaluation Committee

S. No.	Name of BEC Member	Signature
1.	**Sh. Umesh Kumar Madan, EVP & Regional Head,** SBI Capital Markets, New Delhi-**Chairman**	
2.	**Sh. Santosh Kumar, Superintendent Engineer,** Northern Regional Power Committee, New Delhi – **Member**	
3.	**Sh. V.A Kale, Superintendent Engineer (P&P),** Rajasthan Rajya Vidyut Prasaran Nigam Limited Jaipur- **Member**	
4.	**Sh. Y. K. Swarnkar, Director (PSETD),** CEA, New Delhi- **Member**	
5.	**Smt. Manjari Chaturvedi, Director (PSPA-I),** CEA, New Delhi - **Member**	
6.	**Sh. Milind M Dafade, Chairman,** Fatehgarh III Beawar Transmission Limited, New Delhi -**Convener Member**	

True Copy

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I. BACKGROUND:

1. The RFP Bids for the **"Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G "** were submitted by six (06) bidders online through MSTC Portal by the due date and time i.e. 12.01.2023 by 15:00 hrs (IST):

   (i) Adani Transmission Limited
   (ii) Megha Engineering & Infrastructures Limited
   (iii) The Tata Power Company Limited
   (iv) Power Grid Corporation of India Limited
   (v) Sterlite Grid 19 Limited
   (vi) Torrent Power Limited

2. The RFP (Technical) Bids were opened by Bid Opening Committee online through MSTC Portal on the same day i.e. 12.01.2023 at 15:30 hrs (IST) in the office of Central Electricity Authority.

3. On detailed scrutiny of the RFP (Technical) bids, it was observed that the bids of following Bidders are meeting all the requirements as stipulated in the RFP document:

   (i) Adani Transmission Limited
   (ii) Megha Engineering & Infrastructures Limited
   (iii) Power Grid Corporation of India Limited
   (iv) Torrent Power Limited

   Deficiencies were observed in the RFP (Technical) Bids submitted by following two (02) bidders:

   (i) Sterlite Grid 19 Limited
   (ii) The Tata Power Company Limited

4. The RFP (Technical) Bids evaluation was presented to Bid Evaluation Committee (BEC) in its meeting held on 08.02.2023 and BEC suggested BPC to seek clarification in respect of observations/deficiencies in their RFP (Technical) bids.

5. Accordingly, PFCCL sought clarifications from two (02) bidders through MSTC portal and vide letter dated 09.02.2023 with the last date of submission of response as 15.02.2023 up to 16:30 hrs (IST). Both the Bidders submitted the clarifications online through MSTC portal by due date and time.

6. BEC meeting was held on 17.02.2023 through Video Conferencing (VC) for discussing the evaluation of RFP (Technical) bids post receipt of clarifications. BEC observed that the clarifications submitted by bidders are found to be complying the observations/deficiencies satisfactorily.

7. During the meeting, BEC recommended that the bids of the all the six (06) Bidders, as listed below, are qualified at the RFP stage and may be considered for opening of their RFP (Financial) Bids:

   (i) Adani Transmission Limited
   (ii) Megha Engineering & Infrastructures Limited
   (iii) The Tata Power Company Limited
   (iv) Power Grid Corporation of India Limited
   (v) Sterlite Grid 19 Limited
   (vi) Torrent Power Limited

II. RFP (FINANCIAL) BIDS - INITIAL OFFER OPENING

1. As per the recommendations of the BEC, RFP (Financial) Bids - Initial Offer for all the six (06) qualified bidders were opened online on MSTC portal on 23.02.2023 by the Bid Opening Committee in the office of Central Electricity Authority (CEA) in presence of BEC members through VC.

2. The Initial Offer (Quoted Transmission Charges) of each bidder as quoted at the time of submission of RFP Bids is as under:

S. No.	Name of the Bidder	Quoted Transmission Charges (in Indian Rupees million per annum)	Ranking of Bidders based on Quoted Transmission Charges
i.	Sterlite Grid 19 Limited	1489.50	L-1
ii.	The Tata Power Company Limited	1500.00	L-2
iii.	Adani Transmission Limited	1506.00	L-3
iv.	Power Grid Corporation of India Limited	1580.65	L-4
v.	Torrent Power Limited	1692.60	L-5
vi.	Megha Engineering & Infrastructures Limited	3637.80	L-6

3. The lowest Quoted Transmission Charges from the Initial Offer submitted by the bidders was **Rs.1489.50 million per annum** which was the Initial Price for quoting the final offers during e-reverse auction. Copy of Initial Offer – Price Comparative Statement generated at MSTC portal is enclosed at **Annexure-I**.

4. As per Clause No. 3.5.1 of RFP document, *"....Quoted Transmission Charges of such Initial Offer shall be ranked on the basis of the ascending Initial Offer submitted by each Qualified Bidder. Based on such ranking of the Qualified Bidders, in the first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall qualify for participating in the electronic reverse auction".*

   Accordingly, following four (04) bidders were qualified to participate in the e-reverse auction:

S. No.	Name of the Bidder	Quoted Transmission Charges (in Indian Rupees million per annum)	Ranking of Bidders based on Quoted Transmission Charges
i.	Sterlite Grid 19 Limited	1489.50	L-1
ii.	The Tata Power Company Limited	1500.00	L-2

S. No.	Name of the Bidder	Quoted Transmission Charges (in Indian Rupees million per annum)	Ranking of Bidders based on Quoted Transmission Charges
iii.	Adani Transmission Limited	1506.00	L-3
iv.	Power Grid Corporation of India Limited	1580.65	L-4

5. The Initial Offer of **Rs. 1489.50 million per annum** was communicated to the above mentioned four (04) bidders to participate in the e-reverse bidding process. BEC in its meeting held on 23.02.2023 advised BPC to take necessary action to carry out e-reverse auction.

III. RFP (FINANCIAL) BID - FINAL OFFER: E-REVERSE BIDDING PROCESS

1. The e-reverse bidding process was carried out at MSTC Portal on 24.02.2023 at 10:00 hrs (IST) and was closed after 37 rounds, on same day i.e. February 24, 2023 at 21:44 hrs (IST). Except 'Adani Transmission Limited', all the other three (03) qualified bidders participated in e-reverse bidding.

2. The Final Offer (Quoted Transmission Charges) of each bidder as quoted at the time of closing of e-reverse bidding is as under (copy of e-reverse bidding statement generated at MSTC portal is attached at **Annexure-II**):

S. No.	Name of the Bidder	Quoted Transmission Charges (in Indian Rupees million per annum)	Rank
1.	Sterlite Grid 19 Limited	**1357.57**	**L1**
2.	Power Grid Corporation of India Limited	1360.98	L2
3.	The Tata Power Company Limited	1452.64	L3
4.	Adani Transmission Limited	1506.00 (Not participated in e-reverse bidding)	L4

3. A per provisions of RFP document, in addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3-Power of Attorney, Annexure 4-Power of Attorney from Consortium Members (if applicable), Annexure 6-Consortium Agreement (if applicable) and Annexure 14-Bid Bond, before issuance of LoI.

4. Accordingly, as per the requirement, 'Sterlite Grid 19 Limited', the Bidder with lowest Final Offer, has submitted the original hard copies of applicable Annexure 3-Power of Attorney and Annexure 14-Bid Bond on 28.02.2023 vide its letter dated 28.02.2023. The other annexures were not applicable to the bidder.

5. The original hard copies of Annexure 3 and Annexure 14 submitted by 'Sterlite Grid 19 Limited' are found to be in order and there is no discrepancy between the online submission and hard copies submitted by 'Sterlite Grid 19 Limited'.

6. The following have been deliberated:

   (i) The estimated cost of the project as per the meeting of the Cost Committee held on 28.07.2022 (copy of MoM at **Annexure-III)** is Rs.2098.48 Crore.

   (ii) As per CERC tariff norms and cost estimated by Cost Committee, the Levelised Transmission Charges worked out to **Rs.2609.75 million per annum** as enclosed at **Annexure-IV.**

   (iii) It is observed that the Lowest Final Quoted Transmission Charge discovered after the conclusion of the e-reverse bidding process is Rs.1357.57 million per annum which is **47.98 %** lower than levelised tariff worked out as per CERC Tariff Regulations.

   (iv) The entire bid process has been carried out in accordance with the "Tariff based Competitive Bidding Guidelines for Transmission Service" and "Guidelines for encouraging competition in development of the Transmission Projects" issued by Ministry of Power, Govt. of India under Section 63 of the Electricity Act, 2003 and as amended from time to time.

IV. Successful Bidder

1. Based on the e-reverse bidding, the Final Offer (Quoted Transmission Charges) of **Rs. 1357.57 million per annum** quoted by **'Sterlite Grid 19 Limited'** is the lowest. Also, 'Sterlite Grid 19 Limited' has submitted the original hard copies of Annexure 3-Power of Attorney and Annexure 14-Bid Bond which are in order and there is no discrepancy between the online submission and hard copies submitted.

2. As per clause 3.6.1 of RFP,".... *The Bidder with the prevailing lowest Quoted Transmission Charges discovered from Final Offers at the close of the scheduled or extended period of e-reverse bidding as mentioned in clause 2.5 shall be declared as the Successful Bidder, subject to verification of the original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14.The Letter of Intent shall be issued to such Successful Bidder in two (2) copies.*

3. As per recommendations of BEC, the Letter of Intent (LoI) shall be issued to the successful bidder.

Event Details	
Event No.	Period:
TSP/PFCCL/New Delhi/5/22-23/ET/19[REZ in Rajasthan]	02-01-2023 14:00:00.00 To: 12-01-2023 15:00:00.00

Tender Committee Members		
Name of TCM	IP Address	Attendance Date and Time
NIRMALA KUMARI MEENA [Chief Manager]	106.210.101.119	23-02-2023 16:09:06.17
PRIYAM SRIVASTAVA [Dy. Director]	106.210.101.119	23-02-2023 16:11:46.22
SANJAY KUMAR NAYAK [General Manager]	-	-
AKSHAY DUBEY [Dy. Director]	-	-

Lot Details	Approval Details	Opening Details
Lot No:1 Lot Name :Transmission system for evacuation of power from REZ in Rajasthan 20 GW Quantity :1.0 NO	Name Of Approver : PRIYAM SRIVASTAVA[priyam.cea1@gmail.com] Approval Time :23-02-2023 16:14:28.56	Name Of Opener : PRIYAM SRIVASTAVA[priyam.cea1@gmail.com] Opening Time :23-02-2023 16:15:06.44

Price Parameters	Company Name : Adani Transmission Limited PAN : AAMCA4360Q Reference Number :3667 Bid Submit Time :12-01-	Company Name : Megha Engineering and Infrastructures Ltd PAN : AAECM7627A Reference Number :3669	Company Name : POWERGRID CORPORATION OF INDIA LIMITED PAN : AAACP0252	Company Name : Torrent Power Limited PAN : AACCT0294J Reference Number :3688 Bid Submit Time :12-01-	Company Name : Sterlite Grid 19 Limited PAN : ABBCS5262P Reference Number :3807 Bid Submit	Company Name : The Tata Power Company Limited PAN : AAACT0054A Reference Number :5680 Bid Submit

	2023 14:24:40.34 Final Submission IP : 106.205.254.166	Bid Submit Time :12-01-2023 12:45:54.39 Final Submission IP : 182.73.218.195	G Reference Number :3672 Bid Submit Time :12-01-2023 11:53:55.74 Final Submission IP : 103.7.129.91	2023 14:19:44.57 Final Submission IP : 14.140.152.2	Time :12-01-2023 14:14:29.85 Final Submission IP : 14.140.117.58	Time :12-01-2023 14:43:29.91 Final Submission IP : 47.31.99.151
Transmission charges (In Rs. Millions)	1506.0	3637.80	1580.65	1692.60	1489.5	1500
Per Unit Cost (IN INR)	1506	3637.8	1580.65	1692.6	1489.5	1500
Total Cost (IN INR)	1506	3637.8	1580.65	1692.6	1489.5	1500
L1 Bid	-	-	-	-	L1 Bid	-

Annexure-II

Bid History Details

Auction No: TSP/PFCCL/New Delhi/5/22-23/ET/RA/19[REZ in Rajasthan] [170483]
Start Date: 2023-02-24 10:00:00.0
End Date: 2023-02-24 21:44:49.049922
Bid History for Lot/Item: Transmission system for evacuation of power from REZ in Rajasthan 20 GW [1]
Auction Pattern: null

S. No.	Comp Name	Bid Amount		Bid Date	Bid Time
1	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 10:30:31.550456
		Transmission Charges (in Rs. Millions) (a)	1485.77		
		Evaluated Cost/ Unit (INR)	1485.77		
		Bid Amount (INR)	1485.77		
2	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 11:44:55.59723
		Transmission Charges (in Rs. Millions) (a)	1482.05		
		Evaluated Cost/ Unit (INR)	1482.05		
		Bid Amount (INR)	1482.05		
3	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 11:56:06.29437
		Transmission Charges (in Rs. Millions) (a)	1478.34		
		Evaluated Cost/ Unit (INR)	1478.34		
		Bid Amount (INR)	1478.34		

4	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 12:19:02.009132
		Transmission Charges (in Rs. Millions) (a)	1474.64		
		Evaluated Cost/ Unit (INR)	1474.64		
		Bid Amount (INR)	1474.64		
5	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 12:30:56.923724
		Transmission Charges (in Rs. Millions) (a)	1470.95		
		Evaluated Cost/ Unit (INR)	1470.95		
		Bid Amount (INR)	1470.95		
6	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 12:50:16.972712
		Transmission Charges (in Rs. Millions) (a)	1467.27		
		Evaluated Cost/ Unit (INR)	1467.27		
		Bid Amount (INR)	1467.27		
7	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 12:55:15.084498
		Transmission Charges (in Rs. Millions) (a)	1463.60		
		Evaluated Cost/ Unit (INR)	1463.60		
		Bid Amount (INR)	1463.60		
8	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 13:19:09.930681
		Transmission Charges (in Rs. Millions) (a)	1459.94		
		Evaluated Cost/ Unit (INR)	1459.94		
		Bid Amount (INR)	1459.94		

9	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 13:24:37.543085
		Transmission Charges (in Rs. Millions) (a)	1456.29		
		Evaluated Cost/ Unit (INR)	1456.29		
		Bid Amount (INR)	1456.29		
10	The Tata Power Company Limited	Header	Bid Value	24.02.2023	2023-02-24 13:39:19.914878
		Transmission Charges (in Rs. Millions) (a)	1452.64		
		Evaluated Cost/ Unit (INR)	1452.64		
		Bid Amount (INR)	1452.64		
11	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 14:03:39.645184
		Transmission Charges (in Rs. Millions) (a)	1449.00		
		Evaluated Cost/ Unit (INR)	1449.00		
		Bid Amount (INR)	1449.00		
12	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 14:13:02.683365
		Transmission Charges (in Rs. Millions) (a)	1445.37		
		Evaluated Cost/ Unit (INR)	1445.37		
		Bid Amount (INR)	1445.37		
13	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 14:34:51.889897
		Transmission Charges (in Rs. Millions) (a)	1441.75		
		Evaluated Cost/ Unit (INR)	1441.75		
		Bid Amount (INR)	1441.75		

14	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 14:45:16.853395
		Transmission Charges (in Rs. Millions) (a)	1438.14		
		Evaluated Cost/ Unit (INR)	1438.14		
		Bid Amount (INR)	1438.14		
15	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 15:07:02.198711
		Transmission Charges (in Rs. Millions) (a)	1434.54		
		Evaluated Cost/ Unit (INR)	1434.54		
		Bid Amount (INR)	1434.54		
16	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 15:33:40.771925
		Transmission Charges (in Rs. Millions) (a)	1430.95		
		Evaluated Cost/ Unit (INR)	1430.95		
		Bid Amount (INR)	1430.95		
17	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 15:57:00.695352
		Transmission Charges (in Rs. Millions) (a)	1427.37		
		Evaluated Cost/ Unit (INR)	1427.37		
		Bid Amount (INR)	1427.37		
18	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 16:23:39.642589
		Transmission Charges (in Rs. Millions) (a)	1423.80		
		Evaluated Cost/ Unit (INR)	1423.80		
		Bid Amount (INR)	1423.80		

19	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 16:33:35.907275
		Transmission Charges (in Rs. Millions) (a)	1420.24		
		Evaluated Cost/ Unit (INR)	1420.24		
		Bid Amount (INR)	1420.24		
20	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 16:46:51.165622
		Transmission Charges (in Rs. Millions) (a)	1416.68		
		Evaluated Cost/ Unit (INR)	1416.68		
		Bid Amount (INR)	1416.68		
21	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 17:06:32.770713
		Transmission Charges (in Rs. Millions) (a)	1413.13		
		Evaluated Cost/ Unit (INR)	1413.13		
		Bid Amount (INR)	1413.13		
22	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 17:22:51.874654
		Transmission Charges (in Rs. Millions) (a)	1409.59		
		Evaluated Cost/ Unit (INR)	1409.59		
		Bid Amount (INR)	1409.59		
23	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 17:42:41.577293
		Transmission Charges (in Rs. Millions) (a)	1406.06		
		Evaluated Cost/ Unit (INR)	1406.06		
		Bid Amount (INR)	1406.06		

24	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 18:02:28.632103
		Transmission Charges (in Rs. Millions) (a)	1402.54		
		Evaluated Cost/ Unit (INR)	1402.54		
		Bid Amount (INR)	1402.54		
25	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 18:24:24.942553
		Transmission Charges (in Rs. Millions) (a)	1399.03		
		Evaluated Cost/ Unit (INR)	1399.03		
		Bid Amount (INR)	1399.03		
26	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 18:50:16.887124
		Transmission Charges (in Rs. Millions) (a)	1395.53		
		Evaluated Cost/ Unit (INR)	1395.53		
		Bid Amount (INR)	1395.53		
27	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 19:06:07.813237
		Transmission Charges (in Rs. Millions) (a)	1392.04		
		Evaluated Cost/ Unit (INR)	1392.04		
		Bid Amount (INR)	1392.04		
28	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 19:25:56.420328
		Transmission Charges (in Rs. Millions) (a)	1388.55		
		Evaluated Cost/ Unit (INR)	1388.55		
		Bid Amount (INR)	1388.55		

29	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 19:50:45.574965
		Transmission Charges (in Rs. Millions) (a)	1385.07		
		Evaluated Cost/ Unit (INR)	1385.07		
		Bid Amount (INR)	1385.07		
30	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 20:06:08.179965
		Transmission Charges (in Rs. Millions) (a)	1381.60		
		Evaluated Cost/ Unit (INR)	1381.60		
		Bid Amount (INR)	1381.60		
31	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 20:1 :25.525712
		Transmission Charges (in Rs. Millions) (a)	1378.14		
		Evaluated Cost/ Unit (INR)	1378.14		
		Bid Amount (INR)	1378.14		
32	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 20:17:46.567851
		Transmission Charges (in Rs. Millions) (a)	1374.69		
		Evaluated Cost/ Unit (INR)	1374.69		
		Bid Amount (INR)	1374.69		
33	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 20:40:06.834199
		Transmission Charges (in Rs. Millions) (a)	1371.25		
		Evaluated Cost/ Unit (INR)	1371.25		
		Bid Amount (INR)	1371.25		

34	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 20:42:32.851554
		Transmission Charges (in Rs. Millions) (a)	1367.82		
		Evaluated Cost/ Unit (INR)	1367.82		
		Bid Amount (INR)	1367.82		
35	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 21:07:54.895092
		Transmission Charges (in Rs. Millions) (a)	1364.40		
		Evaluated Cost/ Unit (INR)	1364.40		
		Bid Amount (INR)	1364.40		
36	POWERGRID CORPORATION OF INDIA LIMITED	Header	Bid Value	24.02.2023	2023-02-24 21:10:07.090689
		Transmission Charges (in Rs. Millions) (a)	1360.98		
		Evaluated Cost/ Unit (INR)	1360.98		
		Bid Amount (INR)	1360.98		
37	Sterlite Grid 19 Limited	Header	Bid Value	24.02.2023	2023-02-24 21:14:49.049922
		Transmission Charges (in Rs. Millions) (a)	1357.57		
		Evaluated Cost/ Unit (INR)	1357.57		
		Bid Amount (INR)	1357.57		

Recommendations of Cost Committee for finalization of cost estimation for the Independent Transmission Projects being implemented through Tariff Based Competitive Bidding process discussed during meeting held on 28.07.2022.

1. A meeting of the Cost Committee was held on 28.07.2022 through Video Conferencing (VC) for estimating the cost of the following independent Transmission Projects (ITPs), which are presently under bidding with PFC Consulting Limited (PFCCL) as Bid Process Coordinator (BPC):

S. No.	Transmission Project
1.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III-Part A1
2.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A3
3.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1
4.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G
5.	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase-II Part-E

2. The Cost for "Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase-II Part-E" was estimated and finalized during the meeting of cost committee held on 22.10.2020. However, the bidding process was put on hold on 12.05.2021 due to non-availability of LTA applications. On receipt of list of LTA's from CEA, the bid process was resumed on 18.02.2022. As a considerable time has passed since the cost of the project was finalized and there have been changes in the indicative cost matrix used for the estimation of cost at that time, it is considered to review the cost.

3. Representative of Rajasthan Rajya Vidyut Prasaran Nigam Limited (RRVPNL) provided the data available with them regarding equipment cost of substation based on recent projects awarded by them for substation and the same is reproduced below:

(i) 765 kV D/c line (Hexa Zebra – Wind Zone 4): Rs. 547.93 Lakh (inclusive of taxes)
(ii) 220 KV Bay (per bay): Rs. 245.68 Lakh (inclusive of taxes)

For the balance items, the indicative cost matrix data at March, 2022 price level along with detailed assumptions for working out the cost of substation and transmission lines has been obtained from CTUIL.

4. Cost estimate prepared on the basis of cost data provided by RRVPN & CTUIL is rough, indicative and is likely to vary to a great extent from the actual estimate prepared on the basis of BOQ arrived on the basis of detailed survey, soil testing etc., as Cost matrix sheet is generic in nature and is dependent on certain assumed BOQ for various case scenarios such as different types of Transmission lines/ substation. Scenario of metal price market is very volatile and changing day to day.

5. As per the indicative reference data provided by CTUIL to arrive at the completed project cost, the indicative equipment/material cost has to be multiplied with the factors depending upon the completion period of the Project which range between 24 months to 42 months. However, in most of the previous projects awarded through TBCB the tariff discovered was more than 30% lower than the cost estimated by the Committee. The Committee members were of the opinion that based on the experience with previous projects, this factor should not be considered so that more realistic cost estimate may be obtained. After detailed deliberations, it has been decided

that the factor is not to be multiplied to the indicative equipment/material cost from now onwards.

6. The Committee adopted the Guidelines on "Payment of compensation towards damages in regard to Right of Way for transmission lines" issued by Ministry of Power, Govt. of India on 15.10.2015. The provisions with respect to compensation as per these Guidelines are as given below:

(i) Compensation @ 85% of land values determined by District Magistrate or any other authority based on Circle rate/ Guideline value/ Stamp Act rates for tower base area (between four leg) impacted severely due to installation of tower/pylon structure;

(ii) Compensation towards diminution of land value in the width of RoW Corridor due to laying of transmission line and imposing certain restriction would be decided by the States as per categorization/ type of land indifferent places of States, subject to a maximum of 15%of land value as determined based on Circle rate/ Guideline value/ Stamp Act rates

7. Based on the same, representative from RRVPNL provided the DLC (District Level Committee) land rates for various related areas and also the estimated RoW compensation for each transmission lines which is to be added to the cost of transmission lines.

(i) Fatehgarh-I - Fatehgarh-3 400 kV D/c (twin HTLS) line: Rs. 2.5 Lakh/ Km
(ii) Fatehgarh 3- Bhadla-3 400kV D/c line (Quad) : Rs. 2.0 Lakh/ Km
(iii) Fatehgarh-2 PS – Bhadla-3 PS 400kV D/c line (Quad moose) : Rs. 2.0 Lakh/ Km
(iv) Bhadla-3 PS – Sikar-II S/s 765 kV D/c line: Rs. 4.0 Lakh/ Km
(v) Fatehgarh 3- Beawar 765kV D/c line: Rs. 5.5 Lakh/ Km
(vi) Bhadla-II PS - Sikar II 765kV D/c line(2nd) : Rs. 4.0 Lakh/ Km

8. Committee deliberated that, since the transmission line route for all the transmission schemes in Rajasthan are mostly passing through plain terrain and hence, irrespective of type of towers proposed in the transmission line, the plain terrain shall be considered for costing for all the transmission lines in Rajasthan region.

9. As per the provisions of RFP Document, Bus coupler bay and bus transfer bay in each section shall be provided as a function requirement for Double Main and Transfer Bus Switching Scheme. Accordingly, cost of 2 nos. of 220kV bays (Transfer Bus Coupler bays- 1 nos. & Bus Coupler bays- 1 nos.) has been added to the cost of "Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1".

10. One of the Transmission Line of Phase III Part B1 scheme i.e. Fatehgarh-2 PS – Bhadla-3 PS 400kV D/c line (Quad moose) is crossing Lik River having approximate 1000 mtr of bank to bank span in which provision of one pile foundation is applicable. Further, as discussed in the meeting, since the river is weathered flow type, half of the rate of pile foundation at Ganga River for 400kV D/C Quad line has been considered for costing. Same rates of pile foundation has been considered for Fatehgarh 3 - Beawar 765 kV D/c Line (half of the rate of pile foundation at Ganga River for 400kV D/C Quad line) which will cross two rivers namely Luni and Lilri, having bank to bank approximate span of 750 mtr and 681 mtr respectively.

11. As per the indicative cost data at March, 2022 price level, the price for 765kV-240 MVAR switchable line reactor is not available. After deliberations, it has been decided that the difference in rates of 765kV-330 MVAR switchable shunt reactor and 765kV-330 MVAR bus reactor has to be added to 765kV-240 MVAR bus reactor to arrive at cost of 765kV-240 MVAR switchable line reactor. Also, no separate switching equipment cost has to be considered in such a scenario.

12. Committee also deliberated on the inclusion of RoW compensation cost in the total project cost. It is decided that the RoW compensation cost is to be included in the total project cost but the same may be excluded from the total project cost while determining the acquisition price of the SPV.

13. Further, it was agreed that the cost of IDC may be taken on the total project cost as per the rates of IDC provided by CEA (F&CA Division). Accordingly, a factor of 4.75% of the project cost as IDC has been added to the project cost.

14. Based on the above, the estimated cost of the project is worked out and is as below:

Sl.	Name of the Project	Estimated Project Cost (Rs. Crore)	RoW Compensation (Rs. Crore)	Project Cost with RoW Compensation (Rs. Crore)
1.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III-Part A1	357.38	0.58	357.95
2.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A3	1112.76	5.45	1118.21
3.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1	3672.57	18.77	3691.34
4.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G	2080.70	17.78	2098.48
5	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase-II Part-E	2002.65	12.51	2015.16

(Sanjay Nayak)
General Manager, PFCCL
Committee Member

(P S Hariharan)
ACEO, RECPDCL
Committee Member

(Vishwas Kanwat)
GM (Engg), PFCCL
Committee Member

(Y. K. Swarnkar)
Director (PSETD), CEA
Committee Member & Convener

On Leave
(Manjari Chaturvedi)
Director (PSPA-I), CEA
Committee Member

(Subhro Paul)
Director (F&CA), CEA
Committee Member

(V. A. Kale)
SE (P&P), RRVPNL
Committee Member

(A. K. Thakur)
Chief Engineer (PSETD)
CEA
Chairman

12. Committee also deliberated [illegible] RoW compensation cost in the [illegible] project cost. It is decided that the RoW compensation cost is to be [illegible] in the total project [illegible] but the same may be excluded from the total project cost [illegible] determining the acquisition price of the SPV.

13. Further it was agreed that the cost of IDC may be taken on the total project cost as per the rates of IDC provided by CEA (F&CA Division). Accordingly, a factor of [illegible] of the project cost as IDC has been added to the project cost.

14. Based on the above, the estimated cost of the project is worked out and is as below:

Sl.	Name of the Project	Estimated Project Cost (Rs. Crore)	RoW Compensation (Rs. Crore)	Project Cost with RoW Compensation (Rs. Crore)
1.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III-Part A1	357.38	0.58	357.95
2.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III -Part A2	1112.76	[illegible]	1118.21
3.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part B1	2072.57	[illegible]	[illegible]34
4.	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part C	2080.70	17.[illegible]	2096.46
5.	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (3 GW) under Phase-II Part-E	2002.65	12.[illegible]	20[illegible].16

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Committee Member

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SE (P&P), RRVPNL
Committee Member

(A. K. Thakur)
Chief Engineer (PSETD)
CEA
Chairman

Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G

1. Assumptions

Description			Details
Base Project Cost (Rs.Crores)			2098.46
Increase in Project Cost			0%
Completed Project Cost (Rs.Crores)			2098.46
Price Level			March 2022
Date of Commissioning			13-06-2024
Equity			30.00%
Debt			70.00%
Rate for Interest on Loan			9.50%
Return on Equity (Pre-tax)			15.50%
Loan Repayment Schedule			Atleast 10 Years equal Instalments (Post COD)
Moratorium Period (equivalent to construction period)			18 months
Nature of Loan			Term Loan
Rate of Depreciation as per Appendix-I of CERC (Terms and Conditions of Tariff) Regulation 2019			
i) Land and RoW @0%	0%		17.78
ii) Building @ 3.34%	3.34%		0.00
i) Transmission Line @	5.28%		1883.85
iv) Substation @5.28%	5.28%		196.85
V) PLCC @ 6.33%	6.33%		0.00
Depreciation Amount (Rs. in Crore)			109.86
Salvage/ Residual Value as per CERC (T&C of Tariff) Regulation 2019	10%		
Depreciation as per Companies Act, 2013			
Useful Life (in Years)	35.00	Years	
Residual Value	5.00%		
Depreciation Rate	2.71%		
Depreciation as per Income Tax Act, 1961	15.00%		
Line Length (Ckt Km) (See the breakup below)			333.00
Rate of O&M-per CKM-Rs.lakhs	PER CKM	[illegible]	
CAGR		3.51%	
Interest rate for working capital			10.50%
Receivables	45.00	days of Annual Fixed cost	
O&M	1.00	month	
Spares	0.15		

O&M Expenses

Norms for AC and HVDC lines (Rs Lakhs per Km)	2023-24	Ckt Km
Single Circuit (Bundled conductor with Six or more sub conductors)	1.011	0.0000
Single Circuit (Bundled conductor with four sub conductors)	0.867	0.0000
Single Circuit (Twin & Triple conductor)	0.578	0.0000
Single Circuit (single conductor)	0.289	0.0000
Double Circuit (Bundled conductor with four or more sub conductors)	1.517	323.3300
Double Circuit (Twin & Triple conductor)	1.011	0.0000
Double Circuit (single conductor)	0.435	0.0000

Particulars	(Rs Lakhs per Km) Single Circuit (Bundled conductor with four or more sub conductors)	(Rs Lakhs per Km) Single Circuit (Twin & Triple conductor)	(Rs Lakhs per Km) Single Circuit (single conductor)	(Rs Lakhs per Km) Double Circuit (Bundled conductor with four or more sub-conductors)	(Rs Lakhs per Km) Double Circuit (Twin & Triple conductor)	(Rs Lakhs per Km) Double Circuit (single conductor)
2019-20	0.755	0.503	0.252	1.322	0.881	0.377
2020-21	0.781	0.521	0.26	1.368	0.912	0.391
2021-22	0.809	0.539	0.27	1.416	0.944	0.404
2022-23	0.837	0.558	0.279	1.465	0.977	0.419
2023-24	0.867	0.578	0.289	1.517	1.011	0.433
	1.15	1.15	1.15	1.15	1.15	1.15
Length				323.33		

Total O&M (Line Length) (2023-24)	4.90
Total O&M (Line Length) (2024-25)	5.08 Crore
Total O&M (Line Length) (2025-26)	5.26 Crore
Total O&M (Line Length) (2026-27)	5.44 Crore

Norms for Sub-station (Rs Lakhs per bay)	2023-24	No. of Bay AIS	No. of Bay GIS
Factor		1.00	0.70
765 kV	91.680	4.000	0.000
400 kV	36.910	0.000	0.000
220 kV	25.840	0.000	0.000
132 kV	18.460	0.000	0.000

Total O&M (Sub-Station)	2023-24	2.07
Total O&M (Sub-Station)	2024-25	2.14 Crore
Total O&M (Sub-Station)	2025-26	2.21 Crore
Total O&M (Sub-Station)	2026-27	2.29 Crore

Norms for Transformers (Rs Lakhs per MVA)	2023-24	MVA
765 kV	0.564	0.000
400 kV	0.411	0.000
220 kV	0.282	0.000
132 kV	0.282	0.000

Total O&M (Transformers)	2023-24	Crore
Total O&M (Transformers)	2024-25	Crore
Total O&M (Transformers)	2025-26	Crore
Total O&M (Transformers)	2026-27	Crore

Total O&M (Line Lenth, Transformers and Sub Station)	2023-24	6.65 Crore
Total O&M (Line Lenth, Transformers and Sub Station)	2024-25	6.86 Crore
Total O&M (Line Lenth, Transformers and Sub Station)	2025-26	7.29 Crore
Total O&M (Line Lenth, Transformers and Sub Station)	2026-27	7.85 Crore

Income tax	If income exceeds Rs. 1 cr. but not exceeding 10 Cr.		If income exceeds Rs. 10 cr.	
Particulars	Corporate Tax	Minimum Alternate Tax	Corporate Tax	Minimum Alternate Tax
Base (a)	22.00%	9.00%	22.00%	9.00%
Surcharge (b)	10.00%	7.50%	10.00%	12.00%
Total c= (a+b)	24.20%	9.68%	24.20%	9.90%
Education Cess (d	4.75%	4.75%	4.75%	4.75%
Total (c + d)	25.17%	9.89%	25.17%	9.90%

5. Important Dates and Time Period Factors		
Zero Date (Publication of RFP)	19-Jan-22	
Selection of TSP & Issuance of LOI	01-Feb-23	
Effective date of TSA	13-Feb-23	
Time to Assumed Date of Commissiong (RFP Clause 2.6) (I.e. Time in days from Effectiveness of TSA)	547	days
Assumed Date of Commissioning (Start of Contract Year 1)	13-Aug-24	
End of Contract Year 1	31-Mar-25	
Time Period of Contract Year 1	0.6301	years
35th Anniversary of the Scheduled COD (End date Last Contract Year)	13-Aug-59	
Start Date of Last Contract Year	01-Apr-59	
Time Period of Last Contract Year	0.3699	years

2. COMPUTATION OF PROJECT COST

As per Cost Committee Calculations	Line Length	Cost per Km	Total Cost	Total Estimated Cost on Completion
A	B	C	D	E
Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G	323.33	**Base Cost in Rs. Crores**		2098.48
Total Cost				2098.48

Distribution of components of cost	
Land+RoW =	17.78
Building=	0.00
TL=	1883.85
Substation=	196.85
PLCC=	0.00

3. Computation of Levelised Tariff

Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G

YEAR	COD 2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36
	7.67											
	1	2	3	4	5	6	7	8	9	10	11	12
ROE	61.49	97.58	97.58	97.58	97.58	97.58	130.40	130.40	130.40	130.40	130.40	130.40
OPENING LOAN	1468.94	1399.71	1289.85	1179.99	1070.13	960.26	850.40	740.54	630.68	520.82	410.96	301.10
NORMATIVE REPAYMENT	69.23	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86
CLOSING LOAN	1399.71	1289.85	1179.99	1070.13	960.26	850.40	740.54	630.68	520.82	410.96	301.10	191.24
IOL	85.86	127.75	117.32	106.88	96.44	86.01	75.57	65.13	54.70	44.26	33.82	23.39
CUM.REP	69.23	179.09	288.95	398.81	508.67	618.53	728.39	838.25	948.12	1057.98	1167.84	1277.70
DEP	69.23	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86	109.86
CUM DEP.	69.23	179.09	288.95	398.81	508.67	618.53	728.39	838.25	948.12	1057.98	1167.84	1277.70
O&M	4.34	7.29	7.55	7.81	8.09	8.37	8.66	8.97	9.28	9.61	9.95	10.30
IWC	3.00	4.67	4.55	4.42	4.29	4.17	4.47	4.35	4.22	4.10	3.97	3.85
TOTAL	223.92	347.16	336.85	326.55	316.26	305.98	328.96	318.71	308.46	298.22	288.00	277.79
%Tariff	10.67%	16.54%	16.05%	15.56%	15.07%	14.58%	15.68%	15.19%	14.70%	14.21%	13.72%	13.24%
Non-esc tariff	216.58	335.19	324.76	314.32	303.88	293.45	315.83	305.39	294.96	284.52	274.08	263.64

YEAR	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48
	13	14	15	16	17	18	19	20	21	22	23	24
ROE	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40
OPENING LOAN	191.24	81.38	59.69	38.01	16.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NORMATIVE REPAYMENT	109.86	21.68	21.68	21.68	16.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLOSING LOAN	81.38	59.69	38.01	16.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IOL	12.95	6.70	4.64	2.58	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUM.REP	1387.56	1409.24	1430.93	1452.61	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94
DEP	109.86	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68
CUM DEP.	1387.56	1409.24	1430.93	1452.61	1474.30	1495.98	1517.66	1539.35	1561.03	1582.72	1604.40	1626.08
O&M	10.66	11.03	11.42	11.82	12.23	12.66	13.11	13.57	14.04	14.54	15.05	15.58
IWC	3.73	2.50	2.49	2.48	2.47	2.47	2.49	2.51	2.53	2.55	2.57	2.59
TOTAL	267.59	172.32	170.63	168.96	167.56	167.22	167.68	168.16	168.65	169.17	169.70	170.24
%Tariff	12.75%	8.21%	8.13%	8.05%	7.98%	7.97%	7.99%	8.01%	8.04%	8.06%	8.09%	8.11%
Non-esc tariff	253.21	158.78	156.72	154.66	152.86	152.08	152.08	152.08	152.08	152.08	152.08	152.08

YEAR	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
	25	26	27	28	29	30	31	32	33	34	35	36
ROE	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	130.40	48.23
OPENING LOAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NORMATIVE REPAYMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLOSING LOAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CUM.REP	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94	1468.94
DEP	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68	21.68	8.02
CUM DEP.	1647.77	1669.45	1691.14	1712.82	1734.51	1756.19	1777.87	1799.56	1821.24	1842.93	1864.61	1872.63
O&M	16.12	16.69	17.27	17.88	18.51	19.16	19.83	20.53	21.25	21.99	22.76	8.72
IWC	2.61	2.63	2.65	2.67	2.70	2.72	2.75	2.77	2.80	2.83	2.86	1.07
TOTAL	170.81	171.40	172.01	172.64	173.29	173.96	174.66	175.38	176.13	176.90	177.70	66.03
%Tariff	8.14%	8.17%	8.20%	8.23%	8.26%	8.29%	8.32%	8.36%	8.39%	8.43%	8.47%	3.15%
Non-esc tariff	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	56.25

Discount Rate as per CERC for Levelisation of Tariff*	8.09%

Total Transmission Charges (Rs. Crores)

Year	1	2	3	4	5	6	7	8	9	10	11	12
Tariff	223.92	347.16	336.85	325.59	316.26	305.98	328.96	318.71	308.46	298.22	288.00	277.73
Non-esc tariff	216.58	335.19	324.76	314.32	303.88	293.45	315.83	305.39	294.96	284.52	274.08	263.64
Discount Rate	0.98	0.92	0.85	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42

Year	13	14	15	16	17	18	19	20	21	22	23	24
Tariff	267.59	172.32	170.63	168.96	167.56	167.22	167.68	168.16	168.65	169.17	169.70	170.24
Non-esc tariff	253.21	158.78	156.72	154.66	152.36	152.08	152.08	152.08	152.08	152.08	152.08	152.08
Discount Rate	0.39	0.36	0.33	0.31	0.29	0.26	0.24	0.23	0.21	0.19	0.18	0.17

Year	25	26	27	28	29	30	31	32	33	34	35	36
Tariff	170.81	171.40	172.01	172.64	173.29	173.96	174.65	175.38	176.13	176.90	177.70	66.03
Non-esc tariff	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	56.25
Discount Rate	0.15	0.14	0.13	0.12	0.11	0.10	0.10	0.09	0.08	0.08	0.07	0.07

Levallised tariff (Rs. in Crore)	260.97	Base cost (in Rs. Crore)	2098.48
Levallised tariff (Rs. in Millions)	2609.75		12.44%
* CERC NOTIFICATION DATED 30.09.2022			
Lowest Bid in IPO	1489.50	%age Difference with CERC Tariff	-42.93%
Lowest Bid in e-RA	1357.57	%age Difference with CERC Tariff	-47.98%

7. DEPRECIATION

Particulars	2024-25 1	2025-26 2	2026-27 3	2027-28 4	2028-29 5	2029-30 6	2030-31 7	2031-32 8	2032-33 9	2033-34 10	2034-35 11	2035-36 12
DEPRECIATION AS PER BOOKS												
Opening Balance	2,080.70	2,045.11	1,988.64	1,932.16	1,875.68	1,819.21	1,762.73	1,706.26	1,649.78	1,593.30	1,536.83	1,480.35
Depreciation	35.59	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48
Accumulated depreciation	35.59	92.06	148.54	205.02	261.49	317.97	374.44	430.92	487.40	543.87	600.35	656.83
Closing balance	2,045.11	1,988.64	1,932.16	1,875.68	1,819.21	1,762.73	1,706.26	1,649.78	1,593.30	1,536.83	1,480.35	1,423.8
DEPRECIATION AS PER INCOME TAX												
Opening Balance	2,080.70	1,768.60	1,503.31	1,277.81	1,086.14	923.22	784.73	667.02	566.97	481.93	409.64	348.19
Depreciation as per Income Tax	312.11	265.29	225.50	191.67	162.92	138.48	117.71	100.05	85.05	72.29	61.45	52.23
Closing Balance	1,768.60	1,503.31	1,277.81	1,086.14	923.22	784.73	667.02	566.97	481.93	409.64	348.19	295.96

8. TAXATION

Profit before tax	95.25	153.12	156.64	160.16	163.68	167.20	203.53	207.05	210.57	214.09	214.12	207.17
Add Depreciation as per books	35.59	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48
Total	130.84	209.60	213.12	216.64	220.15	223.67	260.01	263.53	267.05	270.56	270.59	263.64
Less Deduction under Income Tax Act, 1961	312.11	265.29	225.50	191.67	162.92	138.48	117.71	100.05	85.05	72.29	61.45	52.23
Total	- 181.26	- 55.69	- 12.38	24.96	57.23	85.19	142.30	163.47	182.00	198.27	209.15	211.42
Gross Taxable Income	- 181.26	- 55.69	- 12.38	24.96	57.23	85.19	142.30	163.47	182.00	198.27	209.15	211.42
Business Loss During the year	- 181.26	- 55.69	- 12.38	-	-	-	-	-	-	-	-	-
Business Loss b/f	-	- 181.26	- 236.95	- 249.33	- 224.36	- 167.13	- 81.94	-	-	-	-	-
Business Loss Set Off during the year	-	-	-	- 249.33	- 224.36	- 167.13	- 81.94	-	-	-	-	-
Business Loss Set Off during the year		-	-	- 24.96	- 57.23	- 85.19	- 81.94	-	-	-	-	-
Total Busines Loss c/f	- 181.26	- 236.95	- 249.33	- 224.36	- 167.13	- 81.94	-	-	-	-	-	-
Gross Taxable Income (After Set of Losses)	-	-	-	-	-	-	60.36	163.47	182.00	198.27	209.15	211.42
Deduction u/s 80-IA (Not Available)	-	-	-	-	-	-	-	-	-	-	-	-
Taxable Income	-	-	-	-	-	-	60.36	163.47	182.00	198.27	209.15	211.42
Book Profit	95.25	153.12	156.64	160.16	163.68	167.20	203.53	207.05	210.57	214.09	214.12	207.17
MAT Payable (A)	-	-	-	-	-	-	-	-	-	-	-	-
Tax payable as per Income Tax Act (B)	-	-	-	-	-	-	15.19	41.14	45.81	49.90	52.64	53.21
Income Tax payable (Max of A & B)	-	-	-	-	-	-	15.191	41.143	45.806	49.902	52.638	53.209
MAT Credit (opening balance)	-	-	-	-	-	-	-	-	-	-	-	-
MAT Credit available for subsequent year	-	-	-	-	-	-	-	-	-	-	-	-
Max of MAT Credit utilisation allowed during the year	-	-	-	-	-	-	-	-	-	-	-	-
MAT Credit utilised during the year	-	-	-	-	-	-	-	-	-	-	-	-
Total MAT credit (closing balance)	-	-	-	-	-	-	-	-	-	-	-	-
Tax payable after MAT Credit	-	-	-	-	-	-	15.19	41.14	45.81	49.90	52.64	53.21

ROE	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Effective Tax Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.46%	19.87%	21.75%	23.31%	24.58%	25.68%
Effective Tax Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%
ROE (After Tax)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%

7. DEPRECIATION

Particulars	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49
	13	14	15	16	17	18	19	20	21	22	23	24	25
DEPRECIATION AS PER BOOKS													
Opening Balance	1,423.87	1,367.40	1,310.92	1,254.45	1,197.97	1,141.49	1,085.02	1,028.54	972.07	915.59	859.11	802.64	746.16
Depreciation	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48
Accumulated depreciation	713.30	769.78	826.25	882.73	939.21	995.68	1,052.16	1,108.63	1,165.11	1,221.59	1,278.06	1,334.54	1,391.02
Closing balance	1,367.40	1,310.92	1,254.45	1,197.97	1,141.49	1,085.02	1,028.54	972.07	915.59	859.11	802.64	746.16	689.68
DEPRECIATION AS PER INCOME TAX													
Opening Balance	295.96	251.57	213.83	181.76	154.49	131.32	111.62	94.88	80.65	68.55	58.27	49.53	42.10
Depreciation as per Income Tax	44.39	37.74	32.07	27.26	23.17	19.70	16.74	14.23	12.10	10.28	8.74	7.43	6.31
Closing Balance	251.57	213.83	181.76	154.49	131.32	111.62	94.88	80.65	68.55	58.27	49.53	42.10	35.78

8. TAXATION

Profit before tax	196.73	102.31	100.25	98.19	96.38	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61
Add Depreciation as per books	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48
Total	253.21	158.78	156.72	154.66	152.86	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08
Less Deduction under Income Tax Act, 1961	44.39	37.74	32.07	27.26	23.17	19.70	16.74	14.23	12.10	10.28	8.74	7.43	6.31
Total	208.81	121.05	124.65	127.40	129.68	132.38	135.34	137.85	139.98	141.80	143.34	144.65	145.77
Gross Taxable Income	208.81	121.05	124.65	127.40	129.68	132.38	135.34	137.85	139.98	141.80	143.34	144.65	145.77
Business Loss During the year	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Loss b/f	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Loss Set Off during the year	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Loss Set Off during the year	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Busines Loss c/f	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Taxable Income (After Set of Losses)	208.81	121.05	124.65	127.40	129.68	132.38	135.34	137.85	139.98	141.80	143.34	144.65	145.77
Deduction u/s 80-IA (Not Available)													
Taxable Income	208.81	121.05	124.65	127.40	129.68	132.38	135.34	137.85	139.98	141.80	143.34	144.65	145.77
Book Profit	196.73	102.31	100.25	98.19	96.38	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61
MAT Payable (A)	-	-	-	-	-	-	-	-	-	-	-	-	-
Tax payable as per Income Tax Act (B)	52.55	30.47	31.37	32.06	32.64	33.32	34.06	34.69	35.23	35.69	36.08	36.41	36.69
Income Tax payable (Max of A & B)	52.554	30.465	31.371	32.064	32.629	33.318	34.062	34.694	35.231	35.688	36.076	36.406	36.687
MAT Credit (opening balance)	-	-	-	-	-	-	-	-	-	-	-	-	-
MAT Credit available for subsequent year	-	-	-	-	-	-	-	-	-	-	-	-	-
Max of MAT Credit utilisation allowed during the year	-	-	-	-	-	-	-	-	-	-	-	-	-
MAT Credit utilised during the year	-	-	-	-	-	-	-	-	-	-	-	-	-
Total MAT credit (closing balance)	-	-	-	-	-	-	-	-	-	-	-	-	-
Tax payable after MAT Credit	52.55	30.47	31.37	32.06	32.64	33.32	34.06	34.69	35.23	35.69	36.08	36.41	36.69

ROE	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Effective Tax Rate	26.71%	29.78%	31.29%	32.66%	33.86%	34.85%	35.63%	36.29%	36.85%	37.33%	37.73%	38.08%	38.37%
Effective Tax Rate	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%
ROE (After Tax)	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%

7. DEPRECIATION

Particulars	2049-50 26	2050-51 27	2051-52 28	2052-53 29	2053-54 30	2054-55 31	2055-56 32	2056-57 33	2057-58 34	2058-59 35	2059-60 36
DEPRECIATION AS PER BOOKS											
Opening Balance	689.68	633.21	576.73	520.26	463.78	407.30	350.83	294.35	237.88	181.40	124.92
Depreciation	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	20.89
Accumulated depreciation	1,447.49	1,503.97	1,560.44	1,616.92	1,673.40	1,729.87	1,786.35	1,842.82	1,899.30	1,955.78	1,976.67
Closing balance	633.21	576.73	520.26	463.78	407.30	350.83	294.35	237.88	181.40	124.92	104.04
DEPRECIATION AS PER INCOME TAX											
Opening Balance	35.78	30.42	25.85	21.98	18.68	15.88	13.50	11.47	9.75	8.29	7.04
Depreciation as per Income Tax	5.37	4.56	3.88	3.30	2.80	2.38	2.02	1.72	1.46	1.24	1.06
Closing Balance	30.42	25.85	21.98	18.68	15.88	13.50	11.47	9.75	8.29	7.04	5.99

8. TAXATION

Profit before tax	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	35.36
Add Depreciation as per books	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	20.89
Total	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	152.08	56.25
Less Deduction under Income Tax Act, 1961	5.37	4.56	3.88	3.30	2.80	2.38	2.02	1.72	1.46	1.24	1.06
Total	146.71	147.52	148.20	148.79	149.28	149.70	150.06	150.36	150.62	150.84	55.19
Gross Taxable Income	146.71	147.52	148.20	148.79	149.28	149.70	150.06	150.36	150.62	150.84	55.19
Business Loss During the year	-	-	-	-	-	-	-	-	-	-	-
Business Loss b/f	-	-	-	-	-	-	-	-	-	-	-
Business Loss Set Off during the year	-	-	-	-	-	-	-	-	-	-	-
Business Loss Set Off during the year	-	-	-	-	-	-	-	-	-	-	-
Total Busines Loss c/f	-	-	-	-	-	-	-	-	-	-	-
Gross Taxable Income (After Set of Losses)	146.71	147.52	148.20	148.79	149.28	149.70	150.06	150.36	150.62	150.84	55.19
Deduction u/s 80-IA (Not Available)											
Taxable Income	146.71	147.52	148.20	148.79	149.28	149.70	150.06	150.36	150.62	150.84	55.19
Book Profit	**95.61**	**95.61**	**95.61**	**95.61**	**95.61**	**95.61**	**95.61**	**95.61**	**95.61**	**95.61**	**35.36**
MAT Payable (A)	-	-	-	-	-	-	-	-	-	-	-
Tax payable as per Income Tax Act (B)	36.93	37.13	37.30	37.45	37.57	37.68	37.77	37.84	37.91	37.96	13.89
Income Tax payable (Max of A & B)	**36.925**	**37.128**	**37.300**	**37.446**	**37.571**	**37.677**	**37.767**	**37.843**	**37.908**	**37.963**	**13.891**
MAT Credit (opening balance)	-	-	-	-	-	-	-	-	-	-	-
MAT Credit available for subsequent year	-	-	-	-	-	-	-	-	-	-	-
Max of MAT Credit utilisation allowed during the year	-	-	-	-	-	-	-	-	-	-	-
MAT Credit utilised during the year	-	-	-	-	-	-	-	-	-	-	-
Total MAT credit (closing balance)	-	-	-	-	-	-	-	-	-	-	-
Tax payable after MAT Credit	36.93	37.13	37.30	37.45	37.57	37.68	37.77	37.84	37.91	37.96	13.89

ROE	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Effective Tax Rate	38.62%	38.83%	39.01%	39.17%	39.30%	39.41%	39.50%	39.58%	39.65%	39.71%	39.28%
Effective Tax Rate	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%	25.17%
ROE (After Tax)	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%

6. PROJECTED PROFIT & LOSS ACCOUNT

YEAR	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Revenue	223.92	347.16	336.85	326.55	315.25	305.98	326.96	318.71	308.46	298.22	288.00	277.79	267.59	172.32	170.63	168.96
O&M Expenses	4.34	7.29	7.55	7.81	8.09	8.37	8.66	8.97	9.28	9.61	9.95	10.30	10.66	11.03	11.42	11.82
PBDIT	219.58	339.87	329.30	318.74	308.18	297.61	320.30	309.74	299.18	288.61	278.05	267.49	256.93	161.28	159.21	157.14
Depreciation	35.59	55.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48
PBIT	184.00	283.39	272.83	262.25	251.70	241.14	263.82	253.26	242.70	232.14	221.58	211.02	200.46	104.81	102.74	100.66
Interest on Working Capital	3.00	4.67	4.55	4.42	4.29	4.17	4.47	4.35	4.22	4.10	3.97	3.85	3.73	2.50	2.49	2.48
Interest on Term Loan	85.74	125.59	111.84	97.68	83.73	69.77	55.82	41.86	27.91	13.95	3.49	0.00	0.00	0.00	0.00	0.00
PBT	95.25	153.12	156.64	160.16	163.68	167.20	203.53	207.05	210.57	214.09	214.12	207.17	196.73	102.31	100.25	98.19
Tax	-	-	-	-	-	-	15.19	41.14	45.81	49.90	52.64	53.21	52.55	30.47	31.37	32.06
PAT	95.25	153.12	156.64	160.16	163.68	167.20	188.34	165.91	164.76	164.19	161.48	153.96	144.18	71.84	68.88	66.12

6. PROJECTED PROFIT & LOSS ACCOUNT

YEAR	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Revenue	167.56	167.22	167.68	168.16	168.65	169.1	169.70	170.24	170.81	171.40	172.01	172.64	173.29	173.96	174.66	175.38	176.13	176.90	[illegible]	66.03
O&M Expenses	12.23	12.66	13.11	13.57	[illegible]	[illegible]	[illegible]	[illegible]	16.12	16.59	17.07	17.88	18.51	19.16	19.83	20.53	21.25	[illegible]	[illegible]	[illegible]
PBDIT	155.33	154.56	154.57	154.59	154.61	154.63	154.65	154.67	154.69	154.71	154.73	154.75	154.78	154.80	154.83	154.86	154.88	154.91	154.94	57.32
Depreciation	56.48	56.48	56.48	56.48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	56.48	[illegible]	20.89
PBIT	98.85	98.08	98.10	98.12	[illegible]	[illegible]	[illegible]	[illegible]	98.21	98.23	[illegible]	98.28	98.30	98.33	98.35	[illegible]	98.41	98.43	98.46	36.43
Interest on Working Capital	2.47	2.47	2.49	2.51	[illegible]	[illegible]	[illegible]	[illegible]	2.63	2.63	[illegible]	2.67	2.70	2.72	2.75	2.77	2.80	2.83	2.86	[illegible]
Interest on Term Loan	0.00	0.00	0.00	0.00	0.00	[illegible]	[illegible]	[illegible]	0.00	0.00	[illegible]	0.00	0.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PBT	96.38	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	95.61	[illegible]	35.36
Tax	32.64	33.32	34.06	34.89	35.23	35.69	36.05	36.41	36.69	36.93	37.12	37.30	37.45	37.57	37.68	37.77	37.84	37.91	37.96	13.89
PAT	63.74	62.29	61.54	60.91	60.37	59.92	59.53	59.20	58.92	58.68	58.48	58.31	58.16	58.04	[illegible]	57.84	57.76	[illegible]	[illegible]	21.47

PFC CONSULTING LTD.

पीएफसी कंसल्टिंग लिमिटेड
(पावर फाइनेंस कॉर्पोरेशन लिमिटेड की पूर्णतःस्वामित्वाधीन सहायक कंपनी)
PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN : U74140DL2008GOI175858

Ref. No.: 04/ITPs/21-22/RFP **April 27, 2022**

To,
Shri P. C. Garg,
Chief Operating Officer (COO),
Central Transmission Utility of India Limited,
"Saudamini", 1st Floor, Plot No. 2,
Sector-29, Gurugram - 122001
Haryana

Sub: Bid process for selection of Transmission Service Provider for Independent Transmission Projects (ITPs) – Regarding Signing of Transmission Service Agreement

Dear Sir,

1. Ministry of Power vide its Gazette Notification has appointed PFC Consulting Limited as the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish transmission system through Tariff Based Competitive Bidding (TBCB) process. The RfP bid process of projects are initiated as per following details:

S. No.	Name of Scheme	Date of Gazette Notification	Date of RFP Issuance	Expected Date of RFP Bid Submission	Expected date of SPV Transfer
1.	Transmission system for evacuation of power from Chhatarpur SEZ (1500 MW)	19.07.2021	16.12.2021	23.05.2022	24.06.2022
2.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A1	06.12.2021	07.02.2022	18.05.2022	17.06.2022
3.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part A3	06.12.2021	07.02.2022	18.05.2022	17.06.2022
4.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part B1	06.12.2021	04.02.2022	09.05.2022	06.06.2022
5.	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under phase III –Part G	06.12.2021	19.01.2022	25.05.2022	24.06.2022
6.	400 kV Khandukhal (Srinagar) – Rampura (Kashipur) D/c line	17.01.2022	11.03.2022	13.05.2022	13.06.2022

2. As per the Para 9.4.3 of the revised TBCB Guidelines issued by MoP, GoI, the TSP (i.e. successful bidder) on the date of acquisition of SPV from the BPC will enter into a Transmission Service Agreement (TSA) with the Nodal Agency and in terms of Section 38(2) of the Electricity Act, for inter-state transmission projects CTUIL shall act as Nodal Agency to execute the Transmission Service Agreement.

3. CTUIL being the Nodal Agency for inter-state transmission projects, is required to execute the TSA for each transmission project at the time of transfer of SPV as per schedule mentioned above.

4. It is requested, that CTUIL may provide their consent for signing of TSA at the time of transfer of SPV for above mentioned projects atleast before the RFP bid submission.

Thanking You,

Yours sincerely,

(Sanjay Nayak)
General Manager

Copy for kind information to:

1. **Sh. Goutam Ghosh, Director (Transmission),** Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi – 110 001 Email: goutam.ghosh11@nic.in

2. **Sh. Ishan Sharan,** Chief Engineer (PSP & PA - I), Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi – 110066 Email: i.sharan@nic.in

सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड
(पावर ग्रिड कारपोरेशन ऑफ इण्डिया लिमिटेड के स्वामित्व में)
(भारत सरकार का उद्यम)
CENTRAL TRANSMISSION UTILITY OF INDIA LTD.
(A wholly Owned Subsidiary of Power Grid Corporation of India Limited)
(A Government of India Enterprise)

Ref No. C/CTU/TSA/PFCCL **Date:** 06.05.2022

Shri Sanjay Nayak
General Manager,
PFC Consulting Limited,
First Floor, "Urjanidhi"
1, Barakhamba Lane, Connaught Place,
New Delhi - 110001

Sub: Bid Process for selection of Transmission service provider for Independent Transmission projects (ITPs) - Regarding Signing of Transmission Service Agreement.

Ref: Letter ref. no. 04/ITPs/21-22/RFP dt 27.04.2022.

Dear Sir,

This is with reference to your letter dated 27.04.2022 regarding Signing of Transmission Service Agreement (TSA) at the time of transfer of SPV for 06 projects mentioned in the said letter.

In this regard, it is requested to provide draft TSA for necessary review at our end wherein details of the successful bidder can be filled after the same is decided. This will facilitate CTU to sign the TSA as per the requirements of Revised TBCB Guidelines issued by MoP, Govt. of India. It is further requested that exact date for signing of TSA may please be intimated to us at least one week in advance.

Thanking you,

Yours faithfully,
ATUL KUMAR AGARWAL
Digitally signed by ATUL KUMAR AGARWAL
Date: 2022.05.06 18:37:59 +05'30'
(Atul Kumar Agarwal)
Chief General Manager

F. No. 24-9/1/2023-PFC
Government of India
Ministry of Power
*****

Shram Shakti Bhavan, Rafi Marg,
New Delhi: the 24th March, 2023

OFFICE MEMORANDUM

Sub: Approval of the Government for the transfer of the shares held by PFC Consulting Limited (a wholly owned subsidiary of Power Finance Corporation Limited) in "Fatehgarh III Beawar Transmission Limited" to "Sterlite Grid 19 Limited" the Successful Bidder-Regarding.

The undersigned is directed to refer to PFCCL's letter No. No.4/21-22/ITP-50/RFP dated 13.03.2023 on the above mentioned subject and to convey the approval of the Competent Authority for divesting the shareholding of PFCCL and its nominee in **"Fatehgarh III Beawar Transmission Limited" to "Sterlite Grid 19 Limited"** the Successful Bidder, with a view to facilitate transfer of the SPV to the successful bidder as required under Ministry of Heavy Industries, Department of Public Enterprises O.M. No.18(16)/2005-GM-GL-82 dated 23.05.2007.

c.thenmoli
24.03.2023

(C.Thenmoli)
Under Secretary to the Govt. of India
Telefax: 23711302
e-mail: c.thenmoli@nic.in

1. CEO, PFCCL, First Floor, Urjanidhi, 1 Barakhamba Lane, Connaught Place, New Delhi-110003.
2. CMD, PFC Limited, New Delhi.
3. Under Secretary, Department of Public Enterprises, CGO Complex, Lodhi Road New Delhi.
4. JS (Trans):- With the advise that Transmission Wing may write to concerned states informing about the project for extending all possible help in assessment of compensation to be paid to landowners and also expediting forest clearance, if involved in the project.
5. PPS to Secretary (Power)/JS (Dist.)/DS (Dist), Ministry of Power.

MINUTES OF THE FOURTH MEETING OF THE BID EVALUATION COMMITTEE ON EVALUATION OF RFP (FINANCIAL) BIDS FOR "TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ IN RAJASTHAN (20 GW) UNDER PHASE III–PART G" HELD ON MARCH 02, 2023

1. The fourth meeting of the Bid Evaluation Committee (BEC) for evaluation of RFP (Financial) bids for the transmission scheme **"Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G"** was held on March 02, 2023 at 15:30 hrs (IST) through Video Conferencing (VC). All the members of BEC were present in the meeting.

2. The RFP (Financial) Bid - Initial Offer for the following six (06) qualified bidders were opened online on MSTC portal by the Bid Opening Committee in the office of Central Electricity Authority (CEA) in presence of BEC members through VC on February 23, 2023 at 15:00 hrs (IST):

    i. Adani Transmission Limited
    ii. Megha Engineering & Infrastructures Limited
    iii. Power Grid Corporation of India Limited
    iv. Sterlite Grid 19 Limited
    v. The Tata Power Company Limited
    vi. Torrent Power Limited

3. The lowest Quoted Transmission Charges from the Initial Offer discovered was **Rs.1489.50 million per annum** which was declared as the initial price for quoting the final offers during e-reverse bidding process.

4. As per Clause No. 3.5.1 of RFP document, *"....Quoted Transmission Charges of such Initial Offer shall be ranked on the basis of the ascending Initial Offer submitted by each Qualified Bidder. Based on such ranking of the Qualified Bidders, first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall qualify for participating in the electronic reverse auction".*

    Accordingly, following four (04) bidders are qualified to participate in the e-reverse auction:

    i. Adani Transmission Limited
    ii. Power Grid Corporation of India Limited
    iii. Sterlite Grid 19 Limited
    iv. The Tata Power Company Limited

5. The lowest Initial Offer at MSTC portal i.e. **Rs. 1489.50 million per annum** was communicated (duly acknowledged by bidders) to the above four (04) bidders qualified for participating in the e-reverse bidding process which was held at MSTC Portal on February 24, 2023 at 10:00 hrs (IST) onwards.

6. The e-reverse bidding process was closed after 37 rounds, on same day i.e. February 24, 2023 at 21:44 hrs (IST). Except 'Adani Transmission Limited', the other three (03) qualified bidders participated in e-reverse bidding. The Evaluation Report is attached at **Annexure-A.**

7. The Final Offer (Quoted Transmission Charges) of each bidder as quoted at the time of closing of e-reverse bidding is as under (copy of e-reverse bidding statement generated at MSTC portal is attached at **Annexure-B**):

S. No.	Name of the Bidder	Final Quoted Transmission Charges (in Indian Rupees million per annum)	Rank
1.	Sterlite Grid 19 Limited	**1357.57**	**L1**
2.	Power Grid Corporation of India Limited	1360.98	L2
3.	The Tata Power Company Limited	1452.64	L3
4.	Adani Transmission Limited	1506.00 (Not participated in e-RA)	L4

8. As per the provisions of RFP document, only one value for annual Transmission Charges is to be quoted by the bidder. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3-Power of Attorney, Annexure 4-Power of Attorney from Consortium Members (if applicable), Annexure 6- Consortium Agreement (if applicable) and Annexure 14- Bid Bond, before issuance of LoI.

9. Accordingly, as per the requirement, 'Sterlite Grid 19 Limited' (the Bidder with lowest Final Offer) vide letter dated 28.02.2023 has submitted the original hard copies of Annexure 3 and Annexure 14 to BPC on 28.02.2023. The other annexures were not applicable to the bidder.

10. BPC has confirmed that the original hard copies of Annexure 3 and Annexure 14 submitted by 'Sterlite Grid 19 Limited' are in order and there is no discrepancy between the online submission and physical documents submitted by M/s Sterlite Grid 19 Limited.

11. In view of above, **'Sterlite Grid 19 Limited'** with the Final Offer (Quoted Transmission Charges) of **Rs. 1357.57 million per annum**, may be declared as the successful bidder.

12. BPC, in their evaluation report (**Annexure-A**) has confirmed the following:

    i. The levelised tariff for this project based on CERC norms works out to Rs.2609.75 million per annum. This has been computed based on the estimated cost as communicated by the Cost Committee constituted by CEA and methodology for calculation of tariff as per CERC norms.

    ii. The entire bid process has been carried out in accordance with the "Tariff based Competitive Bidding Guidelines for Transmission Service" and "Guidelines for encouraging competition in development of the Transmission Projects" issued by Ministry of Power, Govt. of India under Section 63 of the Electricity Act, 2003 and as amended from time to time.

13. After detailed discussions on the evaluation report prepared by BPC (**Annexure-A**), the BEC decided the following:

    i. **"M/s Sterlite Grid 19 Limited"** is the successful Bidder after the conclusion of the e-reverse bidding process with the lowest Quoted Transmission Charges of **Rs. 1357.57 million per annum**.

    ii. The quoted tariff is lower than the Levelised Tariff estimated as per CERC norms. The quoted tariff discovered through e-reverse bidding process is acceptable.

    iii. In view of (i) and (ii) above, **'Sterlite Grid 19 Limited'** may be issued Letter of Intent (LoI).

BEC has also issued a separate certificate in this regard (**Annexure-C**).

Name of BEC Members	Signature
Sh. Umesh Kumar Madan, EVP & Regional Head, SBI Capital Markets, New Delhi-**Chairman**	
Sh. Santosh Kumar, Superintendent Engineer, Northern Regional Power Committee, New Delhi – **Member**	
Sh. V.A Kale, Superintendent Engineer (P&P), Rajasthan Rajya Vidyut Prasaran Nigam Limited Jaipur- **Member**	
Sh. Y. K. Swarnkar, Director (PSETD), CEA, New Delhi-**Member**	
Smt. Manjari Chaturvedi, Director (PSPA-I), CEA, New Delhi -**Member**	
Sh. Milind M Dafade, Chairman, Fatehgarh III Beawar Transmission Limited, New Delhi -**Convener Member**	

Enclosure:

A. **Evaluation Report of Financial Bid (Final Offer)**
B. **E-Reverse Bidding Statement generated at MSTC portal**
C. **Certificate from BEC**

Dated: March 622

CERTIFICATE BY THE BID EVALUATION COMMITTEE

Subject: Selection of Successful Bidder as Transmission Service Provider to establish "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G".

It is hereby certified that:

1. The entire bid process has been carried out in accordance with the "Tariff based Competitive Bidding Guidelines for Transmission Service" and "Guidelines for encouraging competition in development of the Transmission Projects" issued by Ministry of Power, Govt. of India under Section 63 of the Electricity Act, 2003 and as amended from time to time.

2. **Sterlite Grid 19 Limited** emerged as the Successful Bidder after the conclusion of e-reverse bidding process with the lowest Quoted Transmission Charges of **Rs. 1357.57 million per annum.**

3. The quoted tariff is lower than the Levelised Tariff calculated based on CERC norms considering the Capital Cost for the Project **'Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G'** as assessed by Cost Committee. The quoted tariff discovered through e-reverse bidding process is acceptable.

Name of BEC Members	Signature
Sh. Umesh Kumar Madan, EVP & Regional Head, SBI Capital Markets, New Delhi-**Chairman**	
Sh. Santosh Kumar, Superintendent Engineer, Northern Regional Power Committee, New Delhi – **Member**	
Sh. V.A Kale, Superintendent Engineer (P&P), Rajasthan Rajya Vidyut Prasaran Nigam Limited Jaipur- **Member**	
Sh. Y. K. Swarnkar, Director (PSETD), CEA, New Delhi-**Member**	
Smt. Manjari Chaturvedi, Director (PSPA-I), CEA, New Delhi -**Member**	
Sh. Milind M Dafade, Chairman, Fatehgarh III Beawar Transmission Limited, New Delhi -**Convener Member**	

True Copy

PFC CONSULTING LTD.

150 YEARS OF CELEBRATING THE MAHATMA

पीएफसी कंसल्टिंग लिमिटेड
(पावर फाइनेंस कॉर्पोरेशन लिमिटेड की पूर्णतःस्वामित्वाधीन कंपनी)
PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN U74140DL2008GOI175858

Annexure-7

In Duplicate

Ref. No. 04/21-22/ITP-50/RFP

March 03, 2023

To,

Sterlite Grid 19 Limited
DLF Cyber Park, Tower-B, 9th Floor,
Udyog Vihar, Phase III, Sector 20,
Gurugram – 122008

E-mail: sterlite.bd@sterlitepower.com

Kind Attn.: Mr. Mayank Bhatnagar, Authorized Signatory

Sub: Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G" – Letter of Intent.

Dear Sir,

We refer to:

1. The Request for Proposal document dated January 19, 2022 issued to 'Sterlite Grid 19 Limited' as regards participation in the international competitive bidding process for Transmission Scheme for "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G", and as amended till the Bid Deadline including all correspondence / clarifications / amendments exchanged between 'Sterlite Grid 19 Limited' and PFC Consulting Limited in regard thereto (hereinafter collectively referred to as the **"Final RFP"**);

2. The offer of 'Sterlite Grid 19 Limited', by way of a Technical Bid pursuant to (1) above submitted on January 12, 2023 in response to the Final RFP.

3. The offer of 'Sterlite Grid 19 Limited', by way of Financial Bid-Initial Offer submitted on January 12, 2023 in response to the Final RFP.

4. The offer of 'Sterlite Grid 19 Limited', by way of a Financial Bid-Final Offer submitted during e-Reverse Auction process concluded on February 24, 2023 in response to the Final RFP.

5. The Technical Bid as in (2) above and the Financial Bid as in (3) & (4) above, hereinafter collectively referred to as the "Bid".

This is to inform you that the process of evaluating bids received pursuant to the Final RFP, including the Bid, has been concluded. We are pleased to inform you that your proposal and offer received by way of the "Bid" has been accepted and 'Sterlite Grid 19 Limited' is hereby declared as the Successful Bidder as per Clause 3.6.1 of the Final RFP for the above project and consequently, this Letter of Intent (hereinafter referred to as the "LoI") is being issued.

True Copy

This LoI is based on the Final RFP and you are requested to please comply with the following:

a) Acknowledging its issuance and unconditionally accepting its contents and recording "Accepted unconditionally" under the signature of your authorized signatory on each page of the duplicate copy of this letter attached herewith, and returning the same to PFC Consulting Limited within seven (07) days of the date of issuance of LoI. This LoI is issued to you in duplicate.

b) Completion of various activities as stipulated in the Final RFP including in particular Clause 2.15.2, Clause 2.15.3 and Clause 2.15.4 of the Final RFP, within the timelines as prescribed therein.

It may be noted that PFC Consulting Limited has the rights available to them under the Final RFP, including rights under Clause 2.15.5 and Clause 3.6.3 thereof, upon your failure to comply with the aforementioned conditions.

As you are aware, the issuance and contents of this LoI are based on the Bid submitted by you as per the Final RFP including the Transmission charges and other details regarding the Scheduled COD as contained therein. The Quoted Transmission Charges as submitted by you and the Scheduled COD of each transmission Element and the Project as agreed by you in your Bid, as per Annexure-21 and Format-1 of Annexure-8 respectively of the Final RFP is annexed herewith as **Schedule-A** and incorporated herein by way of reference.

Yours sincerely,

For PFC Consulting Limited

(Sanjay Nayak)
General Manager

Enclosures: Schedule-A: Quoted Transmission Charges and the Scheduled COD of each Transmission Element and the Project submitted in your Bid, as per Annexure-21 and Format-1 of Annexure-8 respectively of the Final RFP

Copy to:

1. **Chairman and Managing Director, Power Finance Corporation Limited**, "Urjanidhi", 1, Barakhamba Lane, Connaught Lane, New Delhi – 110 001
2. **Director (Transmission), Ministry of Power**, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001
3. **Chief Engineer (PSPA-I) and Member Secretary (NCT), Central Electricity Authority**, 3rd Floor, Sewa Bhawan, R.K. Puram, New Delhi – 110066
4. **Chief Operating Officer (COO), Central Transmission Utility of India Limited (CTUIL)**, "Saudamini", Plot No. 2, Sector - 29, Gurgaon, Haryana - 122001
5. **Secretary, Central Electricity Regulatory Commission**, 3rd & 4th Floor, Chanderlok Building, 36, Janpath, New Delhi – 110 001

SCHEDULE – A
(Page 1 of 2)

1. **Quoted Transmission Charges as per Annexure-21-Format For Financial Bid**

Quoted Transmission Charges: Rs. 1357.57 million

Notes:

1. The Bidders are required to ensure compliance with the provisions of Clause 2.5.3 of this RFP.
2. Quotes to be in Rupees Millions and shall be up to two (2) decimal points.
3. The contents of this format shall be clearly typed.
4. The financial Bid shall be digitally signed by the authorized signatory in whose name power of attorney as per Clause 2.5.2 is issued.
5. Ensure only one value for annual Transmission Charges is quoted. The same charge shall be payable every year to TSP for the term of TSA.

SCHEDULE – A
(Page 2 of 2)

2. **Scheduled COD of each transmission Element and the Project as per Format-1 of Annexure-8 of RFP**

S. No.	Name of the Transmission Element	Scheduled COD in months from Effective Date	Percentage of Quoted Transmission Charges recoverable on Scheduled COD of the Element of the Project	Element(s) which are pre-required for declaring the commercial operation (COD) of the respective Element
1.	Fatehgarh-3 – Beawar 765kV D/C (2nd) along with 330MVAR Switchable line reactor for each circuit at each end of Fatehgarh-3–Beawar 765kV D/C line Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 nos. 765 kV, 330 MVAR Switchable line reactor- 4 nos.	18 months	100%	All elements of scheme are required to be commissioned simultaneously as their utilization is dependent on commissioning of each other.
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3 765 kV line bays – 4 nos.			

True Copy

PFC CONSULTING LTD.

आजादी का अमृत महोत्सव

पीएफसी कंसल्टिंग लिमिटेड
(पावर फाइनेंस कॉर्पोरेशन लिमिटेड की पूर्णतःस्वामित्वाधीन सहायक कम्पनी)
PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN U74140DL2008GOI175858

Ref. No. 04/21-22/ITP-50/RFP

Annexure-8

July 26, 2023

Sterlite Grid 19 Limited
DLF Cyber Park, Tower-B, 9th Floor,
Udyog Vihar, Phase-III, Sector 20,
Gurugram-122008

E-mail: Sterlite.bd@sterlitepower.com

Kind Attn.: Mr. Mayank Bhatnagar, Authorized Signatory

Subject: Independent Transmission Project (ITP) "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G" – Regarding Transfer of SPV "Fatehgarh III Beawar Transmission Limited".

Ref: 1. Letter of Intent (LoI) no. 04/21-22/ITP-50/RFP dated March 03, 2023.
2. PFCCL letter no. 04/21-22/ITP-50/RFP dated June 07, 2023.

Dear Sir,

In line with the provision of Clause 2.15.2 (c) of the RFP Document, one hundred per cent (100%) equity shareholding of the SPV namely, **"Fatehgarh III Beawar Transmission Limited"** is to be acquired by the selected bidder along with all its related assets and liabilities for an Acquisition Price.

Further, it is to intimate that PFCCL vide its letter dated June 07, 2023 has informed to submit the Contract Performance Guarantee which is still awaited. The Acquisition Price of the SPV Fatehgarh III Beawar Transmission Limited is **Rs. 19,66,96,207/-** (Rupees Nineteen Crore Sixty Six Lakh Ninety Six Thousand Two Hundred Seven Only). The break-up for this amount is given below:

S. No.	Description	Amount (in INR)
1.	PFCCL Management Fees	15,00,00,000
2.	Goods and Service Tax on PFCCL Management Fees	2,70,00,000
3.	Other Administrative Expenses	1,95,96,207
4.	Share Capital	1,00,000
	Total	**19,66,96,207**

The payment of the Acquisition Price may be made as detailed hereunder:

Name	: **PFC Consulting Limited**
PFCCL Goods and Service Tax No.	: 07AAECP6182F1ZC
PFCCL PAN No.	: AAECP6182F
Mode of Payment	: RTGS

Bank Details:

Bank Name	**ICICI Bank, 9A, Phelps, Connaught Place, New Delhi-110001**
Name of Account	PFC CONSULTING LIMITED
A/C No.	000705036117
IFSC Code	ICIC0000007

True Copy

It is requested that TDS may be deducted against the above payment as per I.T. rules. Copy of PAN Card and Cheque of the above bank are enclosed herewith.

The SPV is proposed to be transferred tentatively on 01.08.2023. Therefore, it is requested to make the above payment as per the details provided above through RTGS at the earliest.

Further, it is once again requested to provide the Contract Performance Guarantee (CPG) in favour of Nodal Agency i.e. Central Transmission Utility of India Limited (CTUIL) as per the details provided in RFP and subsequent amendments issued.

With kind regards,

Yours sincerely

(Sanjay Nayak)
General Manager


आयकर विभाग
INCOME TAX DEPARTMENT
भारत सरकार
GOVT. OF INDIA
PFC CONSULTING LIMITED
भारत सरकार
25/03/2008
Permanent Account Number
AAECP6182F
25042008

ICICI Bank
New Delhi Branch
9A, Phelps, Connaught Place,,NEW DELHI - 110001.
RTGS / NEFT IFSC Code : ICIC0000007

PRIVILEGE BANKING

A/C PAYEE

VALID FOR THREE MONTHS ONLY

D D M M Y Y Y Y

Pay

OR ORDER

Rupees

₹

A/c No. 000705036117

FOR PFC CONSULTING LIMITED

CABUS CBS
BUSINESS BANKING : CURRENT ACCOUNT
Payable at par at all branches of ICICI Bank Limited in India

AUTHORISED SIGNATORIES
Please sign above

"346908" 110229002: 036117" 29

True Copy

Sterlite Grid 19 Limited,
DLF Cyber Park, Block B, 9th Floor, Udyog Vihar Phase-III, Sec-20,
Gurugram -122008, Haryana, India Ph. +91 124 456 2000

Sterlite Power

Annexure-9 (Colly.)

Ref. No: PFC/Part-G/CPBG/01 **Date: 31-07-2023**

To,

CGM (BCD, REGULATORY AND LEGAL),
CENTRAL TRANSMISSION UTILITY OF INDIA
LIMITED SAUDAMINI, FIRST FLOOR, PLOT
NO.2 SECTOR-29, GURUGRAM, HA RY ANA

Sub: Submission of Contract Performance Bank Guarantee (CPBG) in favour of CTUIL for "Fatehgarh III Beawar Transmission Limited".

Ref:-

1. **Letter of Intent (LOI) no. 04/21-22/ITP-50/RFP dated March 03, 2023.**
2. **PFCCL letter no. 04/21-22/ITP-50/RFP dated July 26, 2023**
3. **CTUIL E-mail dated 28.07.2023 for submission of CPBG.**

Dear Sir,

This is in reference to your above referred letters regarding transfer of **"Fatehgarh III Beawar Transmission Limited".** In this regard, please find enclosed the original CPBGs in favour of CTUIL for Fatehgarh III Beawar Transmission Limited. The details of CPBG's are as under: -

BG No.	16090100019928
Date of Issue	27-07-2023
Amount of BG	Rs. 42,00,00,000.00 (Rupees Forty Two Crore Only)
Expiry Date	31-05-2025
Claim Expiry Date	31-05-2026

Kindly Acknowledge the receipt of the same.

Thanking You,

Yours Faithfully,

For Sterlite Grid 19 Limited

Mayank

Mayank Bhatnagar
(Authorised Signatory)

STERLITE GRID 19 LIMITED

cc: General Manager, PFC Consulting Limited 9th Floor, Wing-A, Statesman House, Connaught Place, New Delhi – 110001.

Received
31.08.2023
Deepak Krishnan
Manager, CTUIL

True Copy

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

₹100

e-Stamp

Certificate No.	:	IN-DL38492098326648V
Certificate Issued Date	:	20-Jul-2023 12:26 PM
Account Reference	:	IMPACC (IV)/ dl736003/ DELHI/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL736003455344411273606V
Purchased by	:	AXIS BANK LTD
Description of Document	:	Article Bank Guarantee
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	AXIS BANK LTD
Second Party	:	Not Applicable
Stamp Duty Paid By	:	AXIS BANK LTD
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

सत्यमेव जयते

₹100 ₹100 ₹100 ₹100 ₹100

₹100

Please write or type below this line IN-DL38492098326648V

BANK GUARANTEE NO. 16090100019928 DATED 27th July 2023

TO;
CGM (BCD, REGULATORY & LEGAL),
CENTRAL TRANSMISSION UTILITY OF INDIA LIMITED
"SAUDAMINI", FIRST FLOOR, PLOT NO.2
SECTOR-29, GURUGRAM, HARYANA 122001

For AXIS BANK LTD.

Authorised Signatory
Corporate Banking Branch
Statutory Alert:
Pusa Road, Karol Bagh, N. Delhi-5
SS No. 27740

For AXIS BANK LTD.

Authorised Signatory
Corporate Banking Branch
Pusa Road, Karol Bagh, N. Delhi-5
ABHISHEK KUMAR
Deputy Manager
SS No. 29356

BANK GUARANTEE NO. 16090100019928 DATED 27th July 2023

633

Bank Guarantee Expiry Date: - **: 31.05.2025**
Bank Guarantee Claim Expiry Date: - **: 31.05.2026**

In consideration of the **Sterlite Grid 19 Limited (Registered Office: Survey No. 99, Madhuban Dam Road, Village Rakholi, Silvassa Dadra & Nagar Haveli – 396230, India)** agreeing to undertake the obligations under the Transmission Service Agreement dated **1st Aug 2023** and the other RFP Project Documents and the Nodal Agency and PFC Consulting Limited, agreeing to execute the RFP Project Documents with the Selected Bidder, regarding setting up the Project, the **Axis Bank Limited,** A Company Incorporated Under The Companies Act, 1956 And Carrying On Banking Business Under The Banking Regulation Act, 1949 And Having Its Registered Office At 'Trishul', 3rd Floor, Opposite Samartheshwar Temple, Law Garden, Ellis Bridge, Ahmedabad 380 006, Gujarat And Its Corporate Office At Bombay Dyeing Mills Compound, Pandurang Budhakar Marg, Worli, Mumbai- 400025 And One Of Its Branch Office At **Axis Bank Limited,** 3RD FLOOR, PLOT NO. 25 PUSA ROAD NEW DELHI -110005 (Hereinafter Referred To As The "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to **Central Transmission Utility of India Limited** (being the Nodal Agency) at **"Saudamini", 1st Floor, Plot No.2, Sector-29, Gurugram-122001, Haryana** forthwith on demand in writing from the Nodal Agency or any Officer authorized by it in this behalf, any amount up to and not exceeding **Rs.42,00,00,000/-(Rupees Forty Two Crores Only)** on behalf of **M/s Sterlite Grid 19 Limited.**

This guarantee shall be valid and binding on the Guarantor Bank up to and including **31st May 2025** and shall not be terminable by notice or any change in the constitution of the Bank or the term of the Transmission Service Agreement or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to **Rs.42,00,00,000/-(Rupees Forty Two Crores Only).** Our Guarantee shall remain in force until **31st May 2025.** The Nodal Agency shall be entitled to invoke this Guarantee up to three hundred sixty five (365) days of the last date of the validity of this Guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from the **Central Transmission Utility of India Limited** (In its roles as the Nodal Agency), made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to the Nodal Agency.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by **Sterlite Grid 19 Limited, Fatehgarh III Beawar Transmission Limited** and/or any other person. The Guarantor Bank shall not require the Nodal Agency to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Nodal Agency in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly the Nodal Agency shall not be obliged before enforcing this BANK GUARANTEE to take any

For AXIS BANK LTD.
Authorised Signatory
Corporate Banking Branch
Pusa Road, Karol Bagh, N. Delhi-5

AMAN MISHRA
Manager
SS No. 27740

AXIS BANK LTD. Corporate Banking Branch Pusa Road, Karol Bagh, N. Delhi-5

ABHISHEK KUMAR
Deputy Manager
SS No. 29356

For AXIS BANK LTD.
Authorised Signatory
Corporate Banking Branch
Pusa Road, Karol Bagh, N. Delhi-5

action in any court or arbitral proceedings against **Fatehgarh III Beawar Transmission Limited** or the Selected Bidder, as the case may be, to make any claim against or any demand on **Fatehgarh III Beawar Transmission Limited** or the Selected Bidder, as the case may be, or to give any notice to **Fatehgarh III Beawar Transmission Limited** or the Selected Bidder, as the case may be, or to enforce any security held by the Nodal Agency or to exercise, levy or enforce any distress, diligence or other process against **Fatehgarh III Beawar Transmission Limited** or the Selected Bidder, as the case may be.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to the Nodal Agency and may be assigned in whole or in part (whether absolutely or by way of security) by Nodal Agency to any entity to whom the Nodal Agency is entitled to assign its rights and obligations under the Transmission Service Agreement.

The Guarantor Bank hereby agrees and acknowledges that the Nodal Agency shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to **Rs.42,00,00,000/-(Rupees Forty Two Crores Only)** and it shall remain in force until **31st May 2025**, with an additional claim period of three hundred sixty five (365) days thereafter. This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by **Sterlite Grid 19 Limited**. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if the Nodal Agency serves upon us a written claim or demand.

Dated: - 27th July 2023.
Place: - NEW DELHI

In witness where of:

For AXIS BANK LTD.

Authorised Signatory
Corporate Banking Branch
Pusa Road, Karol Bagh, N. Delhi-5

AMAN MISHRA
Manager
SS No. 27740

AXIS BANK LTD. * Corporate Banking Branch * Pusa Road, Karol Bagh, N. Delhi-5

For AXIS BANK LTD.

Authorised Signatory
Corporate Banking Branch
Pusa Road, Karol Bagh, N. Delhi-5

ABHISHEK KUMAR
Deputy Manager
SS No. 29356

True Copy

PFC CONSULTING LTD.

आजादी का अमृत महोत्सव

पीएफसी कंसल्टिंग लिमिटेड
(पावर फाइनेंस कॉर्पोरेशन लिमिटेड की पूर्णतःस्वामित्वाधीन सहायक कम्पनी)
PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Limited)
CIN U74140DL2008GOI175858

Ref. No. 04/21-22/ITP-50/RFP **August 01, 2023**

To,
Sterlite Grid 19 Limited
DLF Cyber Park, Tower-B, 9th Floor,
Udyog Vihar, Phase III, Sector 20,
Gurugram – 122008

Email: sterlite.bd@sterlitepower.com

Kind Attn.: Mr. Mayank Bhatnagar, Authorized Signatory

Sub: Independent Transmission Project "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III–Part G" – Regarding extension of LoI.

Dear Sir,

This is with reference to Letter of Intent (LoI) issued on March 03, 2023 for establishment of subject transmission scheme. The Clause No. 2.15.2 of the RFP document stipulates that within ten (10) days of the issue of the LoI the selected bidder shall complete all the activities including the acquisition of SPV.

As the SPV is being transferred on August 01, 2023, the last date for completion of various activities under Clause No. 2.15.2 of the RFP document is extended from March 13, 2023 (10 days from LoI) to August 01, 2023.

Thanking you,

Yours faithfully,

(Sanjay Nayak)
General Manager

True Copy

Dated 01st AUGUST, 2023

SHARE PURCHASE AGREEMENT

BETWEEN

PFC CONSULTING LIMITED

AND

FATEHGARH III BEAWAR TRANSMISSION LIMITED

AND

STERLITE GRID 19 LIMITED

True Copy

PFC CONSULTING LIMITED NEW DELHI

FATEHGARH III BEAWAR TRANSMISSION LIMITED NEW DELHI

STERLITE GRID

NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS AND AGREEMENTS SET FORTH IN THIS AGREEMENT AND FOR OTHER GOOD AND VALUABLE CONSIDERATION, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. DEFINITIONS

1.1 Capitalised terms in this Agreement, unless defined in this Agreement shall, in so far as the context admits, have the same meaning in this Agreement as has been ascribed to them in the Transmission Service Agreement.

1.2 Additionally, the following terms shall have the meaning hereinafter respectively assigned to them herein below:

(i) **"Acquisition Price"** shall mean **INR 19,66,96,207/- (Rupees Nineteen Crore Sixty Six Lakh Ninety Six Thousand Two Hundred Seven Only)**, which is the aggregate consideration payable by the Selected Bidder towards purchase of the **Sale Shares at par** along with assets and liabilities of the Company as on the Closing Date subject to adjustment as per the audited accounts of the Company as on the Closing Date;

(ii) **"Agreement"** or **"the Agreement"** or **"this Agreement"** shall mean this Share Purchase Agreement and shall include the recitals and/or annexures attached hereto, and the contracts, certificates, disclosures and other documents to be executed and delivered pursuant hereto, if any, and any amendments made to this Agreement by Parties in writing;

(iii) **"Bid Process"** shall mean the competitive bidding process initiated by the Company, by issuance of RFP Documents for selecting a Successful Bidder to build, own, operate and transfer the Project in accordance with and on the terms and conditions mentioned in the RFP Project Documents;

(iv) **"Board"** shall mean the board of directors of the Company

(v) **"Closing Date"** shall mean a mutually agreed date between the Parties falling within the period as mentioned in Clause 2.4 of RFP or on failure of such mutual agreement between the Parties shall be the date falling on the last date of such period;

(vi) **"CTU"** or **"Central Transmission Utility of India Limited"** shall have same meaning as defined in the Electricity Act, 2003;

(vii) **"Encumbrance"** shall mean any mortgage, pledge, lien, charge, security assignment, hypothecation, trust, encumbrance or any other agreement having the effect of creating security interest;

(viii) **"Letter of Intent"** shall have the meaning ascribed thereto under the RFP;

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(ix) **"Nominees"** shall mean the Persons, who are named in Annexure A, holding the Sale Shares as nominees of PFCCL.

(x) "**Party**" shall mean PFCCL, Company and the Selected Bidder, referred to individually, and "**Parties**" shall mean PFCCL, Company and the Selected Bidder collectively referred to, as relevant;

(xi) "**Person**" shall include an individual, an association, a corporation, a partnership, a joint venture, a trust, an unincorporated organisation, a joint stock company or other entity or organisation, including a government or political subdivision, or an agency or instrumentality thereof, and/or any other legal entity;

(xii) **"RFP Project Documents"** shall mean the following documents, referred to collectively:

a) Transmission Services Agreement;

b) this Agreement; and

c) Any other agreement(s) as may be required.

(xiii) "**Representations and Warranties**" shall mean the representations and warranties mentioned in **Clause 4** hereto;

(xiv) **"Sale Shares"** shall mean **10,000 (Ten Thousand)** Shares, representing 100 percent of the total issued, subscribed and fully paid-up equity share capital of the Company held by the Shares Seller and Nominees as more particularly described in Annexure A attached hereto;

(xv) **"Shares"** shall mean the fully paid-up equity shares of Company, of face value Rs. 10 each;

(xvi) "**Shares Seller**" shall mean PFCCL;

(xvii) "**Transmission Services Agreement**" or "**TSA**" means the agreement titled 'Transmission Services Agreement' dated August 01, 2023 entered into between Central Transmission Utility of India Limited and the TSP pursuant to which the TSP shall build, own, operate and transfer the Project and make available the assets of the Project to Central Transmission Utility of India Limitedon a commercial basis, as may be amended from time to time;

(xviii) **Transmission Service Provider" or "TSP"** shall mean **Fatehgarh III Beawar Transmission Limited** which has executed the Transmission Service Agreement and which shall be acquired by the Selected Bidder.

PFC CONSULTING LIMITED NEW DELHI

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

STERLITE GRID 19 LIMITED

1.3 Interpretation Clause

Unless the context otherwise requires, the provisions of the TSA relating to the interpretation of the TSA shall apply to this Agreement as if they were set out in full in this Agreement and to this end are incorporated herein by reference.

2. TRANSFER OF SHARES

2.1 Subject to the terms and conditions of this Agreement, the Shares Seller agrees to sell and transfer to the Selected Bidder and the Selected Bidder hereby agrees to purchase from the Shares Seller, the Sale Shares of the Company free from Encumbrances with rights and benefits attached thereto in consideration of the Acquisition Price and the covenants, undertakings and the agreements of the Selected Bidder contained in this Agreement.

2.2 The Shares Seller hereby undertakes to cause the Nominees to transfer part of the Sale Shares held by them as Nominees of the Shares Seller to the Selected Bidder and execute any documents required to deliver good title to the Sale Shares to the Selected Bidder.

3. CLOSING

3.1 Prior to the Closing Date, the Selected Bidder shall provide to the Shares Seller, valid share transfer forms ("Share Transfer Forms") duly stamped with requisite amount of stamp duty payable on the transfer of Sale Shares.

3.2 On the Closing Date, the Shares Seller shall hand over to the Selected Bidder or its authorised representative, the original share certificates representing the Sale Shares ("Sale Share Certificates") along with the Share Transfer Forms duly executed by the Shares Seller and the Nominees in favour of the Selected Bidder, simultaneously against the Selected Bidder handing over to the Shares Seller demand drafts drawn in favour of the Shares Seller for the Acquisition Price payable to it.

Provided that prior to the handing over of the Sale Share Certificates to the Selected Bidder as mentioned above, the Selected Bidder shall provide satisfactory evidence to PFCCL that on or before the Closing Date, the Selected Bidder has furnished the Performance Bank Guarantee to Central Transmission Utility of India Limited and is in a position to comply with all other requirements of Clause 2.4 of the RFP.

3.3 The Selected Bidder shall immediately upon receiving the Sale Share Certificates and the Share Transfer Forms, duly execute the Share Transfer Forms and duly lodge the Share Transfer Forms and the Sale Share Certificates with the Company. The Selected Bidder may also propose the names of its nominees to be appointed on the Board of the Company and the address within the jurisdiction of the Registrar of Delhi and Haryana, which would be the new registered office of the Company. The Company shall, upon receipt of the said documents from the Selected Bidder, do the following:

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(i) Immediately on the Closing Date convene a meeting of the Board, wherein the Board shall pass the following necessary resolutions:

(a) approving the transfer of the Shares constituting the Sale Shares from the Shares Seller and the Nominees to the name of the **Sterlite Grid 19 Limited in the following manner:**

Sr. No.	Name of the Transferee	No. of Equity Shares held	Percentage of the total paid up equity capital
1.	Sterlite Grid 19 Limited ("SGL 19")	9400	94
2.	Mr. Amarendranath Tatimakula Reddy (as a nominee of SGL 19)	100	1
3.	Mr. Saikrishna Bendapudi (as a nominee of SGL 19)	100	1
4.	Mr. Vivek Goel (as a nominee of SGL 19)	100	1
5.	Ms. Shilpi Rungta (as a nominee of SGL 19)	100	1
6.	Ms. Nikita Gupta (as a nominee of SGL 19)	100	1
7.	Mr. Ashok Ganesan (as a nominee of SGL 19)	100	1
	Total	10000	100%

(b) approving the **Sterlite Grid 19 Limited** and its nominees as mentioned hereinabove in clause 3.3 (i) (a) as a member of the Company and entering the name of the **Sterlite Grid 19 Limited** and its nominees as mentioned hereinabove in clause 3.3 (i) (a) in the register of members.

(c) changing the address of the registered office of the Company to **YC Co Working Space, 3rd Floor, Plot No. 94, Dwarka Sec. 13, Opp. Metro, Near Radisson Blu, South West Delhi, New Delhi-110078** as provided by the selected bidder.

(d) appointing the nominees of the Selected Bidder on the Board and accepting the resignations of the other existing Directors on the Board except Mr. Sanjay Kumar Nayak

(i) Mr. Ashok Amrutlal Gandhi
(ii) Mr. Ankit Bharadwaj

PFC CONSULTING LIMITED NEW DELHI

FATEHGARH III BHADLA TRANSMISSION LTD NEW DELHI

STERLITE GRID

Immediately pursuant to the acceptance of resignation of the existing Directors and appointment of the new Directors, the Board shall continue with the meeting and pass the following resolution:

(e) terminating all the authorizations granted regarding the business and/or operations of the Company or the operations of the bank accounts of the Company, with prospective effect; and

(f) acknowledging and accepting the terms and conditions as contained in the executed copies of the RFP Project Documents and to abide by the provisions contained therein.

(ii) Enter the name of the **Sterlite Grid 19 Limited and its nominees** as mentioned in clause 3.3 (i) (a) as the legal and beneficial owner of the Sale Shares, free of all Encumbrances, in the register of members of the Company;

(iii) Make the necessary endorsements on the Sale Share Certificates, indicating the name of the **Sterlite Grid 19 Limited and its nominees** as mentioned in clause 3.3 (i) (a) as the legal and beneficial owner of the Sale Shares evidenced there under;

(iv) Return the original Sale Share Certificates, duly endorsed in the name of the **Sterlite Grid 19 Limited and its nominees**, to the **Sterlite Grid 19 Limited and its nominees,** as the case may be or its authorised representative;

(v) Handover all the statutory registers and records, if any, of the Company to the Selected Bidder.

(vi) Handover certified true copies of the Board resolution passed by the Company as per (i)(a) to (e) of Clause 3.3 (i) to Central Transmission Utility of India Limited.

3.4 The Parties to this Agreement agree to take all measures that may be required to ensure that all the events contemplated in the **Clauses 3.1 to 3.3** above on the Closing Date are completed on the same day.

Notwithstanding the provisions of **Clause 3.3** hereto, all proceedings to be taken and all documents to be executed and delivered by the Parties at the Closing Date shall be deemed to have been taken and executed simultaneously and no proceedings shall be deemed to have been taken nor documents executed or delivered until all have been taken, executed and delivered.

3.5 The Selected Bidder hereby acknowledges and agrees that after the date of acquisition of one hundred percent (100%) of the equity shareholding of the Company, by the Selected Bidder as per Clause 3.3, (a) the authority, rights and obligations of the PFCCL/Company in respect of the Bid Process shall forthwith cease and any actions to be taken thereafter regarding the Bid Process will be undertaken by Central Transmission Utility of India Limited themselves or through their any other authorized representative(s), (b) all rights and obligations of the PFCCL/Company shall be of the Selected Bidder and (c) any decisions taken by the PFCCL/Company prior to the date of

its acquisition by the Selected Bidder shall continue to be binding on the Selected Bidder. The Parties hereby agree that this provision shall survive the termination of this Agreement.

3.6 This agreement shall be effective from the date of its signing by the Parties and shall remain in force until all the obligations of the respective Parties under Clause 3.3 hereto are fulfilled.

4. REPRESENTATIONS AND WARRANTIES

4.1 The Selected Bidder hereby represents and warrants to the Shares Seller that:

4.1.1 The Selected Bidder has full legal right, power and authority to enter into, execute and deliver this Agreement and to perform the obligations, undertakings and transactions set forth herein, and this Agreement has been duly and validly executed and delivered by the Selected Bidder and constitutes its legal, valid and binding obligations, enforceable against it in accordance with its terms;

4.1.2 The execution, delivery and performance of this Agreement by the Selected Bidder (i) will not violate or contravene any provision of the Memorandum of Association or Articles of the Selected Bidder, (ii) will not violate or contravene any law, statute, rule, regulation, licensing requirement, order, writ, injunction or decree of any court, governmental instrumentality or other regulatory, governmental or public body, agency or authority by which the Selected Bidder are bound or by which any of its and/or their properties or assets are bound, and (iii) except to the extent that the same have been duly and properly completed or obtained, will not require any filing with, or permit, consent or approval of or license from, or the giving of any notice to, any court, governmental instrumentality or other regulatory, governmental or public body, agency or authority, joint venture party, or any other entity or person whatsoever; and

4.1.3 The Selected Bidder is not restricted in any manner whatsoever, including without limitation, on account of any judicial or governmental order, action or proceeding, or any contractual obligation assumed by the Selected Bidder, from purchasing the Sale Shares from the Shares Seller in the manner provided for in this Agreement.

4.2 The Shares Seller hereby represents and warrants to the Selected Bidder that;

4.2.1 The Shares Seller and the Nominees are the legal and beneficial owners of the Sale Shares, free and clear of any Encumbrance and the delivery to the Selected Bidder of the Sale Shares pursuant to the provisions of this Agreement will transfer to the Selected Bidder a good title to the Sale Shares.

4.2.2 The Shares Seller has full legal right, power and authority to enter into, execute and deliver this Agreement and to perform the obligations, undertakings and

transactions set forth herein. The execution, delivery and performance of this Agreement will not violate the Memorandum and Articles of Association of the Shares Seller or contravene any contract by which it is bound.

4.2.3 The Shares Seller has obtained requisite authorizations to sell and transfer the Sale Shares to the Selected Bidder. The Shares Seller also represent that it is not prevented from transferring and selling the Sale Shares. Also, to the best of its knowledge, the Sale Shares are not the subject matter of any claim or pending proceeding or threatened by any legal proceeding made by any third party.

4.3 Except as specified in Clause 4.2, above the Shares Seller shall not be deemed to have, made any representation or warranty whatsoever, whether express or implied, in relation to the Sale Shares or Company, including but not limited to any implied warranty or representation as to the business or affairs of the Company.

4.4 The Representations and Warranties are given as at the date of this Agreement except that where a Representation and Warranty is expressed to be made as at another date, the Representation and Warranty is given with respect to that date only.

4.5 Each Representation and Warranty is to be construed independently of the others and is not limited by reference to any other Warranty. The Representations, Warranties and undertakings contained in this **Clause 4** hereto or in any document delivered pursuant to or in connection with this Agreement are continuing in nature and shall survive the Closing Date for one (1) year.

4.6 The Parties represent to each other that all Representations and Warranties provided herein by the respective Party shall be true as of Closing Date.

5. OBLIGATIONS OF THE SELECTED BIDDER

The Selected Bidder agrees that the Shares Seller shall not be liable in any manner, nor shall it assume any responsibility or liability whatsoever, in respect of the business of the Company and its operations or activities, arising after Closing Date, to any Person or any authority, central, state, local or municipal or otherwise and the same shall be the sole responsibility of the Selected Bidder.

6. MISCELLANEOUS

6.1 NOTICES

a) All notices to be given under this Agreement shall be in writing and in the English language.

b) All notices must be delivered personally or by registered or speed post or by recognised courier to the addresses below:

PFC CONSULTING LIMITED NEW DELHI

BEAWAR TRANSMISSION LTD FATEHGARH III NEW DELHI

STERLITE GRID 19 LIMITED

Selected Bidder	**Sterlite Grid 19 Limited** DLF Cyber Park, Block-B, 9th Floor, Udyog Vihar, Phase-III, Sector-20, Gurugram - 122008
Name of the Holding Company of the SPV	**Company Secretary,** **PFC Consulting Limited** First Floor, "Urjanidhi", 1 Barakhamba Lane, Connaught Place, New Delhi- 110001
Company (Before Closing Date)	**Project In-charge** **Fatehgarh III Beawar Transmission Limited** First Floor, "Urjanidhi", 1 Barakhamba Lane, Connaught Place, New Delhi- 110001
Company (After Closing Date)	**Fatehgarh III Beawar Transmission Limited** DLF Cyber Park, Block-B, 9th Floor, Udyog Vihar, Phase-III, Sector-20, Gurugram – 122008

c) Any Party may by notice of at least fifteen (15) days to the other Parties change the address and / or addresses to which such notices and communications to it are to be delivered or mailed.

6.2 RESOLUTION OF DISPUTES

6.2.1 If any dispute arises between the Parties, in connection with the validity, interpretation, implementation or alleged breach of any provision of this Agreement ("Dispute"), the disputing Parties hereto shall endeavour to settle such Dispute amicably. The attempt to bring about an amicable settlement shall be considered to have failed if not resolved within 60 days from the date of the Dispute.

6.2.2 If the Parties are unable to amicably settle the Dispute in accordance with Clause 6.2.1 within the period specified therein, any of the Parties shall be entitled to within 30 days after expiry of the aforesaid period, refer the Dispute to the Company Secretary of PFCCL and Chief Executive/ Managing Director of the Selected Bidder for resolution of the said Dispute. The attempt to bring about such resolution shall be considered to have failed if not resolved within 30 days from the date of receipt of a written notification in this regard.

PFC CONSULTING LIMITED NEW DELHI

PFCCL

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

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STERLITE GRID 19 LTD

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6.2.3 In the event the Dispute is not settled in accordance with Clause 6.2.2 above, any Party to the Dispute shall be entitled to serve a notice invoking this Clause and making a reference to a sole arbitrator. If the Parties to the Dispute cannot agree as to the appointment of the sole arbitrator within 30 days of receipt of the notice of the Party making the reference, then the Shares Seller along with the Company shall appoint one arbitrator and the Selected Bidder shall appoint one arbitrator and the two arbitrators, so appointed shall appoint a third arbitrator. However, after the Closing Date, in such an event the Shares Seller shall appoint one arbitrator and the Selected Bidder along with the Company shall appoint one arbitrator and the two arbitrators, so appointed shall appoint the third arbitrator.

6.2.4 The place of the arbitration shall be New Delhi. The Arbitration proceedings shall be governed by the Arbitration and Conciliation Act, 1996.

6.2.5 The proceedings of arbitration shall be in English language.

6.2.6 The arbitrator's award shall be substantiated in writing. The arbitrators shall also decide on the costs of the arbitration proceedings. In case the arbitrators have not decided on the costs of the arbitration proceedings, each Party to the Dispute shall bear its own costs, in relation to the arbitration proceedings.

6.3 AUTHORISED PERSON

For the purposes of this Agreement, the Selected Bidder is represented by the Board of Directors of the Company and/or Mr. Nanda Kishore Panda and/or Mr. Chandan Dutt and/or Mr. Pawan Kumar Singh and/or Mr. Ashok Amrutlal Gandhi and/or Mr. Ashok Ganesan and/or Mr. Pradeep Sand [the authorized representative of the Selected Bidder], pursuant to an authorization granted to abovementioned authorized representatives of the selected bidder through necessary board resolutions. Further, the Board of Directors of the Company and/or Mr. Nanda Kishore Panda and/or Mr. Chandan Dutt and/or Mr. Pawan Kumar Singh and/or Mr. Ashok Amrutlal Gandhi and/or Mr. Ashok Ganesan and/or Mr. Pradeep Sand [The authorized representative of the Selected Bidder] is also authorized by such resolutions to take any decision which may be required to be taken, do all acts and execute all documents which are or may be required by the Selected Bidder for the proper and effective fulfillment of the rights and obligations under this Agreement. Any action taken or document executed by above mentioned authorized representatives of the selected bidder shall be deemed to be acts done or documents executed by the Selected Bidder and shall be binding on the Selected Bidder.

PFC CONSULTING LIMITED NEW DELHI

FATEHGARH III BEAWAR TRANSMISSION LIMITED NEW DELHI

STERLITE GRID 19 LIMITED

6.4 RESERVATION OF RIGHTS

No forbearance, indulgence or relaxation or inaction by any Party at any time to require performance of any of the provisions of this Agreement shall in any way affect, diminish or prejudice the right of such Party to require performance of that provision, and any waiver or acquiescence by any Party of any breach of any of the provisions of this Agreement shall not be construed as a waiver or acquiescence of any continuing or succeeding breach of such provisions, a waiver of any right under or arising out of this Agreement or acquiescence to or recognition of rights other than that expressly stipulated in this Agreement.

6.5 CUMULATIVE RIGHTS

All remedies of either Party under this Agreement whether provided herein or conferred by statute, civil law, common law, custom or trade usage, are cumulative and not alternative and may be enforced successively or concurrently.

6.6 PARTIAL INVALIDITY

If any provision of this Agreement or the application thereof to any person or circumstance shall be invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to persons or circumstances other than those as to which it is held invalid or unenforceable shall not be affected thereby, and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law. Any invalid or unenforceable provision of this Agreement shall be replaced with a provision, which is valid and enforceable and most nearly reflects the original intent of the unenforceable provision.

6.7 TERMINATION

If (i) the Closing does not occur on the Closing Date for any reason whatsoever, or (ii) the Letter of Intent is withdrawn or terminated for any reason, or (iii) due to termination of the TSA by Central Transmission Utility of India Limited in accordance with Article 3.3.2 or Article 13 of the TSA thereof, PFCCL shall have a right to terminate this Agreement forthwith by giving a written notice to the other Parties hereto.

6.8 AMENDMENTS

No modification or amendment of this Agreement and no waiver of any of the terms or conditions hereof shall be valid or binding unless made in writing and duly executed by all the Parties.

PFC CONSULTING LIMITED NEW DELHI

FATEHGARH III BEAWAR TRANSMISSION LIMITED NEW DELHI

STERLITE GRID 19 LIMITED

6.9 ASSIGNMENT

This Agreement and the rights and liabilities hereunder shall bind and inure to the benefit of the respective successors of the Parties hereto, but no Party hereto shall assign or transfer its rights and liabilities hereunder to any other Person without the prior written consent of the other Parties, which will not be unreasonably withheld.

6.10 ENTIRE AGREEMENT

This Agreement constitutes the entire Agreement between the Parties with respect to the subject matter herein and supersedes and cancels any prior oral or written agreement, representation, understanding, arrangement, communication or expression of intent relating to the subject matter of this Agreement.

6.11 COSTS

Each of the Parties hereto shall pay their own costs and expenses relating to the negotiation, preparation and execution of this Agreement and the transactions contemplated by this Agreement.

The Selected Bidder shall be liable to bear and pay the stamp duty and other costs in respect of this Agreement and the Share Transfer Forms.

6.12 RELATIONSHIP

None of the provisions of this Agreement shall be deemed to constitute a partnership between the Parties hereto and no Party shall have any authority to bind the other Party otherwise than under this Agreement or shall be deemed to be the agent of the other in any way.

6.13 GOVERNING LAW AND JURISDICTION

This Agreement shall be governed by and construed in accordance with the laws of India and shall be subject to the exclusive jurisdiction of the courts of Delhi.

6.14 COUNTERPARTS

This Agreement may be executed in counterparts by the Parties and each fully executed counterpart shall be deemed to be original.

6.15 CONFIDENTIALITY

The Parties undertake to hold in confidence and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

PFC CONSULTING LIMITED NEW DELHI

NEW DELHI

STERLITE GRID

PFCCL FIIIBTL SG19L

(a) to their professional advisors;

(b) to their officers, employees, agents or representatives, who need to have access to such information for the proper performance of their activities;

(c) disclosures required under Law;

without the prior written consent of the other Parties.

Provided that Central Transmission Utility of India Limited and PFCCL may at any time, disclose the terms and conditions of transactions contemplated hereby to any person, to the extent stipulated under the law or the Bidding Guidelines.

6.16 INDEMNIFICATION

- The Parties hereby agree that transfer of Sale Shares to the Selected Bidder shall vest all the rights, privileges, licenses, responsibilities, liabilities and other obligations pertaining to the Company in the Selected Bidder.

- The Selected Bidder hereby agrees that the Selected Bidder shall not be entitled to any claims or initiate any legal proceedings, by itself or through the Transmission Service Provider against the Share Sellers, its directors, officers, employees and the subscribers including the members of any committees appointed by them in respect of any actions or decisions taken by any of them with in the purview of any Law, rules and regulations up to the Closing Date in furtherance of the Project referred to in recital A of this Agreement.

- Further, the Selected Bidder hereby indemnifies and holds harmless at all times the Share Seller against all losses, damages, charges, and expenses which the Share Seller may sustain or incur towards contractual obligations with respect to the contracts awarded by the Share Seller or any other liability arising with regard to any action/ activity undertaken by the Share Seller in accordance with law and as per relevant standards without any negligence on their part for and on behalf of the Company in furtherance of the Project referred to above or otherwise concerning the Company. All such actions shall be defended by the Selected Bidder either itself or through the TSP at its own cost.

- The Parties hereby agree that the provisions of this clause shall survive the termination of this Agreement.

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IN WITNESS WHEREOF, THE PARTIES HERETO HAVE CAUSED THIS AGREEMENT TO BE DULY EXECUTED AND DELIVERED AS OF THE DAY AND YEAR FIRST ABOVE WRITTEN

SIGNED AND DELIVERED
BY THE WITHIN NAMED "**PFCCL**" **PFC CONSULTING LIMITED**

BY THE HAND OF **MR. SACHIN ARORA, COMPANY SECRETARY.**

PURSUANT TO THE RESOLUTION PASSED BY THE BOARDOF DIRECTORS ON MARCH 10, 2023.

ON THE 1ST DAY OF AUGUST, 2023.

IN THE PRESENCE OF: (CM) BIBHUTI GIRI
CM, PFCCL
WITNESS:
NAME, SIGNATURE, DESIGNATION AND ADDRESS:

SIGNED AND DELIVERED
BY THE WITHIN NAMED "**FATEHGARH III BEAWAR TRANSMISSION LIMITED**"

BY THE HAND OF **MR. SANJAY KUMAR NAYAK, DIRECTOR & PROJECT IN-CHARGE.**

PURSUANT TO THE RESOLUTION PASSED BY THE BOARD OF DIRECTORS ON MARCH 03, 2023.

ON THE 1ST DAY OF AUGUST, 2023

(AM) DEEPAK KUMAR
AM, PFCCL

IN THE PRESENCE OF:
WITNESS:
NAME, SIGNATURE, DESIGNATION AND ADDRESS:

SIGNED AND DELIVERED

BY THE WITHIN NAMED **"STERLITE GRID 19 LIMITED"**

BY THE HAND OF **MR. AMARENDRANATH TATIMAKULA REDDY, DIRECTOR**

PURSUANT TO THE
RESOLUTION PASSED BY THE BOARD OF DIRECTORS ON JULY 31, 2023.

ON THE 01ST DAY OF AUGUST, 2023.

IN THE PRESENCE OF:
WITNESS:

NAME, SIGNATURE, DESIGNATION AND ADDRESS:

PRADEEP SAND
ASSOCIATE
3170, Sector-23, Gurugram. 122017

ANNEXURE A

DESCRIPTION OF THE SALE SHARES

S. NO.	NAME OF THE SHAREHOLDER	NUMBER OF EQUITY SHARES HELD	PERCENTAGE OF THE TOTAL PAID UP EQUITY CAPITAL
1.	PFC Consulting Limited	9400	94 %
2.	Shri Manoj Kumar Rana (Nominee of PFC Consulting Limited)	100	1 %
3.	Shri Milind Madhusudan Dafade (Nominee of PFC Consulting Limited)	100	1 %
4.	Shri Dharuman Manavalan (Nominee of PFC Consulting Limited)	100	1 %
5.	Shri Neeraj Singh (Nominee of PFC Consulting Limited)	100	1 %
6.	Shri Sanjay Kumar Nayak (Nominee of PFC Consulting Limited)	100	1 %
7.	Shri Sachin Shukla (Nominee of PFC Consulting Limited)	100	1 %
	Total	**10000**	**100%**

True Copy

PFC CONSULTING LIMITED NEW DELHI

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

STERLITE GRID 19

STANDARD

TRANSMISSION SERVICE AGREEMENT

FOR

DEVELOPMENT AND OPERATION OF INTER-STATE TRANSMISSION SYSTEM

FOR TRANSMISSION OF ELECTRICITY THROUGH TARIFF BASED COMPETITIVE BIDDING FOR

TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ IN RAJASTHAN (20 GW) UNDER PHASE-III PART G

BETWEEN THE

CENTRAL TRANSMISSION UTILITY OF INDIA LIMITED

(NODAL AGENCY)

AND

FATEHGARH III BEAWAR TRANSMISSION LIMITED

August 01, 2023

FATEHGARH III BEAWAR TRANSMISSION LTD ★ NEW DELHI

Dhirwal

True Copy

CONTENTS

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

Central Transmission Utility of India Ltd Gurugram

Transmission Service Agreement

Bond

Indian-Non Judicial Stamp
Haryana Government

654

Date : 31/03/2023

Certificate No. G0312023C5608 *G0312023C5608*

Stamp Duty Paid : ₹ 101
(Rs. Only)

GRN No. 101015347 *101015347*

Penalty : ₹ 0
(Rs. Zero Only)

Deponent

Name : Central Transmission utility of India ltd
H.No/Floor : 2 Sector/Ward : 29 Landmark : Na
City/Village : Gurugram District : Gurugram State : Haryana
Phone : 98******10

Purpose : ARTICLE 5 GENERAL AGREEMENT **to be submitted at Concerned office**

The authenticity of this document can be verified by scanning this QrCode Through smart phone or on the website https://egrashry.nic.in

THIS TRANSMISISON SERVICE AGREEMENT (hereinafter referred to as "TSA" or "Agreement" or "the Agreement" or "this Agreement") is made on the ...01... [Insert day] of...Aug... [Insert month] of Two Thousand and...Twenty Three... [Insert Year]

BETWEEN:

The **Central Transmission Utility of India Limited**, "Saudamini",1st Floor, Plot No. 2, Sector-29, Gurugram-122001, Haryana, acting as a Nodal Agency (referred to as the "Nodal Agency"), which expression shall unless repugnant to the context or meaning thereof include its successors, and permitted assigns) as Party of the one part;

AND

Fatehgarh III Beawar Transmission Limited, incorporated under the Companies Act, 1956/ Companies Act, 2013 (as the case may be), having its registered office at First Floor, Urjanidhi, 1 Barakhamba Lane Cannaught Place, New Delhi, Delhi Central Delhi DL 110001 (herein after referred to as "Transmission Service Provider" or "TSP" or "ISTS Licensee", which expression shall unless repugnant to the context or meaning thereof include its successors, and permitted assigns) as Party of the other part;

("Nodal Agency" and "TSP" are individually referred to as "Party" and collectively as the "Parties")

AND WHEREAS:

A) In accordance with the Bidding Guidelines, the Bid Process Coordinator (hereinafter referred to as BPC) had initiated a competitive e-reverse bidding

process through issue of RFP for selecting a Successful Bidder to build, own, operate and transfer the Project comprising of the Elements mentioned in Schedule 1 (hereinafter referred to as the Project)

B) Pursuant to the said e-reverse bidding process, the BPC has identified the Successful Bidder, who will be responsible to set up the Project on build, own, operate and transfer basis to provide Transmission Service in accordance with the terms of this Agreement and the Transmission License.

C) The Selected Bidder have submitted the Contract Performance Guarantee and acquired one hundred percent (100%) of the equity shareholding of **Fatehgarh III Beawar Transmission Limited**, along with all its related assets and liabilities in terms of the provisions of the Share Purchase Agreement.

D) The TSP has agreed to make an application for a Transmission License to the Commission for setting up the Project on build, own, operate and transfer basis.

E) The TSP has further agreed to make an application to the Commission for the adoption of the Transmission Charges under Section 63 of the Electricity Act, 2003, along with a certification from the Bid Evaluation Committee in accordance with the Bidding Guidelines issued by Ministry of Power, Government of India.

F) The TSP has agreed to execute the agreement(s) required, if any, under Sharing Regulations within fifteen (15) days from the date of grant of Transmission License from the Commission.

G) The TSP agrees to the terms and conditions laid down under Sharing Regulations, for making available the ISTS and charge the Transmission Charges in accordance with the terms and conditions of Sharing Regulations.

H) The billing, collection and disbursement of the Transmission Charges by the CTU to the ISTS Licensee shall be governed as per Sharing Regulations.

I) The terms and conditions stipulated in the Transmission License issued by the Commission to the TSP shall be applicable to this Agreement and the TSP agrees to comply with these terms and conditions. In case of inconsistency between the Transmission License terms & conditions and the conditions of this Agreement, the conditions stipulated in the Transmission License granted by the Commission shall prevail.

NOW, THEREFORE, IN CONSIDERATION OF THE PREMISES AND MUTUAL AGREEMENTS, COVENANTS AND CONDITIONS SET FORTH HEREIN, IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

Central Transmission Utility of India Gurugram

ARTICLE: 1

1 DEFINITIONS AND INTERPRETATIONS

1.1 Definitions:

1.1.1 The words / expressions used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under including those issued / framed by the Commission (as defined hereunder), as amended or re-enacted from time to time or the General Clauses Act, failing which it shall bear its ordinary English meaning.

The words/expressions when used in this Agreement shall have the respective meanings as specified below:

"Acquisition Price" shall have the same meaning as defined in the Share Purchase Agreement;

"Act" or **"Electricity Act"** or **"Electricity Act 2003"** shall mean the Electricity Act, 2003 and any amendments made to the same or any succeeding enactment thereof;

"Affiliate" shall mean a company that either directly or indirectly

i. controls or

ii. is controlled by or

iii. is under common control with

a Bidding Company (in the case of a single company) or a Member (in the case of a Consortium), and **"control"** means ownership by one entity of at least twenty six percent (26%) of the voting rights of the other entity;

"Availability" in relation to the Project or in relation to any Element of the Project, for a given period shall mean the time in hours during that period the Project is capable to transmit electricity at its Rated Voltage and shall be expressed in percentage of total hours in the given period and shall be calculated as per the procedure contained in **Appendix –II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019**, attached herewith in Schedule 6;

"Bid" shall mean technical bid and financial bid submitted by the Bidder, in response to the RFP, in accordance with the terms and conditions of the RFP;

"Bid Deadline" shall mean the last date and time for submission of the Bid in response to RFP, as specified in the RFP;

"Bidding Company" shall refer to such single company that has made a Response to RFP for the Project;

"Bidding Consortium / Consortium" shall refer to a group of companies that has collectively made a Response to RFP for the Project;

"Bid Documents" or **"Bidding Documents"** shall mean the RFP, along with all attachments thereto or clarifications thereof;

"Bidding Guidelines" shall mean the "Tariff Based Competitive Bidding Guidelines for Transmission Service" and "Guidelines for Encouraging Competition in Development of Transmission Projects" issued by Government of India, Ministry of Power under Section – 63 of the Electricity Act as amended from time to time;

"Bid Process Coordinator" or **"BPC"** shall mean a person or its authorized representative as notified by the Government of India, responsible for carrying out the process for selection of Bidder who will acquire Transmission Service Provider;

"Bill" shall mean any bill raised by the CTU on the DICs to recover the Transmission Charges pursuant to the Sharing Regulations;

"Business Day" shall mean a day other than Sunday or a statutory holiday, on which the banks remain open for business in the State in which the Nodal Agency's registered office is located and the concerned TSP are located;

"CEA" shall mean the Central Electricity Authority constituted under Section -70 of the Electricity Act;

"Change in law" shall have the meaning ascribed thereto in Article 12;

"Commercial Operation Date" or **"COD"** shall mean the date as per Article 6.2;

"Commission" or **"CERC"** shall mean the Central Electricity Regulatory Commission referred to in sub-section (1) of Section 76 of the Electricity Act, 2003 or its successors and assigns;

"Competent Court of Law" shall mean the Supreme Court or any High Court, or any tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to the Project;

"Connection Agreement" shall mean the agreement between the CTU or STU or any other concerned parties and the TSP, setting out the terms relating to the connection of the Project to the Inter-connection Facilities and use of the Inter State Transmission System as per the provisions of the IEGC, as the case may be;

"Consultation Period" shall mean the period of sixty (60) days or such longer period as the Parties may agree, commencing from the date of issue of a TSP's Preliminary Notice or a Nodal Agency's Preliminary Termination Notice, as provided in Article 13 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;

"Consents, Clearances and Permits" shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the development, execution and operation of Project including without any limitation for the construction, ownership, operation and maintenance of the Transmission Lines and/or sub-stations;

"Construction Period" shall mean the period from (and including) the Effective Date of the Transmission Service Agreement up to (but not including) the COD of the Element of the Project in relation to an Element and up to (but not including) the COD of the Project in relation to the Project;

"Contractors" shall mean the engineering, procurement, construction, operation & maintenance contractors, surveyors, advisors, consultants, designers, suppliers to the TSP and each of their respective sub-contractors (and each of their respective successors and permitted assigns) in their respective capacities as such;

"Contract Performance Guarantee" shall mean the irrevocable unconditional bank guarantee, submitted and to be submitted by the TSP or by the Selected Bidder on behalf of the TSP to the Nodal Agency from a bank mentioned in Annexure 17 of the RFP, in the form attached here to as Schedule 8, in accordance with Article 3 of this Agreement and which shall include the additional bank guarantee furnished by the TSP under this Agreement;

"Contract Year", for the purpose of payment of Transmission Charges, shall mean the period beginning on the COD, and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that the last Contract Year shall end on the last day of the term of the TSA;

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

"CTU" or **"Central Transmission Utility"** shall have same meaning as defined in the Electricity Act, 2003;

"Day" shall mean a day starting at 0000 hours and ending at 2400 hours;

"D/C" shall mean Double Circuit;

"Designated ISTS Customers" or **"DICs"** shall have the meaning as ascribed in the Sharing Regulations;

"Dispute" shall mean any dispute or difference of any kind between the Parties, in connection with or arising out of this Agreement including any issue on the interpretation and scope of the terms of this Agreement as provided in Article 16;

"Effective Date" for the purposes of this Agreement, shall have the same meaning as per Article 2.1 of this Agreement;

"Electrical Inspector" shall mean a person appointed as such by the Government under sub-section (1) of Section 162 of the Electricity Act 2003 and also includes Chief Electrical Inspector;

"Electricity Rules 2005" shall mean the rules framed pursuant to the Electricity Act 2003 and as amended from time to time;

"Element" shall mean each Transmission Line or each circuit of the Transmission Lines (where there are more than one circuit) or each bay of Sub-station or switching station or HVDC terminal or inverter station of the Project, including ICTs, Reactors, SVC, FSC, etc. forming part of the ISTS, which will be owned, operated and maintained by the concerned ISTS Licensee, and which has a separate Scheduled COD as per Schedule 2 of this Agreement and has a separate percentage for recovery of Transmission Charges on achieving COD as per Schedule 5 of this Agreement;

"Event of Default" shall mean the events as defined in Article 13 of this Agreement;

"Expiry Date" shall be the date which is thirty five (35) years from the COD of the Project;

"Financial Closure" shall mean the first Business Day on which funds are made available to the TSP pursuant to the Financing Agreements;

"Financially Evaluated Entity" shall mean the company which has been evaluated for the satisfaction of the financial requirement set forth in the RFP;

"Financing Agreements" shall mean the agreements pursuant to which the TSP is to finance the Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of the Designated ISTS Customers / Nodal Agency;

"Financial Year" shall mean a period of twelve months at midnight Indian Standard Time (IST) between 1st April & 31st March;

"Force Majeure" and **"Force Majeure Event"** shall have the meaning assigned thereto in Article 11;

"GOI" shall mean Government of India;

"Grid Code" / "IEGC" shall mean the Grid Code specified by the Central Commission under Clause (h) of sub-section (1) of Section 79 of the Electricity Act;

"Independent Engineer" shall mean an agency/ company, appointed by Nodal Agency in accordance with the Guidelines for Encouraging Competition in Development of Transmission Projects.

"Indian Governmental Instrumentality" shall mean Government of India, Government of any State in India or any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or any State Government or both, any political sub-division of any of them including any court or Commission or tribunal or judicial or quasi-judicial body in India but excluding the CTU, TSP and the Designated ISTS Customers;

"Insurances" shall mean the insurance cover to be obtained and maintained by the TSP in accordance with Article 9 of this Agreement;

"Interconnection Facilities" shall mean the facilities as may be set up for transmission of electricity through the use of the Project, on either one or both side of generating station's / CTU's / STU's / ISTS Licensee's / Designated ISTS Customer's substations (as the case may be) which shall include, without limitation, all other transmission lines, gantries, sub-stations and associated equipments not forming part of the Project;

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

"ISTS Licensee" shall be the TSP under this Agreement, consequent to having been awarded a Transmission License by the CERC and shall be referred to as the TSP or the ISTS Licensee, as the context may require in this Agreement;

"Law" or "Laws" in relation to this Agreement, shall mean all laws including electricity laws in force in India and any statute, ordinance, rule, regulation, notification, order or code, or any interpretation of any of them by an Indian Governmental Instrumentality having force of law and shall include all rules, regulations, decisions and orders of the Commission;

"Lead Member of the Bidding Consortium" or "Lead Member" shall mean a company who commits at least 26% equity stake in the Project, meets the technical requirement as specified in the RFP and so designated by other Member(s) in Bidding Consortium;

"Lenders" means the banks, financial institutions, multilateral funding agencies, non banking financial companies registered with the Reserve Bank of India (RBI), insurance companies registered with the Insurance Regulatory & Development Authority (IRDA), pension funds regulated by the Pension Fund Regulatory & Development Authority (PFRDA),mutual funds registered with Securities & Exchange Board of India (SEBI), etc., including their successors and assigns, who have agreed on or before COD of the Project to provide the TSP with the debt financing described in the capital structure schedule, and any successor banks or financial institutions to whom their interests under the Financing Agreements may be transferred or assigned;

Provided that, such assignment or transfer shall not relieve the TSP of its obligations to the Nodal Agency under this Agreement in any manner and shall also does not lead to an increase in the liability of the Nodal Agency;

"Lenders Representative" shall mean the person notified by the Lender(s) in writing as being the representative of the Lender(s) or the Security Trustee and such person may from time to time be replaced by the Lender(s) pursuant to the Financing Agreements by written notice to the TSP;

"Letter of Intent" or **"LOI"** shall have the same meaning as in the RFP;

"Member in a Bidding Consortium / Member" shall mean each company in the Bidding Consortium;

"Month" shall mean a period of thirty (30) days from (and excluding) the date of the event;

"Monthly Transmission Charges" for any Element of the Project, after COD of the Element till COD of the Project, and for the Project after COD of the Project, shall mean the amount of Transmission Charges as specified in Schedule 5 of this Agreement multiplied by no. of days in the relevant month and divided by no. of days in the year;

"National Load Despatch Centre" shall mean the centre established as per sub-section (1) of Section 26 of the Electricity Act 2003;

"**Nodal Agency**" shall mean CTU, which shall execute and implement the Transmission Service Agreement (TSA);

Provided that while taking major decisions, CTU shall consult CEA on technical matters and any other matter it feels necessary.

"Notification" shall mean any notification, issued in the Gazette of India;

"Operating Period" for any Element of the Project shall mean the period from (and including) the COD of such Element of the Project, up to (and including) the Expiry Date and for the Project, shall mean the period from (and including) the COD of the Project, up to (and including) the Expiry Date;

"Parent Company" shall mean an entity that holds at least twenty six percent (26%) of the paid - up equity capital directly or indirectly in the Bidding Company or in the Member in a Bidding Consortium, as the case may be;

"Preliminary Termination Notice" shall mean a Nodal Agency's Preliminary Termination Notice as defined in Article 13 of this Agreement;

"Project" shall mean **"Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G"**, as detailed in Schedule 1 of this Agreement;

"**Project Assets**" shall mean all physical and other assets relating to and forming part of the Project including:

(a) rights over the Site for substations, ROW for transmission lines;

(b) tangible & intangible assets such as civil works and equipment including foundations, embankments, pavements, electrical systems, communication systems, relief centres, administrative offices, Sub-stations, software, tower and sub-stations designs etc;

(c) project facilities situated on the Site;

(d) all rights of the TSP under the project agreements;

(e) financial assets, such as receivables, security deposits etc;

(f) insurance proceeds; and

(g) Applicable Permits and authorisations relating to or in respect of the Transmission System;"

"Project Execution Plan" shall mean the plan referred to in Article 3.1.3(c) hereof;

"Prudent Utility Practices" shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric transmission utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation, repair and maintenance of the Project and which practices, methods and standards shall be adjusted as necessary, to take account of:

(i) operation, repair and maintenance guidelines given by the manufacturers to be incorporated in the Project,

(ii) the requirements of Law, and

(iii) the physical conditions at the Site;

(iv) the safety of operating personnel and human beings;

"Rated Voltage" shall mean voltage at which the Transmission System is designed to operate or such lower voltage at which the line is charged, for the time being, in consultation with the Central Transmission Utility;

"Rebate" shall have the meaning as ascribed to in Article 10.3 of this Agreement;

"RFP" shall mean Request For Proposal dated **January 19, 2022** along with all schedules, annexures and RFP Project Documents attached thereto, issued by the BPC for tariff based competitive bidding process for selection of Bidder as TSP to execute the Project, including any modifications, amendments or alterations thereto;

"RFP Project Documents" shall mean the following documents to be entered into in respect of the Project, by the Parties to the respective agreements:

a. Transmission Service Agreement,

b. Share Purchase Agreement,

c. Agreement(s) required under Sharing Regulations and

d. Any other agreement as may be required;

"RLDC" shall mean the relevant Regional Load Dispatch Centre as defined in the Electricity Act, 2003, in the region(s) in which the Project is located;

"RPC" shall mean the relevant Regional Power Committee established by the Government of India for the specific Region(s) in accordance with the Electricity Act, 2003 for facilitating integrated operation of the Power System in that Region;

"Scheduled COD" in relation to an Element(s) shall mean the date(s) as mentioned in Schedule 2 as against such Element(s) and in relation to the Project, shall mean the date as mentioned in Schedule 2 as against such Project, subject to the provisions of Article 4.4 of this Agreement, or such date as may be mutually agreed among the Parties;

"Scheduled Outage" shall mean the final outage plan as approved by the RPC as per the provisions of the Grid Code;

"Selected Bid" shall mean the technical Bid and the Final Offer of the Selected Bidder submitted during e-reverse bidding, which shall be downloaded and attached in Schedule 7 on or prior to the Effective Date;

"Share Purchase Agreement" shall mean the agreement amongst **PFC Consulting Limited (PFCCL)**, **Fatehgarh III Beawar Transmission Limited** and the Successful Bidder for the purchase of one hundred (100%) per cent of the shareholding of the **Fatehgarh III Beawar Transmission Limited** for the Acquisition Price, by the Successful Bidder on the terms and conditions as contained therein;

"Sharing Regulations" shall mean the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and as amended from time to time;

"Site" in relation to a substation, switching station or HVDC terminal or inverter station, shall mean the land and other places upon which such station / terminal is to be established;

"SLDC" shall mean the State Load Despatch Centre established as per sub-section (1) of Section 31 of the Electricity Act 2003;

"STU" or **"State Transmission Utility"** shall be the Board or the Government company, specified as such by the State Government under sub-section (1) of Section 39 of the Electricity Act 2003;

"Successful Bidder" or **"Selected Bidder"** shall mean the Bidder selected pursuant to the RFP and who has to acquire one hundred percent (100%) equity shares of **Fatehgarh III Beawar Transmission Limited,** along with all its related assets and liabilities, which will be responsible as the TSP to establish the Project on build, own, operate and transfer basis as per the terms of the TSA and other RFP Project Documents;

"TSP's Preliminary Notice" shall mean a notice issued by the TSP in pursuant to the provisions of Article 13.3 of this Agreement;

"Target Availability" shall have the meaning as ascribed hereto in Article 8.2 of this Agreement;

"Technically Evaluated Entity" shall mean the company which has been evaluated for the satisfaction of the technical requirement set forth in RFP;

"Termination Notice" shall mean a Nodal Agency's Termination Notice given by the Nodal Agency to the TSP pursuant to the provisions of Articles 3.3.2, 3.3.4, 4.4.2, 5.8, 13.2 and 13.3 of this Agreement for the termination of this Agreement;

"Term of Agreement" for the purposes of this Agreement shall have the meaning ascribed thereto in Article 2.2 of this Agreement;

"Transmission Charges" shall mean the Final Offer of the Selected Bidder during the e-reverse bidding and adopted by the Commission, payable to the TSP as per Sharing Regulations;

"Transmission License" shall mean the license granted by the Commission in terms of the relevant regulations for grant of such license issued under the Electricity Act;

"Transmission Service" shall mean making the Project available as per the terms and conditions of this Agreement and Sharing Regulations;

"Unscheduled Outage" shall mean an interruption resulting in reduction of the Availability of the Element(s) / Project (as the case may be) that is not a result of a Scheduled Outage or a Force Majeure Event.

"Ultimate Parent Company" shall mean an entity which owns at least twenty six percent (26%) equity in the Bidding Company or Member of a Consortium, (as the case may be) and in the Technically Evaluated Entity and / or Financially Evaluated Entity (as the case may be) and such Bidding Company or Member of a Consortium, (as the case may be) and the Technically Evaluated Entity and / or Financially Evaluated Entity (as the case may be) shall be under the direct control or indirectly under the common control of such entity;

1.2 Interpretation:

Save where the contrary is indicated, any reference in this Agreement to:

"Agreement" shall be construed as including a reference to its Schedules, Appendices and Annexures;

"Rupee", "Rupees" and **"Rs."** shall denote lawful currency of India;

"crore" shall mean a reference to ten million (10,000,000) and a **"lakh"** shall mean a reference to one tenth of a million (1,00,000);

"encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;

"holding company" of a company or corporation shall be construed as a reference to any company or corporation of which the other company or corporation is a subsidiary;

"indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;

"person" shall have the meaning as defined in Section 2 (49) of the Act;

"subsidiary" of a company or corporation (the holding company) shall be construed as a reference to any company or corporation:

(i) which is controlled, directly or indirectly, by the holding company, or

(ii) more than half of the issued share capital of which is beneficially owned, directly or indirectly, by the holding company, or

(iii) which is a subsidiary of another subsidiary of the holding company,

for these purposes, a company or corporation shall be treated as being controlled by another if that other company or corporation is able to direct its affairs and/or to control the composition of its board of directors or equivalent body;

"winding-up", **"dissolution"**, **"insolvency"**, or **"reorganization"** in the context of a company or corporation shall have the same meaning as defined in the Companies Act, 1956/ Companies Act, 2013 (as the case may be).

1.2.1 Words importing the singular shall include the plural and vice versa.

1.2.2 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented.

1.2.3 A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time.

1.2.4 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.

1.2.5 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part.

1.2.6 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement.

1.2.7 All interest payable under this Agreement shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days.

1.2.8 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement.

1.2.9 The contents of Schedule 7 shall be referred to for ascertaining accuracy and correctness of the representations made by the Selected Bidder in Article 17.2.1 hereof.

ARTICLE: 2

2 EFFECTIVENESS AND TERM OF AGREEMENT

2.1 Effective Date:

This Agreement shall be effective from later of the dates of the following events:

a. The Selected Bidder, on behalf of the TSP, has provided the Contract Performance Guarantee, as per terms of Article 3.1 of this Agreement; and

b. The Selected Bidder has acquired for the Acquisition Price, one hundred percent (100%) of the equity shareholding of **PFC Consulting Limited** in **Fatehgarh III Beawar Transmission Limited** along with all its related assets and liabilities as per the provisions of the Share Purchase Agreement. and

c. The Agreement is executed and delivered by the Parties;

2.2 Term and Termination:

2.2.1 Subject to Article 2.2.3 and Article 2.4, this Agreement shall continue to be effective in relation to the Project until the Expiry Date, when it shall automatically terminate.

2.2.2 Post the Expiry Date of this Agreement, the TSP shall ensure transfer of Project Assets to CTU or its successors or an agency as decided by the Central Government at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days of expiry of this Agreement failing which CTU shall be entitled to take over the Project Assets Suo moto.

2.2.3 This Agreement shall terminate before the Expiry Date in accordance with Article 13 or Article 3.3.2 or Article 3.3.4.

2.3 Conditions prior to the expiry of the Transmission License

2.3.1 In order to continue the Project beyond the expiry of the Transmission License, the TSP shall be obligated to make an application to the Commission at least two (2) years before the date of expiry of the Transmission License, seeking the Commission's approval for the extension of the term of the Transmission License up to the Expiry Date.

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2.3.2 The TSP shall timely comply with all the requirements that may be laid down by the Commission for extension of the term of the Transmission License beyond the initial term of twenty-five (25) years & upto the Expiry Date and the TSP shall keep the Nodal Agency fully informed about the progress on its application for extension of the term of the Transmission License.

2.4 Survival:

The expiry or termination of this Agreement shall not affect any accrued rights, obligations/ roles and liabilities of the Parties under this Agreement, including the right to receive liquidated damages as per the terms of this Agreement, nor shall it effect the survival of any continuing obligations/ roles for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Articles 3.3.3, 3.3.5, Article 9.3 (Application of Insurance Proceeds), Article 11 (Force Majeure), Article 13 (Events of Default and Termination), Article 14 (Liability & Indemnification), Article 16 (Governing Law & Dispute Resolution), Article 19 (Miscellaneous).

2.5 Applicability of the provisions of this Agreement

2.5.1 For the purpose of Availability, Target Availability and the computation of Availability, Incentive, Penalty, the provisions provided in this Agreement shall apply and any future modifications in the relevant Rules and Regulations shall not be applicable for this Project.

2.5.2 For the purposes of this Agreement for ISTS systems developed under the tariff based competitive bidding framework, the provisions relating to the definitions (Availability and COD), Article 3 (Contract Performance Guarantee and Conditions Subsequent), Article 5 (Construction of the Project), Article 6 (Connection and Commissioning of the Project), Article 8 (Target Availability and calculation of Availability), Article 11 (Force Majeure), Article 12 (Change in Law), Article 13 (Event of Default), Article 14 (Indemnification), Article 15 (Assignment and Charges), Articles 16.1, 16.2 and 16.4 (Governing Laws and Dispute Resolution) and Article 17 (representation and warranties of the ISTS Licensee) of this agreement shall supersede the corresponding provisions under Sharing Regulations.

ARTICLE: 3

3 CONDITIONS SUBSEQUENT

3.1 Satisfaction of conditions subsequent by the TSP

3.1.1 Within ten (10) days from the date of issue of Letter of Intent, the Selected Bidder, shall:

a. Provide the Contract Performance Guarantee, and

b. Acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of **Fatehgarh III Beawar Transmission Limited** from **PFC Consulting Limited**, who shall sell to the Selected Bidder, the equity shareholding of **Fatehgarh III Beawar Transmission Limited,** along with all its related assets and liabilities.

c. Execute this Agreement;

The TSP shall, within five (5) working days from the date of acquisition of SPV by the Selected Bidder, undertake to apply to the Commission for the grant of Transmission License and for the adoption of tariff as required under section-63 of the Electricity Act.

The Selected Bidder, on behalf of the TSP, will provide to the **Central Transmission Utility of India Limited** (being the Nodal Agency) the Contract Performance Guarantee for an amount of **Rs 42 Crore (Rupees Forty Two Crore Only).**

3.1.2 The Contract Performance Guarantee shall be initially valid for a period up to three (3) months after the Scheduled COD of the Project and shall be extended from time to time to be valid for a period up to three (3) months after the COD of the Project. In case the validity of the Contract Performance Guarantee is expiring before the validity specified in this Article, the TSP shall, at least thirty (30) days before the expiry of the Contract Performance Guarantee, replace the Contract Performance Guarantee with another Contract Performance Guarantee or extend the validity of the existing Contract Performance Guarantee until the validity period specified in this Article.

3.1.3 The TSP agrees and undertakes to duly perform and complete the following activities within six (6) months from the Effective Date (except for c) below), unless such completion is affected due to any Force Majeure Event, or if any of the activities is specifically waived in writing by the Nodal Agency:

a. To obtain the Transmission License for the Project from the Commission;

b. To obtain the order for adoption of Transmission Charges by the Commission, as required under Section 63 of the Electricity Act 2003;

c. To submit to the Nodal Agency, CEA & Independent Engineer, the Project Execution Plan, immediately after award of contract(s) and maximum within one hundred and twenty (120) days from the Effective Date. Also, an approved copy each of Manufacturing Quality Plan (MQP) and Field Quality Plan (FQP) would be submitted to Independent Engineer & Nodal Agency in the same time period. The TSP's Project Execution Plan should be in conformity with the Scheduled COD as specified in Schedule 2 of this Agreement, and shall bring out clearly the organization structure, time plan and methodology for executing the Project, award of major contracts, designing, engineering, procurement, shipping, construction, testing and commissioning to commercial operation;

d. To submit to the Nodal Agency, CEA & Independent Engineer a detailed bar (GANTT) chart of the Project outlining each activity (taking longer than one Month), linkages as well as durations;

e. To submit to the Nodal Agency, CEA & Independent Engineer detailed specifications of conductor meeting the functional specifications specified in RFP;

f. To achieve Financial Closure;

g. To provide an irrevocable letter to the Lenders duly accepting and acknowledging the rights provided to the Lenders under the provisions of Article 15.3 of this Agreement and all other RFP Project Documents;

h. To award the Engineering, Procurement and Construction contract ("EPC contract") for the design and construction of the Project and shall have given to such Contractor an irrevocable notice to proceed; and

i. To sign the Agreement(s) required, if any, under Sharing Regulations.

3.2 Recognition of Lenders' Rights by the Nodal Agency

3.2.1 The Nodal Agency hereby accepts and acknowledges the rights provided to the Lenders as per Article 15.3 of this Agreement and all other RFP Project Documents.

3.3 Consequences of non-fulfilment of conditions subsequent

3.3.1 If any of the conditions specified in Article 3.1.3 is not duly fulfilled by the TSP even within three (3) Months after the time specified therein, then on and from the expiry of such period and until the TSP has satisfied all the conditions specified in Article 3.1.3, the TSP shall, on a monthly basis, be liable to furnish to **Central Transmission Utility of India Limited (being the Nodal Agency)** additional Contract Performance Guarantee of **Rs 4.20 Crore (Rupees Four Crore Twenty Lakh Only) within** two (2) Business Days of expiry of every such Month. Such additional Contract Performance Guarantee shall be provided to **Central Transmission Utility of India Limited (being the Nodal Agency)** in the manner provided in Article 3.1.1 and shall become part of the Contract Performance Guarantee and all the provisions of this Agreement shall be construed accordingly. **Central Transmission Utility of India Limited (being the Nodal Agency)** shall be entitled to hold and / or invoke the Contract Performance Guarantee, including such additional Contract Performance Guarantee, in accordance with the provisions of this Agreement.

3.3.2 Subject to Article 3.3.4, if:

(i) the fulfilment of any of the conditions specified in Article 3.1.3 is delayed beyond nine (9) Months from the Effective Date and the TSP fails to furnish additional Contract Performance Guarantee to the Nodal Agency in accordance with Article 3.3.1 hereof; or

(ii) the TSP furnishes additional Performance Guarantee to the Nodal Agency in accordance with Article 3.3.1 hereof but fails to fulfil the conditions specified in Article 3.1.3 within a period of twelve (12) months from the Effective Date,

the Nodal Agency shall have the right to terminate this Agreement, by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement.

3.3.3 If the Nodal Agency elects to terminate this Agreement as per the provisions of Article 3.3.2, the TSP shall be liable to pay to the Nodal Agency an amount of **Rs 42 Crore (Rupees Forty Two Crore Only)** as liquidated damages. The Nodal Agency shall be entitled to recover this amount of damages by invoking the Contract Performance Guarantee to the extent of liquidated damages, which shall be required by the Nodal Agency, and the balance shall be returned to TSP, if any.

It is clarified for removal of doubt that this Article shall survive the termination of this Agreement.

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3.3.4 In case of inability of the TSP to fulfil the conditions specified in Article 3.1.3 due to any Force Majeure Event, the time period for fulfilment of the condition subsequent as mentioned in Article 3.1.3, may be extended for a period of such Force Majeure Event. Alternatively, if deemed necessary, this Agreement may be terminated by the Nodal Agency by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement and the Contract Performance Guarantee shall be returned as per the provisions of Article 6.5.1.

Provided, that due to the provisions of this Article 3.3.4, any increase in the time period for completion of conditions subsequent mentioned under Article 3.1.3, shall lead to an equal increase in the time period for the Scheduled COD. If the Scheduled COD is extended beyond a period of one hundred eighty (180) days due to the provisions of this Article 3.3.4, the TSP will be allowed to recover the interest cost during construction corresponding to the period exceeding one hundred eighty (180) days by adjustment in the Transmission Charges in accordance with Schedule 9.

3.3.5 Upon termination of this Agreement as per Articles 3.3.2 and 3.3.4, the Nodal Agency may take steps to bid out the Project again.

3.3.6 The Nodal agency, on the failure of the TSP to fulfil its obligations, if it considers that there are sufficient grounds for so doing, apart from invoking the Contract Performance Guarantee under para 3.3.3 may also initiate proceedings for blacklisting the TSP as per provisions of Article 13.2 of TSA.

3.4 Progress Reports

The TSP shall notify the Nodal Agency and CEA in writing at least once a Month on the progress made in satisfying the conditions subsequent in Articles 3.1.3.

ARTICLE: 4

4 DEVELOPMENT OF THE PROJECT

4.1 TSP's obligations in development of the Project:

Subject to the terms and conditions of this Agreement, the TSP at its own cost and expense shall observe, comply with, perform, undertake and be responsible:

a. for procuring and maintaining in full force and effect all Consents, Clearances and Permits, required in accordance with Law for development of the Project;

b. for financing, constructing, owning and commissioning each of the Element of the Project for the scope of work set out in Schedule 1 of this Agreement in accordance with:

i. the Electricity Act and the Rules made thereof;

ii. the Grid Code;

iii. the CEA Regulations applicable, and as amended from time to time, for Transmission Lines and sub-stations:

- the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007;
- Central Electricity Authority (Technical Standards for construction of Electrical Plants and Electric Lines) Regulation, 2010;
- Central Electricity Authority (Grid Standard) Regulations, 2010;
- Central Electricity Authority (Safety requirements for construction, operation and maintenance of Electrical Plants and Electrical Lines) Regulation, 2011;
- Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulation, 2010;
- Central Electricity Authority (Technical Standards for Communication System in Power System Operation) Regulations, 2020.

iv. Safety/ security Guidelines laid down by the Government;

v. Prudent Utility Practices, relevant Indian Standards and the Law;

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not later than the Scheduled COD as per Schedule 2 of this Agreement;

c. for entering into a Connection Agreement with the concerned parties in accordance with the Grid Code.

d. for owning the Project throughout the term of this Agreement free and clear of any encumbrances except those expressly permitted under Article 15 of this Agreement;

e. to co-ordinate and liaise with concerned agencies and provide on a timely basis relevant information with regard to the specifications of the Project that may be required for interconnecting the Project with the Interconnection Facilities;

f. for providing all assistance to the Arbitrators as they may require for the performance of their duties and responsibilities;

g. to provide to the Nodal Agency and CEA, on a monthly basis, progress reports with regard to the Project and its execution (in accordance with prescribed form) to enable the CEA to monitor and co-ordinate the development of the Project matching with the Interconnection Facilities;

h. to comply with Ministry of Power order no. 25-11/6/2018 – PG dated 02.07.2020 as well as other Guidelines issued by Govt. of India pertaining to this;

i. to procure the products associated with the Transmission System as per provisions of Public Procurement (Preference to Make in India) orders issued by Ministry of Power vide orders No. 11/5/2018 - Coord. dated 28.07.2020 for transmission sector, as amended from time to time read with Department for Promotion of Industry and Internal Trade (DPIIT) orders in this regard (Procuring Entity as defined in above orders shall deemed to have included Selected Bidder and/ or TSP).

Also, to comply with Department of Expenditure, Ministry of Finance vide Order (Public Procurement No 1) bearing File No. 6/18/2019-PPD dated 23.07.2020, Order (Public Procurement No 2) bearing File No. 6/18/2019-PPD dated 23.07.2020 and Order (Public Procurement No. 3) bearing File No. 6/18/2019-PPD, dated 24.07.2020, as amended from time to time, regarding public procurement from a bidder of a country, which shares land border with India;

j. to submit to Nodal Agency information in the prescribed format [To be devised by Nodal Agency] for ensuring compliance to Article 4.1 i) above.

k. to comply with all its obligations undertaken in this Agreement.

4.2 Roles of the Nodal Agency in implementation of the Project:

4.2.1 Subject to the terms and conditions of this Agreement, the Nodal Agency shall be the holder and administrator of this Agreement and shall inter alia:

a. appoint an Independent Engineer within 90 days of the Effective Date

b. provide letters of recommendation to the concerned Indian Governmental Instrumentality, as may be requested by the TSP from time to time, for obtaining the Consents, Clearances and Permits required for the Project;

c. coordinate among TSP and upstream/downstream entities in respect of Interconnection Facilities; and

d. monitor the implementation of the Agreement and take appropriate action for breach thereof including revocation of guarantees, cancellation of Agreement, blacklisting etc

e. provide all assistance to the Arbitrators as required for the performance of their duties and responsibilities; and

f. perform any other responsibility (ies) as specified in this Agreement.

4.3 Time for Commencement and Completion:

a. The TSP shall take all necessary steps to commence work on the Project from the Effective Date of the Agreement and shall achieve Scheduled COD of the Project in accordance with the time schedule specified in Schedule 2 of this Agreement;

b. The COD of each Element of the Project shall occur no later than the Scheduled COD or within such extended time to which the TSP shall be entitled under Article 4.4 hereto.

4.4 Extension of time:

4.4.1 In the event that the TSP is unable to perform its obligations for the reasons solely attributable to the Nodal Agency, the Scheduled COD shall be extended, by a 'day to day' basis, subject to the provisions of Article 13.

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4.4.2 In the event that an Element or the Project cannot be commissioned by its Scheduled COD on account of any Force Majeure Event as per Article 11, the Scheduled COD shall be extended, by a 'day to day' basis for a period of such Force Majeure Event. Alternatively, if deemed necessary, the Nodal Agency may terminate the Agreement as per the provisions of Article 13.4 by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement.

4.4.3 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on how long the Scheduled COD should be deferred by, any Party may raise the Dispute to be resolved in accordance with Article 16.

4.5 Metering Arrangements:

4.5.1 The TSP shall comply with all the provisions of the IEGC and the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time, with regard to the metering arrangements for the Project. The TSP shall fully cooperate with the CTU / STU / RLDC and extend all necessary assistance in taking meter readings.

4.6 Interconnection Facilities:

4.6.1 Subject to the terms and conditions of this Agreement, the TSP shall be responsible for connecting the Project with the interconnection point(s) specified in Schedule 1 of this Agreement. The Interconnection Facilities shall be developed as per the scope of work and responsibilities assigned in Schedule 1 of this Agreement. The Nodal Agency shall be responsible for coordinating to make available the Interconnection Facilities.

4.6.2 In order to remove any doubts, it is made clear that the obligation of the TSP within the scope of the project is to construct the Project as per Schedule-1 of this Agreement and in particular to connect it to the Interconnection Facilities as specified in this Agreement.

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ARTICLE: 5

5 CONSTRUCTION OF THE PROJECT

5.1 TSP's Construction Responsibilities:

5.1.1 The TSP, at its own cost and expense, shall be responsible for designing, constructing, erecting, testing and commissioning each Element of the Project by the Scheduled COD in accordance with the Regulations and other applicable Laws specified in Article 4.1 of this Agreement.

5.1.2 The TSP acknowledges and agrees that it shall not be relieved from any of its obligations under this Agreement or be entitled to any extension of time or any compensation whatsoever by reason of the unsuitability of the Site or Transmission Line route(s).

5.1.3 The TSP shall be responsible for obtaining all Consents, Clearances and Permits related but not limited to road / rail / river / canal / power line / crossings, Power and Telecom Coordination Committee (PTCC), defence, civil aviation, right of way / way-leaves and environmental & forest clearances from relevant authorities required for developing, financing, constructing, maintaining/ renewing all such Consents, Clearances and Permits in order to carry out its obligations under this Agreement in general and shall furnish to the Nodal Agency such copy/ies of each Consents, Clearances and Permits, on demand. Nodal Agency shall provide letters of recommendation to the concerned Indian Governmental Instrumentality, as may be requested by the TSP from time to time, for obtaining the Consents, Clearances and Permits required for the Project.

5.1.4 The TSP shall be responsible for:

a) deleted

b) deleted

c) survey and geo-technical investigation of line route in order to determine the final route of the Transmission Lines;

d) seeking access to the Site and other places where the Project is being executed, at its own risk and costs, including payment of any crop, tree compensation or any other compensation as may be required.

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5.1.5 In case the Project involves any resettlement and rehabilitation, the resettlement and rehabilitation package will be implemented by the State Government authorities, for which the costs is to be borne by the TSP and no changes would be allowed in the Transmission Charges on account of any variation in the resettlement and rehabilitation cost. The TSP shall provide assistance on best endeavour basis, in implementation of the resettlement and rehabilitation package, if execution of such package is in the interest of expeditious implementation of the Project and is beneficial to the Project affected persons.

5.2 Appointing Contractors:

5.2.1 The TSP shall conform to the requirements as provided in this Agreement while appointing Contractor(s) for procurement of goods & services.

5.2.2 The appointment of such Contractor(s) shall neither relieve the TSP of any of its obligations under this Agreement nor make the Nodal Agency liable for the performance of such Contractor(s).

5.3 Monthly Progress Reporting:

The TSP shall provide to the CEA, Nodal Agency & Independent Engineer, on a monthly basis, progress reports along with likely completion date of each Element with regard to the Project and its execution (in accordance with prescribed form). The Nodal Agency/ CEA shall monitor the development of the Project for its timely completion for improving and augmenting the electricity system as a part of its statutory responsibility.

5.4 Quality of Workmanship:

The TSP shall ensure that the Project is designed, built and completed in a good workmanship using sound engineering and construction practices, and using only materials and equipment that are new and manufactured as per the MQP and following approved FQP for erection, testing & commissioning and complying with Indian /International Standards such that, the useful life of the Project will be at least thirty five (35) years from the COD of the Project.

The TSP shall ensure that all major substation equipment / component (e.g. transformers, reactors, Circuit Breakers, Instrument Transformers (IT), Surge Arresters (SA), Protection relays, clamps & connectors etc.), equipment in terminal stations of HVDC installations including Thyristor/ IGBT valves, Converter Transformers, smoothing reactors, Transformer bushings and wall bushings, GIS bus ducts, towers and gantry structures and transmission towers or poles and line

materials (conductors, earthwire, OPGW, insulator, accessories for conductors, OPGW & earthwires, hardware fittings for insulators, aviation lights etc), facilities and system shall be designed, constructed and tested (Type test, Routine tests, Factory Acceptance Test (FAT)) in accordance with relevant CEA Regulations and Indian Standards. In case Indian Standards for any particular equipment/ system/ process is not available, IEC/ IEEE or equivalent International Standards and Codes shall be followed.

5.5 Progress Monitoring & Quality Assurance:

5.5.1 The Project Execution Plan submitted by the TSP in accordance with Article 3.1.3 c) shall comprise of detailed schedule of all the equipments/items /materials required for the Project, right from procurement of raw material till the dispatch from works and receipt at the site. Further, it should also include various stages of the construction schedule up to the commissioning of the Project.

5.5.2 Nodal Agency, CEA & Independent Engineer shall have access at all reasonable times to the Site and to the Manufacturer's works and to all such places where the Project is being executed.

5.5.3 Independent Engineer shall ensure conformity of the conductor specifications with the functional specifications specified in RFP.

5.5.4 The Independent Engineer shall monitor the following during construction of the Project:

a) Quality of equipments, material, foundation, structures and workmanship etc. as laid down in Article 5.4 and 6.1.4 of the TSA. Specifically, quality of Sub-station equipments, transmission line material and workmanship etc. would be checked in accordance with the Article 5.4.

b) Progress in the activities specified in Condition Subsequent

c) Verification of readiness of the elements including the statutory clearances & completion of civil works, fixing of all components and finalisation of punch points (if any) prior to charging of the elements

d) Progress of construction of substation and Transmission Lines

5.5.5 The progress shall be reviewed by the Independent Engineer against the Project Execution Plan. The Independent Engineer shall prepare its report on monthly basis and submit the same to Nodal Agency highlighting the progress achieved

till the end of respective month vis-à-vis milestone activities, areas of concern, if any, which may result in delay in the timely completion of the Project. Based on the progress, Nodal Agency and/ or CEA shall issue written instructions to the TSP to take corrective measures, as may be prudent for the timely completion of the Project. In case of any deficiency, the Nodal Agency would be at liberty to take action in accordance with the procedure of this Agreement.

5.5.6 For any delay in commissioning any critical Element(s), as identified in Schedule 1 & Schedule 2 of this Agreement, beyond a period of 45 days shall lead to a sequestration of 10% of the Contract Performance Guarantee.

5.6 Site regulations and Construction Documents

The TSP shall abide by the Safety Rules and Procedures as mentioned in Schedule 3 of this Agreement

The TSP shall retain at the Site and make available for inspection at all reasonable times, copies of the Consents, Clearances and Permits, construction drawings and other documents related to construction.

5.7 Supervision of work:

The TSP shall provide all necessary superintendence for execution of the Project and its supervisory personnel shall be available to provide full-time superintendence for execution of the Project. The TSP shall provide skilled personnel who are experienced in their respective fields.

5.8 Remedial Measures:

The TSP shall take all necessary actions for remedying the shortfall in achievement of timely progress in execution of the Project, if any, as intimated by the Independent Engineer and/ or CEA and/ or the Nodal Agency. However, such intimation by the Independent Engineer and/ or CEA and/ or the Nodal Agency and the subsequent effect of such remedial measures carried out by the TSP shall not relieve the TSP of its obligations in the Agreement. Independent Engineer and/ or CEA and/ or the Nodal Agency may carry out random inspections during the Project execution, as and when deemed necessary by it. If the shortfalls as intimated to the TSP are not remedied to the satisfaction of the CEA and/ or the Nodal Agency, this Agreement may be terminated by the Nodal Agency by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement.

ARTICLE: 6

6 CONNECTION AND COMMISSIONING OF THE PROJECT

6.1 Connection with the Inter-Connection Facilities:

6.1.1 The TSP shall give the RLDC(s), CTU, / STU, as the case may be, and any other agencies as required, at least sixty (60) days advance written notice of the date on which it intends to connect an Element of the Project, which date shall not be earlier than its Scheduled COD or Schedule COD extended as per Article 4.4.1 & 4.4.2 of this Agreement, unless mutually agreed to by Parties. Further, any preponing of COD of any element prior to Scheduled COD must be approved by the Nodal Agency.

6.1.2 The RLDC / SLDC (as the case may be) or the CTU / STU (as the case may be), for reasonable cause, including non-availability of Interconnection Facilities as per Article 4.2, can defer the connection for up to fifteen (15) days from the date notified by the TSP pursuant to Article 6.1.1, if it notifies to the TSP in writing, before the date of connection, of the reason for the deferral and when the connection is to be rescheduled. However, no such deferment on one or more occasions would be for more than an aggregate period of thirty (30) days. Further, the Scheduled COD would be extended as required, for all such deferments on "day to day" basis.

6.1.3 Subject to Articles 6.1.1 and 6.1.2, any Element of Project may be connected with the Interconnection Facilities when:

a. it has been completed in accordance with this Agreement and the Connection Agreement;

b. it meets the Grid Code, Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 as amended from time to time and all other Indian legal requirements, and

c. The TSP has obtained the approval in writing of the Electrical Inspector certifying that the Element is ready from the point of view of safety of supply and can be connected with the Interconnection Facilities.

d. It has satisfactorily met all the testing requirements as per Articles 6.1.4

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6.1.4 Site Acceptance Test (SAT)/ pre-commissioning tests of all major substation equipment, component, system, facilities shall be successfully carried out before commissioning. The Type tests, FAT and SAT reports should be available at the substation / terminal station of HVDC installations for ready reference of operation and maintenance staff and has to be made available to the Independent Engineer appointed for quality monitoring or their authorised representatives, as and when they wish to examine the same.

6.2 Commercial Operation:

6.2.1 An Element of the Project shall be declared to have achieved COD twenty four (24) hours following the connection of the Element with the Interconnection Facilities pursuant to Article 6.1 or seven (7) days after the date on which it is declared by the TSP to be ready for charging but is not able to be charged for reasons not attributable to the TSP subject to Article 6.1.2.

Provided that an Element shall be declared to have achieved COD only after all the Element(s), if any, which are pre-required to have achieved COD as defined in Schedule 2 of this Agreement, have been declared to have achieved their respective COD.

6.2.2 Once any Element of the Project has been declared to have achieved deemed COD as per Article 6.2.1 above, such Element of the Project shall be deemed to have Availability equal to the Target Availability till the actual charging of the Element and to this extent, TSP shall be eligible for the Monthly Transmission Charges applicable for such Element.

6.3 Compensation for Direct Non Natural Force Majeure Event or Indirect Non Natural Force Majeure Event or Natural Force Majeure Event (affecting the Nodal Agency)

6.3.1 If the TSP is otherwise ready to connect the Element(s) of the Project and has given due notice, as per provisions of Article 6.1.1, to the concerned agencies of the date of intention to connect the Element(s) of the Project, where such date is not before the Scheduled COD, but is not able to connect the Element(s) of the Project by the said date specified in the notice, due to Direct Non Natural Force Majeure Event or Indirect Non Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency, provided such Direct Non Natural Force Majeure Event or Indirect Non Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency has continued for a period of more than three (3) continuous or non-continuous Months, the TSP shall, until the

effects of the Direct Non Natural Force Majeure Event or of Indirect Non Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency no longer prevent the TSP from connecting the Element(s) of the Project, be deemed to have achieved COD relevant to that date and to this extent, be deemed to have been providing Transmission Service with effect from the date notified, and shall be treated as follows:

a. In case of delay due to Direct Non Natural Force Majeure Event, TSP is entitled for Transmission Charges calculated on Target Availability for the period of such events in excess of three (3) continuous or non continuous Months in the manner provided in (c) below.

b. In case of delay due to Indirect Non Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency, TSP is entitled for payment for debt service which is due under the Financing Agreements, subject to a maximum of Transmission Charges calculated on Target Availability, for the period of such events in excess of three (3) continuous or non continuous Months in the manner provided in (c) below.

c. In case of delay due to Direct Non Natural Force Majeure Event or Indirect Non Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency, the TSP is entitled for payments mentioned in (a) and (b) above, after commencement of Transmission Service, in the form of an increase in Transmission Charges. These amounts shall be paid from the date, being the later of a) the date of cessation of such Indirect Non Natural Force Majeure Event or Natural Force Majeure Event affecting the Nodal Agency and b) the completion of sixty (60) days from the receipt of the Financing Agreements by the Nodal Agency from the TSP.

   Provided such increase in Transmission Charges shall be so as to put the TSP in the same economic position as the TSP would have been in case the TSP had been paid amounts mentioned in (a) and (b) above in a situation where the Force Majeure Event had not occurred.

For the avoidance of doubt, it is clarified that the charges payable under this Article 6.3.1 shall be recovered as per Sharing Regulations.

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6.4 Liquidated Damages for Delay in achieving COD of Project:

6.4.1 If the TSP fails to achieve COD of any Element of the Project or the Project, by the Element's / Project's Scheduled COD or such Scheduled COD as extended under Articles 4.4.1 and 4.4.3, then the TSP shall pay to the Nodal Agency, a sum equivalent to 3.33% of Monthly Transmission Charges applicable for the Element of the Project [in case where no Elements have been defined, to be on the Project as a whole] / Project, for each day of delay up to sixty (60) days of delay and beyond that time limit, at the rate of five percent (5%) of the Monthly Transmission Charges applicable to such Element / Project, as liquidated damages for such delay and not as penalty, without prejudice to any rights of the Nodal Agency under the Agreement.

6.4.2 The TSP's maximum liability under this Article 6.4 shall be limited to the amount of liquidated damages calculated in accordance with Article 6.4.1 for and up to six (6) months of delay for the Element or the Project.

Provided that, in case of failure of the TSP to achieve COD of the Element of the Project even after the expiry of six (6) months from its Scheduled COD, the provisions of Article 13 shall apply.

6.4.3 The TSP shall make payment to the Nodal Agency of the liquidated damages calculated pursuant to Article 6.4.1 within ten (10) days of the earlier of:

a. the date on which the applicable Element achieves COD; or

b. the date of termination of this Agreement.

The payment of such damages shall not relieve the TSP from its obligations to complete the Project or from any other obligation and liabilities under the Agreement.

6.4.4 If the TSP fails to pay the amount of liquidated damages to the Nodal Agency within the said period of ten (10) days, the Nodal Agency shall be entitled to recover the said amount of the liquidated damages by invoking the Contract Performance Guarantee. If the then existing Contract Performance Guarantee is for an amount which is less than the amount of the liquidated damages payable by the TSP to the Nodal Agency under this Article 6.3 and the TSP fails to make payment of the balance amount of the liquidated damages not covered by the Contract Performance Guarantee, then such balance amount shall be deducted from the Transmission Charges payable to the TSP. The right of the Nodal Agency

to encash the Contract Performance Guarantee is without prejudice to the other rights of the Nodal Agency under this Agreement.

6.4.5 For avoidance of doubt, it is clarified that amount payable by TSP under this Article is over and above the penalty payable by TSP under Article 5.5.6 of this Agreement.

6.5 Return of Contract Performance Guarantee

6.5.1 The Contract Performance Guarantee as submitted by TSP in accordance with Article 3.1.1 shall be released by the Nodal Agency within three (3) months from the COD of the Project. In the event of delay in achieving Scheduled COD of any of the Elements by the TSP (otherwise than due to reasons as mentioned in Article 3.1.3 or Article 11) and consequent part invocation of the Contract Performance Guarantee by the Nodal Agency, Nodal Agency shall release the Contract Performance Guarantee, if any remaining unadjusted, after the satisfactory completion by the TSP of all the requirements regarding achieving the Scheduled COD of the remaining Elements of the Project. It is clarified that the Nodal Agency shall also return / release the Contract Performance Guarantee in the event of (i) applicability of Article 3.3.2 to the extent the Contract Performance Guarantee is valid for an amount in excess of **Rs 42 Crore (Rupees Forty Two Crore Only),** or (ii) termination of this Agreement by the Nodal Agency as mentioned under Article 3.3.4 of this Agreement.

6.5.2 The release of the Contract Performance Guarantee shall be without prejudice to other rights of the Nodal Agency under this Agreement.

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ARTICLE: 7

7 OPERATION AND MAINTENANCE OF THE PROJECT

7.1 Operation and Maintenance of the Project:

The TSP shall be responsible for ensuring that the Project is operated and maintained in accordance with the regulations made by the Commission and CEA from time to time and provisions of the Act.

ARTICLE: 8

8 AVAILABILITY OF THE PROJECT

8.1 Calculation of Availability of the Project:

Calculation of Availability for the Elements and for the Project, as the case may be, shall be as per **Appendix –II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019**, as applicable on the Bid Deadline and as appended in Schedule 6 of this Agreement.

8.2 Target Availability:

The Target Availability of each Element and the Project shall be **98%.**

Payment of monthly Transmission charges based on actual availability will be calculated as per para 1.2 of Schedule 4 of this Agreement.

If the availability of any Element or the Project is below the Target Availability, for six consecutive months in a Contract Year, the DIC(s) or the Nodal Agency may issue a show cause notice to the TSP, asking them to show cause as to why the Transmission Service Agreement be not terminated, and if no satisfactory cause is shown it may terminate the Agreement. If the Nodal Agency is of the opinion that the transmission system is of critical importance, it may carry out or cause to carry the operation and maintenance of transmission system at the risk and cost of TSP.

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ARTICLE: 9

9 INSURANCES

9.1 Insurance:

9.1.1 The TSP shall effect and maintain or cause to be effected and maintained during the Construction Period and the Operating Period, adequate Insurances against such risks, with such deductibles including but not limited to any third party liability and endorsements and co-beneficiary/insured, as may be necessary under

a. any of the Financing Agreements,

b. the Laws, and

c. in accordance with Prudent Utility Practices.

The Insurances shall be taken effective from a date prior to the date of the Financial Closure till the Expiry Date.

9.2 Evidence of Insurance cover:

9.2.1 The TSP shall furnish to the Nodal Agency copies of certificates and policies of the Insurances, as and when the Nodal Agency may seek from the TSP as per the terms of Article 9.1

9.3 Application of Insurance Proceeds:

9.3.1 Save as expressly provided in this Agreement, the policies of Insurances and the Financing Agreements, the proceeds of any insurance claim made due to loss or damage to the Project or any part of the Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

9.3.2 If a Natural Force Majeure Event renders the Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, the portion of the proceeds of such Insurance available to the TSP (after making admissible payments to the Lenders as per the Financing Agreements) shall be allocated only to the TSP. Nodal Agency and / or concerned Designated ISTS Customers shall have no claim on such proceeds of the Insurance.

9.3.3 Subject to the requirements of the Lenders under the Financing Agreements, any dispute or difference between the Parties as to whether the Project is no longer economically and technically viable due to a Force Majeure Event or whether that

event was adequately covered in accordance with this Agreement by the Insurances shall be determined in accordance with Article 16.

9.4 Effect on liability of the Nodal Agency / Designated ISTS Customers

9.4.1 The Nodal Agency and / or the Designated ISTS Customers shall have no financial obligations or liability whatsoever towards the TSP in respect of this Article 9.

ARTICLE: 10

10 BILLING AND PAYMENT OF TRANSMISSION CHARGES

10.1 Subject to provisions of this Article 10, the Monthly Transmission Charges shall be paid to the TSP, in Indian Rupees, on monthly basis as per the provisions of the Sharing Regulations, from the date on which an Element(s) has achieved COD until the Expiry Date of this Agreement, unless terminated earlier and in line with the provisions of Schedule 4 of this Agreement.

10.2 Calculation of Monthly Transmission Charges:

The Monthly Transmission Charges for each Contract Year including Incentive & Penalty payment shall be calculated in accordance with the provisions of Schedule 4 of this Agreement.

10.3 Rebate & Late Payment Surcharge:

The rebate and late payment surcharge shall be governed as per Sharing Regulations.

10.4 Disputed Bills, Default in payment by the Designated ISTS Customers & Annual Reconciliation:

Any Disputed Bill, Default in payment by the Designated ISTS Customers & Annual Reconciliation shall be governed as per Sharing Regulations.

ARTICLE: 11

11 FORCE MAJEURE

11.1 Definitions

11.1.1 The following terms shall have the meanings given hereunder.

11.2 Affected Party

11.2.1 An Affected Party means any Party whose performance has been affected by an event of Force Majeure.

11.2.2 Any event of Force Majeure shall be deemed to be an event of Force Majeure affecting the TSP only if the Force Majeure event affects and results in, late delivery of machinery and equipment for the Project or construction, completion, commissioning of the Project by Scheduled COD and/or operation thereafter;

11.3 Force Majeure

A 'Force Majeure' means any event or circumstance or combination of events and circumstances including those stated below that wholly or partly prevents or unavoidably delays an Affected Party in the performance of its obligations/ roles under this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:

a) Natural Force Majeure Events:

i. act of God, including, but not limited to drought, fire and explosion (to the extent originating from a source external to the Site), earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, or exceptionally adverse weather conditions, which are in excess of the statistical measures for the last hundred (100) years; and

ii. epidemic/ pandemic notified by Indian Governmental Instrumentality.

b) Non-Natural Force Majeure Events:

i. Direct Non–Natural Force Majeure Events

- Nationalization or compulsory acquisition by any Indian

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Governmental Instrumentality of any material assets or rights of the Affected Party; or

- the unlawful, unreasonable or discriminatory revocation of, or refusal to renew, any Consents, Clearances and Permits required by the Affected Party to perform their obligations/ roles under the RFP Project Documents or any unlawful, unreasonable or discriminatory refusal to grant any other Consents, Clearances and Permits required for the development/ operation of the Project, provided that a Competent Court of Law declares the revocation or refusal to be unlawful, unreasonable and discriminatory and strikes the same down; or

- any other unlawful, unreasonable or discriminatory action on the part of an Indian Governmental Instrumentality which is directed against the Project, provided that a Competent Court of Law declares the action to be unlawful, unreasonable and discriminatory and strikes the same down.

ii. Indirect Non - Natural Force Majeure Events

- act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; or

- radio active contamination or ionising radiation originating from a source in India or resulting from any other Indirect Non Natural Force Majeure Event mentioned above, excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Site by the Affected Party or those employed or engaged by the Affected Party; or

- industry-wide strikes and labour disturbances, having a nationwide impact in India.

11.4 Force Majeure Exclusions

11.4.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

(a) Unavailability, late delivery, or changes in cost of the machinery, equipment, materials, spare parts etc. for the Project;

(b) Delay in the performance of any Contractors or their agents;

(c) Non-performance resulting from normal wear and tear typically experienced in transmission materials and equipment;

(d) Strikes or labour disturbance at the facilities of the Affected Party;

(e) Insufficiency of finances or funds or the Agreement becoming onerous to perform; and

(f) Non-performance caused by, or connected with, the Affected Party's:

i. negligent or intentional acts, errors or omissions;

ii. failure to comply with an Indian Law; or

iii. breach of, or default under this Agreement or any Project Documents.

(g) Any error or omission in the survey report provided by BPC during the bidding process.

11.5 Notification of Force Majeure Event

11.5.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than seven (7) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement.

Provided that, such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under this Agreement. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular reports on the progress of those remedial measures and such other

information as the other Party may reasonably request about the Force Majeure.

11.5.2 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations/ roles under this Agreement, as soon as practicable after becoming aware of each of these cessations.

11.6 Duty to perform and duty to mitigate

To the extent not prevented by a Force Majeure Event, the Affected Party shall continue to perform its obligations/ roles as provided in this Agreement. The Affected Party shall use its reasonable efforts to mitigate the effect of any event of Force Majeure as soon as practicable.

11.7 Available Relief for a Force Majeure Event

Subject to this Article 11,

(a) no Party shall be in breach of its obligations/ roles pursuant to this Agreement to the extent that the performance of its obligations/ roles was prevented, hindered or delayed due to a Force Majeure Event;

(b) each Party shall be entitled to claim relief for a Force Majeure Event affecting its performance in relation to its obligations/ roles under Articles 3.3.4, 4.4.2 and 6.3.1 of this Agreement.

(c) For the avoidance of doubt, it is clarified that the computation of Availability of the Element(s) under outage due to Force Majeure Event, as per Article 11.3 affecting the TSP shall be as per **Appendix–II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019** as on Bid Deadline. For the event(s) for which the Element(s) is/are deemed to be available as per **Appendix –II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019**, then the Transmission Charges, as applicable to such Element(s), shall be payable as per Schedule 4, for the duration of such event(s).

(d) For so long as the TSP is claiming relief due to any Force Majeure Event under this Agreement, the Nodal Agency may, if it so desires, from time to time on one (1) day notice, inspect the Project and the TSP shall provide the Nodal Agency's personnel with access to the Project to carry out such inspections.

(e) For avoidance of doubt, the TSP acknowledges that for extension of Scheduled COD a period up to one hundred eighty (180) days due to Force Majeure event, no compensation on the grounds such as interest cost, incident expenditure, opportunity cost will be made to the TSP. However, if Scheduled COD is extended beyond a period of one hundred eighty (180) days due to Force Majeure event, the TSP will be allowed to recover the interest cost during construction corresponding to the period exceeding one hundred eighty (180) days by adjustment in the Transmission Charges in accordance with Schedule 9.

ARTICLE: 12

12 CHANGE IN LAW

12.1 Change in Law

12.1.1 Change in Law means the occurrence of any of the following after the Bid Deadline resulting into any additional recurring / non-recurring expenditure by the TSP or any savings of the TSP:

- the enactment, coming into effect, adoption, promulgation, amendment, modification or repeal (without re-enactment or consolidation) in India, of any Law, including rules and regulations framed pursuant to such Law, subject to the provisions under Article 12.1.2;
- a change in the interpretation or application of any Law by any Indian Governmental Instrumentality having the legal power to interpret or apply such Law, or any Competent Court of Law;
- the imposition of a requirement for obtaining any Consents, Clearances and Permits which was not required earlier;
- a change in the terms and conditions prescribed for obtaining any Consents, Clearances and Permits or the inclusion of any new terms or conditions for obtaining such Consents, Clearances and Permits;
- any change in the licensing regulations of the Commission, under which the Transmission License for the Project was granted if made applicable by such Commission to the TSP;
- change in wind zone; or
- any change in tax or introduction of any tax made applicable for providing Transmission Service by the TSP as per the terms of this Agreement.

12.1.2 Notwithstanding anything contained in this Agreement, Change in Law shall not cover any change:

a) Taxes on corporate income; and

b) Withholding tax on income or dividends distributed to the shareholders of the TSP.

12.2 Relief for Change in Law

12.2.1 During Construction Period, the impact of increase/decrease in the cost of the Project on the Transmission Charges shall be governed by the formula given in Schedule 9 of this Agreement

12.2.2 During the Operation Period:

During the operation period, if as a result of Change in Law, the TSP suffers or is benefited from a change in costs or revenue, the aggregate financial effect of which exceeds 0.30% (zero point three percent) of the Annual Transmission Charges in aggregate for a Contract Year, the TSP may notify so to the Nodal Agency and propose amendments to this Agreement so as to place the TSP in the same financial position as it would have enjoyed had there been no such Change in Law resulting in change in costs or revenue as aforesaid.

12.2.3 For any claims made under Articles 12.2.1 and 12.2.2 above, the TSP shall provide to the Nodal Agency documentary proof of such increase / decrease in cost of the Project / revenue for establishing the impact of such Change in Law.

In cases where Change in Law results in decrease of cost and it comes to the notice of Nodal Agency that TSP has not informed Nodal Agency about such decrease in cost, Nodal Agency may initiate appropriate claim.

12.3 **Notification of Change in Law:**

12.3.1 If the TSP is affected by a Change in Law in accordance with Article 12.1 and wishes to claim relief for such Change in Law under this Article 12, it shall give notice to Nodal Agency of such Change in Law as soon as reasonably practicable after becoming aware of the same.

12.3.2 The TSP shall also be obliged to serve a notice to the Nodal Agency even when it is beneficially affected by a Change in Law.

12.3.3 Any notice served pursuant to Articles 12.3.1 and 12.3.2 shall provide, amongst other things, precise details of the Change in Law and its estimated impact on the TSP.

12.4 Payment on account of Change in Law

12.4.1 The payment for Change in Law shall be through a separate Bill. However, in case of any change in Monthly Transmission Charges by reason of Change in Law, as determined in accordance with this Agreement, the Bills to be raised by the Nodal

Agency after such change in Transmission Charges shall appropriately reflect the changed Monthly Transmission Charges.

ARTICLE: 13

13 EVENTS OF DEFAULT AND TERMINATION

13.1 TSP's Event of Default

The occurrence and continuation of any of the following events shall constitute a TSP Event of Default, unless any such TSP Event of Default occurs as a result of any non-fulfilment of its obligations as prescribed under this Agreement by the Nodal Agency or a Force Majeure Event:

a. After having taken up the construction of the Project, the abandonment by the TSP or the TSP's Contractors of the construction of the Project for a continuous period of two (2) months and such default is not rectified within thirty (30) days from the receipt of notice from the Nodal Agency in this regard;

b. The failure to commission any Element of the Project by the date falling six (6) months after its Scheduled COD unless extended by Nodal Agency as per provisions of this Agreement;

c. If the TSP:

i. assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Project in contravention of the provisions of this Agreement; or

ii. transfers or novates any of its obligations pursuant to this Agreement, in a manner contrary to the provisions of this Agreement;

Except where such transfer is in pursuance of a Law and

- it does not affect the ability of the transferee to perform, and such transferee has the financial and technical capability to perform, its obligations under this Agreement;
- is to a transferee who assumes such obligations under the Project and this Agreement remains effective with respect to the transferee;

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d. If:

i. The TSP becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days; or

ii. any winding up or bankruptcy or insolvency order is passed against the TSP; or

iii. the TSP goes into liquidation or dissolution or a receiver or any similar officer is appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law,

Provided that a dissolution or liquidation of the TSP will not be a TSP's Event of Default, where such dissolution or liquidation of the TSP is for the purpose of a merger, consolidation or reorganization with the prior approval of the Commission as per the provisions of Central Electricity Regulatory Commission (Procedure, terms and Conditions for grant of Transmission License and other related matters) Regulations, 2006 or as amended from time to time; or

e. Failure on the part of the TSP to comply with the provisions of Article 19.1 of this Agreement; or

f. the TSP repudiates this Agreement and does not rectify such breach even within a period of thirty (30) days from a notice from the Nodal Agency in this regard; or

g. after Commercial Operation Date of the Project, the TSP fails to achieve monthly Target Availability of 98% for a period of six (6) consecutive months or within a non-consecutive period of six (6) months within any continuous aggregate period of eighteen(18) months except where the Availability is affected by Force Majeure Events as per Article 11; or

h. any of the representations and warranties made by the TSP in Article 17 of this Agreement being found to be untrue or inaccurate. Further, in addition to the above, any of the undertakings submitted by the Selected Bidder at the time of submission of the Bid being

found to be breached or inaccurate, including but not limited to undertakings from its Parent Company / Affiliates related to the minimum equity obligation; or

i. the TSP fails to complete / fulfil all the activities / conditions within the specified period as per Article 3; or

j. except for the reasons solely attributable to Nodal Agency, the TSP is in material breach of any of its obligations under this Agreement and such material breach is not rectified by the TSP within thirty (30) days of receipt of notice in this regard from the Nodal Agency; or

k. deleted

13.2 Termination Procedure for TSP Event of Default

a. Upon the occurrence and continuance of any TSP's Event of Default under Article 13.1 the Nodal Agency may serve notice on the TSP, with a copy to the CEA and the Lenders' Representative, of their intention to terminate this Agreement (a "Nodal Agency's Preliminary Termination Notice"), which shall specify in reasonable detail, the circumstances giving rise to such Nodal Agency's Preliminary Termination Notice.

b. Following the issue of a Nodal Agency's Preliminary Termination Notice, the Consultation Period shall apply and would be for the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

c. During the Consultation Period, the Parties shall, save as otherwise provided in this Agreement, continue to perform their respective obligations/ roles under this Agreement, and the TSP shall not remove any material, equipment or any part of the Project, without prior consent of the Nodal Agency.

Following the expiry of the Consultation Period, unless the Parties shall have otherwise agreed to the contrary or the circumstances giving rise to Nodal Agency's Preliminary Termination Notice shall have ceased to exist or shall have been remedied, this Agreement may be terminated by the Nodal Agency by giving a Termination Notice to the TSP, in writing, of at least seven (7) days, with a copy to CEA and the Lenders' Representative

in order to enable the Lenders to exercise right of substitution in accordance with Article 15.3 of this Agreement.

Further, the Nodal Agency may also initiate proceedings to blacklist the TSP & its Affiliates from participation in any RFP issued by BPCs for a period of 5 years.

13.3 Procedure for Nodal Agency's non-fulfilment of Role

a. Upon the Nodal Agency not being able to fulfil its role under Article 4.2, the TSP may serve notice on the Nodal Agency, with a copy to CEA and the Lenders' Representative (a "TSP's Preliminary Notice"), which notice shall specify in reasonable detail the circumstances giving rise to such non-fulfilment of role by the Nodal Agency.

b. Following the issue of a TSP's Preliminary Notice, the Consultation Period shall apply.

c. The Consultation Period would be for the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant non-fulfilment of role by the Nodal Agency including giving time extension to TSP, having regard to all the circumstances.

d. During the Consultation Period, both Parties shall, save as otherwise provided in this Agreement, continue to perform their respective obligations/ roles under this Agreement.

13.4 Termination due to Force Majeure

13.4.1 In case the Parties could not reach an agreement pursuant to Articles 3.3.4 and 4.4.2 of this Agreement and the Force Majeure Event or its effects continue to be present, the Nodal Agency shall have the right to cause termination of the Agreement. In case of such termination, the Contract Performance Guarantee shall be returned to the TSP as per the provisions of Article 6.5.1.

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13.4.2 In case of termination of this Agreement, the TSP shall provide to the Nodal Agency the full names and addresses of its Contractors as well as complete designs, design drawings, manufacturing drawings, material specifications and technical information, as required by the Nodal Agency within thirty (30) days of Termination Notice.

13.5 Termination or amendment due to non-requirement of any Element or Project during construction

13.5.1 In case any Element or Project, which is under construction, is no longer required due to any reason whatsoever, the Nodal Agency may issue a notice to this effect to the TSP.

13.5.2 Nodal agency may also issue notice to the TSP seeking their response to the proposed termination/ amendment (as the case may be) of the Agreement. The Nodal Agency shall issue copy of such notice to Lenders. In the notice, Nodal Agency shall also include an assessment of the physical progress made by TSP in the Element/ Project (as the case may be) that is no longer required.

13.5.3 The TSP shall neither carry out further investment nor carry out any work on the Element/ Project (as the case may be) that is no longer required after delivery of the notice.

13.5.4 After taking into account the comments of the TSP, the Nodal Agency may terminate the Agreement or amend it if both Parties agree to the amendment.

13.6 Revocation of the Transmission License

13.6.1 The Commission may, as per the provisions of the Electricity Act, 2003, revoke the Transmission License of the ISTS Licensee. Further, in such a case, the Agreement shall be deemed to have been terminated.

13.7 Termination Payment

13.7.1 If Agreement is terminated on account of Force Majeure Events, non-requirement of any Element or Project during Construction, Nodal Agency's non-fulfilment of Role & TSP's Event of Default, the TSP shall be entitled for Termination Payment equivalent to valuation of Project Assets. Upon payment, the Nodal Agency shall take over the Project Assets.

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ARTICLE: 14

14 LIABILITY AND INDEMNIFICATION

14.1 Indemnity

14.1.1 The TSP shall indemnify, defend and hold the Nodal Agency harmless against:

(a) any and all third party claims, actions, suits or proceedings against the Nodal Agency for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the TSP of any of its obligations under this Agreement, except to the extent that any such claim, action, suit or proceeding has arisen due to a negligent act or omission, breach of this Agreement or non-fulfilment of statutory duty on the part of Nodal Agency; and

(b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by the Nodal Agency from third party claims arising by reason of:

i. a breach by the TSP of any of its obligations under this Agreement, (provided that this Article 14 shall not apply to such breaches by the TSP, for which specific remedies have been provided for under this Agreement) except to the extent that any such losses, damages, costs and expenses including legal costs, fines, penalties and interest (together to constitute "Indemnifiable Losses") has arisen due to a negligent act or omission, breach of this Agreement or non-fulfilment of statutory duty on the part of the Nodal Agency, or

ii. any of the representations and warranties of the TSP under this Agreement being found to be inaccurate or untrue.

14.1.2 The Nodal Agency shall, in accordance with the Regulations framed by CERC in this regard, indemnify, defend and hold the TSP harmless against:

(a) any and all third party claims, actions, suits or proceedings against the TSP, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of any material breach by the Nodal Agency of any of their roles under this Agreement, except to the extent that any such claim, action, suit or proceeding has arisen due to a negligent act or

omission, breach of this Agreement or breach of statutory duty on the part of the TSP, its Contractors, servants or agents; and

(b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by the TSP from third party claims arising by reason of:

i. any material breach by the Nodal Agency of any of its roles under this Agreement (provided that, this Article 14 shall not apply to such breaches by the Nodal Agency, for which specific remedies have been provided for under this Agreement), except to the extent that any such Indemnifiable Losses have arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of the TSP, its Contractors, servants or agents or

ii. any of the representations and warranties of the Nodal Agency under this Agreement being found to be inaccurate or untrue.

14.2 Patent Indemnity:

14.2.1

(a) The TSP shall, subject to the Nodal Agency's compliance with Article 14.2.1 (b), indemnify and hold harmless the Nodal Agency and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, which the Nodal Agency may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Agreement by reason of the setting up of the Project by the TSP.

Such indemnity shall not cover any use of the Project or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Agreement, any infringement resulting from the misuse of the Project or any part thereof, or any products produced in association or combination with any other equipment, plant or materials not supplied by the TSP, pursuant to the Agreement.

(b) If any proceedings are brought or any claim is made against the Nodal

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Agency arising out of the matters referred to in Article 14.2.1(a), the Nodal Agency shall promptly give the TSP a notice thereof, and the TSP shall at its own expense take necessary steps and attend such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. The TSP shall promptly notify the Nodal Agency of all actions taken in such proceedings or claims.

(c) If the TSP fails to notify the Nodal Agency within twenty-eight (28) days after receipt of such notice from the Nodal Agency under Article 14.2.1(b) above, that it intends to attend any such proceedings or claim, then the Nodal Agency shall be free to attend the same on their own behalf at the cost of the TSP. Unless the TSP has so failed to notify the Nodal Agency within the twenty eight (28) days period, the Nodal Agency shall make no admission that may be prejudicial to the defence of any such proceedings or claims.

(d) The Nodal Agency shall, at the TSP's request, afford all available assistance to the TSP in attending to such proceedings or claim, and shall be reimbursed by the TSP for all reasonable expenses incurred in so doing.

14.2.2

(a) The Nodal Agency, in accordance with the Regulations framed by CERC in this regard, subject to the TSP's compliance with Article 14.2.2(b) shall indemnify and hold harmless the TSP and its employees, officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs and expenses of whatsoever nature, including attorney's fees and expenses, which the TSP may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Agreement by reason of the setting up of the Project by the TSP.

(b) If any proceedings are brought or any claim is made against the TSP arising out of the matters referred to in Article 14.2.2 (a) the TSP shall promptly give the Nodal Agency a notice thereof, and the Nodal Agency shall at its own expense take necessary steps and attend such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. The Nodal Agency shall promptly notify the TSP of all actions taken in such proceedings or claims.

(c) If the Nodal Agency fails to notify the TSP within twenty-eight (28) days after receipt of such notice from the TSP under Article 14.2.2(b) above, that it intends to attend any such proceedings or claim, then the TSP shall be free to attend the same on its own behalf at the cost of the Nodal Agency. Unless the Nodal Agency has so failed to notify the TSP within the twenty (28) days period, the TSP shall make no admission that may be prejudicial to the defence of any such proceedings or claim.

(d) The TSP shall, at the Nodal Agency request, afford all available assistance to the Nodal Agency in attending to such proceedings or claim, and shall be reimbursed by the Nodal Agency for all reasonable expenses incurred in so doing.

14.3 Monetary Limitation of liability

14.3.1 A Party ("Indemnifying Party") shall be liable to indemnify the other Party ("Indemnified Party") under this Article 14 for any indemnity claims made in a Contract Year only up to an amount of Rs. **2.80 Crore (Rupees two Crore Eighty Lakh Only).**

14.4 Procedure for claiming indemnity

14.4.1 Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Articles 14.1 or 14.2 the Indemnified Party shall promptly notify the Indemnifying Party of such claim, proceeding, action or suit referred to in Articles 14.1 or 14.2 in respect of which it is entitled to be indemnified. Such notice shall be given as soon as reasonably practicable after the Indemnified Party becomes aware of such claim, proceeding, action or suit. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice.

Provided however that, if:

i. the Parties choose to contest, defend or litigate such claim, action, suit or proceedings in accordance with Article 14.4.3 below; and

ii. the claim amount is not required to be paid/deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the

resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

14.4.2 The Indemnified Party may contest, defend and litigate a claim, action, suit or proceeding for which it is entitled to be indemnified under Articles 14.1 or 14.2 and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified Party. However, such Indemnified Party shall not settle or compromise such claim, action, suit or proceedings without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

14.4.3 An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

14.5 Limitation on Liability

14.5.1 Except as expressly provided in this Agreement, neither the TSP nor the Nodal Agency nor their respective officers, directors, agents, employees or Affiliates (including, officers, directors, agents or employees of such Affiliates), shall be liable or responsible to the other Party or its Affiliates including its officers, directors, agents, employees, successors, insurers or permitted assigns for incidental, indirect or consequential, punitive or exemplary damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of transmission capacity or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of the Nodal Agency, the TSP or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.

14.5.2 The Nodal Agency shall have no recourse against any officer, director or shareholder of the TSP or any Affiliate of the TSP or any of its officers, directors or shareholders for such claims excluded under this Article. The TSP shall also have no recourse against any officer, director or shareholder of the Nodal Agency, or any Affiliate of the Nodal Agency or any of its officers, directors or shareholders for

such claims excluded under this Article.

14.6 Duty to Mitigate

The party entitled to the benefit of an indemnity under this Article 14 shall take all reasonable measures to mitigate any loss or damage which has occurred. If the Party fails to take such measures, the other Party's liabilities shall be correspondingly reduced.

ARTICLE: 15

15 ASSIGNMENTS AND CHARGES

15.1 Assignments:

15.1.1 This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party, except as provided in Article 15.3.

15.2 Permitted Charges:

15.2.1 Neither Party shall create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement.

15.2.2 However, the TSP may create any encumbrance over all or part of the receivables, or the Project Assets of the Project in favour of the Lenders or the Lenders' Representative on their behalf, as security for amounts payable under the Financing Agreements and any other amounts agreed by the Parties.

Provided that:

i. the Lenders or the Lenders' Representative on their behalf shall have entered into the Financing Agreements and agreed in writing to the provisions of this Agreement; and

ii. any encumbrance granted by the TSP in accordance with this Article 15.2.2 shall contain provisions pursuant to which the Lenders or the Lender's Representative on their behalf agrees unconditionally with the TSP to release from such encumbrances upon payment by the TSP to the Lenders of all amounts due under the Financing Agreements.

15.2.3 Article 15.2.1 does not apply to:

a. liens arising by operation of law (or by an agreement evidencing the same) in the ordinary course of the TSP developing and operating the Project;

b. pledges of goods, the related documents of title and / or other related documents, arising or created in the ordinary course of the TSP developing and operating the Project; or

c. security arising out of retention of title provisions in relation to goods acquired in the ordinary course of the TSP developing and operating the Project.

15.3 Substitution Rights of the Lenders

15.3.1 The TSP would need to operate and maintain the Project under the provisions of this Agreement and cannot assign the Transmission License or transfer the Project or part thereof to any person by sale, lease, exchange or otherwise, without the prior approval of the Nodal Agency.

15.3.2 However, in the case of default by the TSP in debt repayments or in the case of default by the TSP as per Article 13 of this Agreement during the debt repayments, the Commission may, on an application from the Lenders, assign the Transmission License to the nominee of the Lenders subject to the fulfilment of the qualification requirements and provisions of the Central Electricity Regulatory Commission (Procedure, terms and Conditions for grant of Transmission License and other related matters) Regulations, 2006 and as amended from time to time.

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ARTICLE: 16

16 GOVERNING LAW AND DISPUTE RESOLUTION

16.1 Governing Law:

This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

16.2 Amicable Settlement:

16.2.1 Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement, including its existence or validity or termination or whether during the execution of the Project or after its completion and whether prior to or after the abandonment of the Project or termination or breach of the Agreement by giving a written notice to the other Party, which shall contain:

(i) a description of the Dispute;

(ii) the grounds for such Dispute; and

(iii) all written material in support of its claim.

16.2.2 The other Party shall, within thirty (30) days of issue of notice issued under Article 16.2.1, furnish:

(i) counter-claim and defences, if any, regarding the Dispute; and

(ii) all written material in support of its defences and counter-claim.

16.2.3 Within thirty (30) days of issue of notice by the Party pursuant to Article 16.2.1, if the other Party does not furnish any counter claim or defense under Article 16.2.2, or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 16.2.3, the Dispute shall be referred for dispute resolution in accordance with Article 16.3.

16.3 Dispute Resolution:

All Disputes shall be adjudicated by the Commission.

16.4 Parties to Perform Obligations:

Notwithstanding the existence of any Dispute and difference referred to the Commission as provided in Article 16.3 and save as the Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations/ roles (which are not in dispute) under this Agreement.

ARTICLE: 17

17 REPRESENTATION AND WARRANTIES

17.1 Representation and warranties of the Nodal Agency

17.1.1 The Nodal Agency hereby represents and warrants to and agrees with the TSP as follows and acknowledges and confirms that the TSP is relying on such representations and warranties in connection with the transactions described in this Agreement:

a. It has all requisite powers and authority to execute and consummate this Agreement;

b. This Agreement is enforceable against the Nodal Agency in accordance with its terms;

c. The consummation of the transactions contemplated by this Agreement on the part of Nodal Agency will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, agreement, license, permit, evidence of indebtedness, restriction, or other contract to which the Nodal Agency is a Party or to which the Nodal Agency is bound, which violation, default or power has not been waived;

17.2 Representation and Warranties of the TSP:

17.2.1 The TSP hereby represents and warrants to and agrees with the Nodal Agency as follows and acknowledges and confirms that the Nodal Agency is relying on such representations and warranties in connection with the transactions described in this Agreement:

a. It has all requisite powers and has been duly authorized to execute and consummate this Agreement;

b. This Agreement is enforceable against it, in accordance with its terms;

c. The consummation of the transactions contemplated by this Agreement on the part of the TSP will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, agreement, license, permit, evidence of indebtedness, restriction, or other contract to which the TSP is a Party or to which the TSP is bound which violation, default or power has not been waived;

d. The TSP is not insolvent and no insolvency proceedings have been instituted, nor threatened or pending by or against the TSP;

e. There are no actions, suits, claims, proceedings or investigations pending or, to the best of the TSP's knowledge, threatened in writing against the TSP at law, in equity, or otherwise, and whether civil or criminal in nature, before or by, any court, commission, arbitrator or governmental agency or authority, and there are no outstanding judgments, decrees or orders of any such courts, commission, arbitrator or governmental agencies or authorities, which materially adversely affect its ability to execute the Project or to comply with its obligations under this Agreement.

17.2.2 The TSP makes all the representations and warranties above to be valid as on the Effective Date of this Agreement.

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ARTICLE : 18

18 INDEPENDENT ENGINEER

18.1 Appointment of Independent Engineer

The Nodal Agency shall appoint an agency/ company as Independent Engineer as per framework provided in the Guidelines for Encouraging Competition in Development of Transmission Projects for selection of Independent Engineer.

18.2 Roles and functions of Independent Engineer

The role and functions of the Independent Engineer shall include the following:

a. Progress Monitoring as required under this Agreement;

b. Ensuring Quality as required under this Agreement;

c. determining, as required under the Agreement, the costs of any works or services and/or their reasonableness during construction phase;

d. determining, as required under the Agreement, the period or any extension thereof, for performing any duty or obligation during construction phase;

e. determining, as required under the Agreement, the valuation of the Project Assets.

f. Assisting the Parties in resolution of Disputes and

g. Undertaking all other duties and functions in accordance with the Agreement.

18.3 Remuneration of Independent Engineer

The fee and charges of the Independent Engineer shall be paid by the Nodal Agency as per terms & conditions of appointment.

18.4 Termination of appointment

18.4.1 The Nodal Agency may, in its discretion, terminate the appointment of the Independent Engineer at any time, but only after appointment of another Independent Engineer.

18.4.2 If the TSP has reason to believe that the Independent Engineer is not discharging its duties and functions in a fair, efficient and diligent manner, it may make a written representation to the Nodal Agency and seek termination of the

appointment of the Independent Engineer. Upon receipt of such representation, the Nodal Agency shall hold a tripartite meeting with the TSP and Independent Engineer for an amicable resolution, and the decision of Nodal agency is final. In the event that the appointment of the Independent Engineer is terminated hereunder, the Nodal Agency shall appoint forthwith another Independent Engineer.

18.5 Authorised signatories

The Nodal Agency shall require the Independent Engineer to designate and notify to the Nodal Agency up to 2 (two) persons employed in its firm to sign for and on behalf of the Independent Engineer, and any communication or document required to be signed by the Independent Engineer shall be valid and effective only if signed by any of the designated persons; provided that the Independent Engineer may, by notice in writing, substitute any of the designated persons by any of its employees.

ARTICLE: 19

19 MISCELLANEOUS PROVISIONS

19.1 Equity Lock-in Commitment:

19.1.1 The aggregate equity share holding of the Selected Bidder in the issued and paid up equity share capital of **Fatehgarh III Beawar Transmission Limited** shall not be less than Fifty one percent (51%) up to a period of one (1) year after COD of the Project.

Provided that, in case the Lead Member or Bidding Company is holding equity through Affiliate/s, Ultimate Parent Company or Parent Company, such restriction as specified above shall apply to such entities.

Provided further, that in case the Selected Bidder is a Bidding Consortium, the Lead Member shall continue to hold equity of at least twenty six percent (26%) upto a period of one (1) year after COD of the Project and any Member of such Bidding Consortium shall be allowed to divest its equity as long as the other remaining Members (which shall always include the Lead Member) hold the minimum equity specified above.

19.1.2 If equity is held by the Affiliates, Parent Company or Ultimate Parent Company of the Selected Bidder, then, subject to the second proviso to Article 19.1.1, such Affiliate, Parent Company or Ultimate Parent Company shall be eligible to transfer its shareholding in **Fatehgarh III Beawar Transmission Limited** to another Affiliate or to the Parent Company / Ultimate Parent Company of the Selected Bidder. If any such shareholding entity, qualifying as an Affiliate / Parent Company / Ultimate Parent Company, is likely to cease to meet the criteria to qualify as an Affiliate / Parent Company / Ultimate Parent Company, the shares held by such entity shall be transferred to another Affiliate / Parent Company / Ultimate Parent Company of the Selected Bidder.

19.1.3 Subject to Article 19.1.1, all transfer(s) of shareholding of **Fatehgarh III Beawar Transmission Limited** by any of the entities referred to in Article 19.1.1 and 19.1.2 above, shall be after prior written intimation to the Nodal Agency.

19.1.4 For computation of effective Equity holding, the Equity holding of the Selected Bidder or its Ultimate Parent Company in such Affiliate(s) or Parent Company and the equity holding of such Affiliate(s) or Ultimate Parent Company in **Fatehgarh III Beawar Transmission Limited** shall be computed in accordance with the example given below:

If the Parent Company or the Ultimate Parent Company of the Selected Bidder A directly holds thirty percent (30%) of the equity in **Fatehgarh III Beawar Transmission Limited,** then holding of Selected Bidder A in **Fatehgarh III Beawar Transmission Limited** shall be thirty percent (30%);

If Selected Bidder A holds thirty percent (30%) equity of the Affiliate and the Affiliate holds fifty percent (50%) equity in **Fatehgarh III Beawar Transmission Limited**, then, for the purposes of ascertaining the minimum equity, equity lock-in requirements specified above, the effective holding of Bidder A in **Fatehgarh III Beawar Transmission Limited** shall be fifteen percent (15%), (i.e., 30% x 50%)

19.1.5 The provisions as contained in this Article 19.1 shall override the terms of the consortium agreement submitted as part of the Bid.

19.1.6 The TSP shall be responsible to report to Nodal Agency, within thirty (30) days from the occurrence of any event that would result in any change in its equity holding structure from that which existed as on the date of signing of the Share Purchase Agreement. In such cases, the Nodal Agency would reserve the right to ascertain the equity holding structure and to call for all such required documents / information / clarifications as may be required.

19.2 Commitment of maintaining Qualification Requirement

19.2.1 The Selected Bidder will be required to continue to maintain compliance with the Qualification Requirements, as stipulated in RFP Document, till the COD of the Project. Where the Technically Evaluated Entity and/or the Financially Evaluated Entity is not the Bidding Company or a Member in a Bidding Consortium, as the case may be, the Bidding Company or Member shall continue to be an Affiliate of the Technically Evaluated Entity and/or Financially Evaluated Entity till the COD of the Project.

19.2.2 Failure to comply with the aforesaid provisions shall be dealt in the same manner as TSP's Event of Default as under Article 13 of this Agreement.

19.3 Language:

19.3.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

19.3.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such

agreements, correspondence, communications or documents shall prevail in matters of interpretation.

19.4 Affirmation

The TSP and the Nodal Agency, each affirm that:

1. neither it nor its respective directors, employees, or agents has paid or undertaken to pay or shall in the future pay any unlawful commission, bribe, pay-off or kick-back; and
2. it has not in any other manner paid any sums, whether in Indian currency or foreign currency and whether in India or abroad to the other Party to procure this Agreement, and the TSP and the Nodal Agency hereby undertake not to engage in any similar acts during the Term of Agreement.

19.5 Severability

The invalidity or enforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

19.6 Counterparts

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which collectively shall be deemed one and the same Agreement.

19.7 Breach of Obligations/ Roles

The Parties acknowledge that a breach of any of the obligations/ roles contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting Party in each case specified under this Agreement.

19.8 Restriction of Shareholders / Owners Liability

19.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement.

19.8.2 Further, the financial liabilities of the shareholder(s) of each Party to this

Agreement shall be restricted to the extent provided in the Indian Companies Act, 1956 / Companies Act, 2013 (as the case may be).

19.9 Taxes and Duties:

19.9.1 The TSP shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/levied on the TSP, its Contractors or their employees that are required to be paid by the TSP as per the Law in relation to the execution of the Project and for providing Transmission Service as per the terms of this Agreement.

19.9.2 The Nodal Agency shall be indemnified and held harmless by the TSP against any claims that may be made against the Nodal Agency in relation to the matters set out in Article 19.9.1.

19.9.3 The Nodal Agency shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of the TSP by the Nodal Agency on behalf of TSP or its personnel, provided the TSP has consented in writing to the Nodal Agency for such work, for which consent shall not be unreasonably withheld.

19.10 No Consequential or Indirect Losses

The liability of the TSP shall be limited to that explicitly provided in this Agreement.

Provided that, notwithstanding anything contained in this Agreement, under no event shall the Nodal Agency or the TSP claim from one another any indirect or consequential losses or damages.

19.11 Discretion:

Except where this Agreement expressly requires a Party to act fairly or reasonably, a Party may exercise any discretion given to it under this Agreement in any way it deems fit.

19.12 Confidentiality

19.12.1 The Parties undertake to hold in confidence this Agreement and RFP Project Documents and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

(a) to their professional advisors;

(b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or

(c) disclosures required under Law,

without the prior written consent of the other Parties.

Provided that, the TSP agrees and acknowledges that the Nodal Agency, may, at any time, disclose the terms and conditions of the Agreement and the RFP Project Documents to any person, to the extent stipulated under the Law and the Competitive Bidding Guidelines.

19.13 Order of priority in application:

Save as provided in Article 2.5, in case of inconsistencies between the terms and conditions stipulated in Transmission License issued by the Commission to the TSP, agreement(s) executed between the Parties, applicable Law including rules and regulations framed thereunder, the order of priority as between them shall be the order in which they are placed below:

- terms and conditions of Transmission License;
- applicable Law, rules and regulations framed thereunder;
- this Agreement;
- Agreement(s), if any, under Sharing Regulations.

19.14 Independent Entity:

19.14.1 The TSP shall be an independent entity performing its obligations pursuant to the Agreement.

19.14.2 Subject to the provisions of the Agreement, the TSP shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the TSP or Contractors engaged by the TSP in connection with the performance of the Agreement shall be under the complete control of the TSP and shall not be deemed to be employees, representatives, Contractors of the Nodal Agency and nothing contained in the Agreement or in any agreement or contract awarded by the TSP shall be construed to create any contractual relationship between any such employees, representatives or Contractors and the Nodal Agency.

19.15 Amendments:

19.15.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

19.16 Waiver:

19.16.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorised representative of such Party.

19.16.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

19.17 Relationship of the Parties:

This Agreement shall not be interpreted or construed to create an association, joint venture, or partnership or agency or any such other relationship between the Parties or to impose any partnership obligation or liability upon either Party and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

19.18 Entirety:

19.18.1 This Agreement along with its sections, schedules and appendices is intended by the Parties as the final expression of their agreement and is intended also as a complete and exclusive statement of the terms of their agreement.

19.18.2 Except as provided in this Agreement, all prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement or the provision of Transmission Service under this Agreement to the Nodal Agency by the TSP shall stand superseded and abrogated.

19.19 Notices:

19.19.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language

19.19.2 If to the TSP, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the addressee below:

Address : DLF, Cyber Park, Tower-B, 9th Floor, Udyog Vihar, Phase-III, Sector-20, Gurugram-122008, Haryana

FATEHGARH III BEAWAR TRANSMISSION LTD. NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

Attention	:	Mr- Baloji Sivan
Email	:	balojisivan@sterlite.com
Fax. No.	:	–
Telephone No.	:	8527544855

19.19.3 If to the Nodal Agency, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the addresses below:

(i) **Central Transmission Utility of India Limited (Nodal Agency)**

Address	:	Plot No.2, Sector – 29, Gurugram, Haryana-122001, India
Attention	:	Mr. Vikram Singh Bhal, ED
Email	:	vsbhal@powergrid.in
Fax. No.	:	-
Telephone No.	:	9910378068

19.19.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

19.19.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

19.20 Fraudulent and Corrupt Practices

19.20.1 The TSP and its respective officers, employees, agents and advisers shall observe the highest standard of ethics during the subsistence of this Agreement. Notwithstanding anything to the contrary contained in the Agreement, the Nodal Agency may terminate the Agreement without being liable in any manner whatsoever to the TSP, if it determines that the TSP has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive

practice in the Bid process. In such an event, the Nodal Agency shall forfeit the Contract Performance Guarantee of the TSP, without prejudice to any other right or remedy that may be available to the Nodal Agency hereunder or subsistence otherwise.

19.20.2 Without prejudice to the rights of the Nodal Agency under Clause 19.20.1 hereinabove and the rights and remedies which the Nodal Agency may have under this Agreement, if a TSP is found by the Nodal Agency to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bid process, or after the issue of Letter of Intent (hereinafter referred to as LoI) or after the execution of the agreement(s) required under Sharing Regulations, the Nodal Agency may terminate the Agreement without being liable in any manner whatsoever to the TSP. Further, the TSP & its Affiliates shall not be eligible to participate in any tender or RFP issued by any BPC for an indefinite period from the date such TSP is found by the Nodal Agency to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be.

19.20.3 For the purposes of this Clause 19.20, the following terms shall have the meaning hereinafter respectively assigned to them:

(a) **"corrupt practice"** means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bid process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the BPC who is or has been associated or dealt in any manner, directly or indirectly with the Bid process or the LoI or has dealt with matters concerning the RFP Project Documents or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the BPC, shall be deemed to constitute influencing the actions of a person connected with the Bid Process); or (ii) engaging in any manner whatsoever, whether during the Bid Process or after the issue of the LoI or after the execution of the RFP Project Documents, as the case may be, any person in respect of any matter relating to the Project or the LoI or the RFP Project Documents, who at any time has been or is a legal, financial or technical adviser of the BPC in relation to any matter concerning the Project;

(b)"**fraudulent practice**" means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bid process;

(c) "**coercive practice**" means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Bid process;

(d) "**undesirable practice**" means (i) establishing contact with any person connected with or employed or engaged by the BPC with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bid process; or (ii) having a Conflict of Interest; and

(e) "**restrictive practice**" means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bid process;

19.21 Compliance with Law:

Despite anything contained in this Agreement but without prejudice to Article 12, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

IN WITNESS WHEREOF, THE PARTIES HAVE CAUSED THIS AGREEMENT TO BE EXECUTED BY THEIR DULY AUTHORISED REPRESENTATIVES AS OF THE DATE AND PLACE SET FORTH ABOVE.

FATEHGARH III BEAWAR TRANSMISSION LIMITED NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

1. For and on behalf of TSP

FATEHGARH III BEAWAR TRANSMISSION LTD ★ NEW DELHI

.....

[Signature, Name, Designation and Address]

Amareddi Sarath Tatimakula Reddy
EVP - Special Projects
DLF Cyber Park, Block-B, 9th Floor, Udyog Vihar, Phase-III
Sector-20, Gurugram 122008 HR

2. For and on behalf of **Central Transmission Utility of India Limited (Nodal Agency)**

.....

ATUL KUMAR AGARWAL
Chief General Manager
CENTRAL TRANSMISSION UTILITY OF INDIA LTD.
(Wholly Owned Subsidiary of
Power Grid Corporation of India Limited)
(A Government of India Enterprise)
Saudamini, Plot No. 02, Sector-29, Gurugram-122 001

[Signature, Name, Designation and Address]

WITNESSES:

1. For and on behalf of

: **BPC**

.....

[Signature]

DEEPAK KUMAR
AM, PFCCL
01/08/23

.....

[Insert, Name, Designation and Address of the Witness]

2. For and on behalf of

: **Nodal Agency**

.....

[Signature]

Deepak Krishnan
manager, CTUIL

.....

[Insert Name, Designation and Address of the Witness]

FATEHGARH III BEAWAR TRANSMISSION LTD ★ NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

SCHEDULES

Schedule: 1

Project Description and Scope of Project

a. Description of the Transmission Scheme

In order to integrate and evacuate power from additional 20 GW renewable potential of Renewable Energy Zones (Fatehgarh: 9.1 GW, Bhadla: 8GW, Ramgarh: 2.9 GW) in Rajasthan, various transmission alternatives were evolved and deliberated in the 3rd NRPC-TP meeting held on 19.02.21. Based on the discussion, hybrid (EHVAC& HVDC) transmission system was agreed in above meeting for evacuation of power from additional 20 GW REZ in Rajasthan (Phase-III).

As part of Phase-III system, Fatehgarh-4 & Bhadla-3 Polling stations (new) are to be established which will be interconnected with Fatehgarh-3 & Fatehgarh-2 PS respectively. Further, renewable sources in Ramgarh complex are also proposed to be pooled at Ramgarh PS which shall be interconnected with Bhadla-3 PS. In view of integration & evacuation of additional 20 GW RE in Rajasthan with reliability as well as taking care of RE variability, under Phase-III System, Hybrid transmission system comprising EHV AC (765kV) & HVDC corridors are planned towards Delhi & Southern UP.

The subject transmission scheme involves implementation of Fatehgarh-3– Beawar 765 kV D/c (2nd) line which shall facilitate evacuation of RE power from Fatehgarh complex through Fatehgarh-3 PS for onward dispersal of power to various beneficiaries

Above transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III was also agreed in 49th Northern Region Power Committee (NRPC) meeting held on 27/09/2021 & 5th National Committee on Transmission (NCT) held on 25th Aug, 2021 and 2nd Sep, 2021. Subsequently, Ministry of Power, Government of India, vide its Gazette Notification CG-DL-E-08122021-231686 (No. 4661) dated 06.12.2021 declared establishment of Transmission system for evacuation of power from REZ in Raj (20 GW) under Phase III Part G through tariff based competitive bidding process route as part of "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III".

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

b. Detailed Scope of Work

Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part G		
S. No.	**Name of Transmission Element**	**Scheduled COD in months from Effective Date**
1.	Fatehgarh-3 – Beawar 765kV D/C (2nd) along with 330MVAR Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765kV D/C line • Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 nos. • 765 kV, 330 MVAR Switchable line reactor- 4 nos.	18 months
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3 • 765 kV line bays – 4 nos.	

Note:

i. *Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.*

ii. *Developer of Beawar S/s to provide space for 2 nos. of 765 kV line bays at Beawar S/s along with space for 765kV switchable line reactors.*

FATEHGARH III BEAWAR TRANSMISSION LTD NEW DELHI

Central Transmission Utility of India Ltd Gurugram

SPECIFIC TECHNICAL REQUIREMENTS FOR TRANSMISSION LINE

A.1.0 The design, routing and construction of transmission lines shall be in accordance with Chapter V, Part-A of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, as amended from time to time.

A.2.0 Selection of tower type shall be made as per CEA Regulations, however in case lattice type towers are used, the following shall also be applicable:

A.2.1 Steel section of grade E 250 and/or grade E 350 as per IS 2062, only are permitted for use in towers, extensions, gantry structures and stub setting templates. For towers in snowbound areas, steel sections shall conform to Grade-C of IS-2062.

A.2.2 Towers shall be designed as per IS-802:2015, however the drag coefficient of the tower shall be as follows: -

Solidity Ratio	Drag Coefficient
Upto 0.05	3.6
0.1	3.4
0.2	2.9
0.3	2.5
0.4	2.2
0.5 and above	2.0

A.3.0 Transmission Service Provider (TSP) shall adopt any additional loading/design criteria for ensuring reliability of the line, if so desired and/or deemed necessary.

A.4.0 Transmission line shall be designed considering wind zones as specified in wind map given in National Building Code 2016, Vol.1. The developer shall also make his own assessment of local wind conditions and frequent occurrences of high intensity winds (HIW) due to thunderstorms, dust-storms, downburst etc. along the line route and wherever required, higher wind zone than that given in wind map shall be considered for tower design for ensuring reliability of line. Further, for transmission line sections passing within a distance of 50 km from the boundary of two wind zones, higher of the two wind zones shall be considered for design of towers located in such sections.

A.5.0 A) For power line crossing of 400 kV or above voltage level if crossed over the existing line) large angle & dead end towers (i.e. D/DD/QD) shall be used on either side of power line crossing.

B) For power line crossing of 132 kV and 220 kV voltage level, angle towers (B/C/D/DB/DC/DD/QB/QC/QD) shall be used on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.

C) For power line crossing of 66 kV and below voltage level, suspension/tension towers shall be provided on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.

D) For crossing of railways, national highways and state highways, the rules/Regulations of appropriate authorities shall be followed.

A.6.0 The relevant conductor configuration shall be as follows: -

Type of conductor: ACSR / AAAC / AL59

Basic parameters:

Transmission line	ACSR Conductor specified	Equivalent AAAC conductor based on 53.5% conductivity of Al Alloy	Equivalent minimum size of AL59 conductor based on 59% conductivity of AL Alloy*	Sub-conductor Spacing
765kV D/C (Hexa Zebra) transmission lines	Zebra: Stranding 54/3.18 mm-Al + 7/3.18 mm-Steel, 28.62 mm diameter 428 sq. mm, Aluminium area, Maximum DC Resistance at 20°C (Ω/km): 0.06868 Minimum UTS: 130.32 kN	Stranding details: 61/3.19mm, 28.71 mm diameter; 487.5 sq.mm Aluminium alloy area Maximum DC Resistance at 20°C (Ω/km) : 0.06815 Minimum UTS: 135.6 kN	Stranding details: 61/3.08mm, 27.72 mm diameter; 454 sq.mm Aluminium alloy area Maximum DC Resistance at 20°C (Ω/km) : 0.0653 Minimum UTS: 108 kN	457 mm

Note:

1. **To Select any size above the minimum, the sizes mentioned in the Indian standard IS-398(part-6) shall be followed.*

2. *The transmission lines shall have to be designed for a maximum operating conductor temperature of 85 deg C*

A.7.0 The required phase to phase spacing and horizontal spacing for 765kV line shall be governed by the tower design as well as minimum live metal clearances for 765kV voltage level under different insulator swing angles. However, the phase to phase spacing for 765kV line shall not be less than 15 m.

A.8.0 All electrical clearances including minimum live metal clearance, ground clearance and minimum mid span separation between earth wire and conductor shall be as per Central Electricity Authority (Measures Relating to Safety & Electric Supply) Regulations as amended from time to time and IS:5613. Since these clearances for 765kV are not included in CEA Regulation/ Indian Standard, following values shall be considered:

a) Minimum live metal clearances for 765 kV line:

(i) Under stationary conditions

From tower body: For 765 kV D/C: 6.1 m

For 765 kV S/C: 5.6 m

(ii) Under swing conditions

Wind pressure Condition	Minimum electrical clearance
a) Swing angle (25º)	4.4 mtrs
b) Swing angle (55º)	1.3 mtrs

b) Minimum ground clearance: 18 m

c) Minimum mid span separation between earthwire and conductor: 9.0 m

A.9.0 Shielding angle shall not exceed 10 deg for 765kV D/C Line transmission line.

A.10.0 The Fault current for design of line shall be 50kA for 1 sec for 765kV.

A.11.0 In case of 765kV voltage class lines, at least one out of two earth wires shall be OPGW and second earth wire, if not OPGW, shall be either of galvanized standard steel (GSS) or AACSR or any other suitable conductor type depending upon span length and other technical consideration.

A.12.0 Each tower shall be earthed such that tower footing impedance does not exceed 10 ohms. Pipe type or Counterpoise type earthing shall be provided in accordance

with relevant IS. Additional earthing shall be provided on every 7 to 8 kms distance at tension tower for direct earthing of both shield wires. If site condition demands, multiple earthing or use of earthing enhancement compound shall be used.

A.13.0 Pile type foundation shall be used for towers located in river or creek bed or on bank of river having scourable strata or in areas where river flow or change in river course is anticipated, based on detailed soil investigation and previous years' maximum flood discharge of the river, maximum velocity of water, highest flood level, scour depth & anticipated change in course of river based on river morphology data of at least past 20 years to ensure availability and reliability of the transmission line.

A.14.0 Transmission line route shall be finalized, in consultation with appropriate authorities so as to avoid the habitant zones of endangered species and other protected species. Bird diverters, wherever required, shall be provided on the line.

A.15.0 The raised chimney foundation is to be provided in areas prone to flooding/water stagnation like paddy field /agricultural field & undulated areas to avoid direct contact of water with steel part of tower. The top of the chimney of foundation should be at least above HFL (High Flood Level) or the historical water stagnation/ logging level (based on locally available data) or above High Tide Level or 500 mm above Natural Ground level (whichever is higher).

SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION

The proposed augmentation of **Fatehgarh-3 (AIS) substation** and **Beawar (AIS) substation** shall be generally conforming to the requirements of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, as amended from time to time.

B.1.0 Salient features of Substation Equipment and Facilities

The design and specification of substation equipment are to be governed by the following factors:

B.1.1 Insulation Coordination

The system design parameters for substations/switchyards shall be as given below:

Sl No	Description of parameters	Extn. of 765kV Fatehgarh-3 s/s	Extn. of 765kV Beawar s/s
		765 kV System	**765 kV System**
1.	System operating voltage	765kV	765kV
2.	Maximum voltage of the system (rms)	800kV	800kV
3.	Rated frequency	50Hz	50Hz
4.	No. of phase	3	3
5.	Rated Insulation levels		
i)	Lighting Impulse withstand voltage for (1.2/50 micro sec.) - Transformer and Reactors - for Equipment other than Transformer and Reactors - for Insulator String	 2100kVp 2100kVp	 2100kVp 2100kVp
ii)	Switching impulse withstand voltage (250/2500 micro sec.) dry and wet	1550kVp	1550kVp
iii)	One minute power frequency dry withstand voltage (rms)	830kV	830kV
6.	Corona extinction voltage	508 kV	508 kV
7.	Max. radio interference voltage for frequency between 0.5 MHz and 2 MHz	2500 micro-volts at 508 kV rms	2500 micro-volts at 508 kV rms
8.	Minimum creepage distance for insulator string/ longrod insulators/ outdoor bushings	24800 mm (31mm/kV)	24800 mm (31mm/kV)

Sl No	Description of parameters	Extn. of 765kV Fatehgarh-3 s/s	Extn. of 765kV Beawar s/s
		765 kV System	765 kV System
9.	Minimum creepage distance for switchyard equipment	20000 mm (25 mm/kV)	20000 mm (25 mm/kV)
10.	Max. fault current	50 kA	50kA
11.	Duration of fault	1 sec	1 Sec

B.1.2 Switching Scheme

The switching schemes, as mentioned below, shall be adopted at various voltage levels of substation/switchyard:

Substation	765kV side
765kV **Fatehgarh-3 S/s** Extn	One & half breaker
765kV **Beawar S/s** Extn.	One & half breaker

Notes: -

(i) At 765kV voltage level, each circuit of a double circuit transmission line shall be terminated in different diameters.

(ii) Two transformers of same HV rating shall not be connected in the same diameter and similarly, two bus reactors of same HV rating shall also not be connected in the same diameter.

B.2.0 Substation Equipment and facilities:

The switchgear shall be designed and specified to withstand operating conditions and duty requirements. All equipment shall be designed considering the following capacity.

Sl. No	Description of bay	765kV Fatehgarh-3 S/s Extn	765kV Beawar S/s Extn.
		765kV	765kV
1.	Bus Bar	4000A	4000A
2.	Line bay	3150A	3150A
3.	Line Reactor Bay	3150A	3150A

FATEHGARH III BEAWAR TRANSMISSION LTD. NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

B.2.1 Shunt Reactor

110 MVAR, 765/√3 kV, 1-Phase Reactor (including arrangement for 3-phase bank formation of 330 MVAR) shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above)" as amended up to date available on CEA website.

Neutral Grounding Reactor (NGR) and Surge Arrester for 765 kV Line Reactors (as applicable)

The neutral of the line reactors (wherever provided) shall be grounded through adequately rated Neutral Grounding Reactors (NGR) to facilitate singie phase auto-reclosure, provided that the NGR shall be provided with bypass arrangement through a breaker so that the line reactor can be used as Bus reactor as and when required. The neutral of bus reactor shall be solidly grounded. The resistive value of NGR for each circuit at both ends of 765kV D/c Fatehgarh-3– Beawar S/s shall be 450 ohms.

NGR shall be oil filled or dry type air core for outdoor application. NGR shall conform to CEA's "Standard specifications and technical parameters of transformers and reactors (66kV and above)". Technical parameters of NGR shall be as specified in Annexure-A of abovementioned document.

The surge arresters (rated voltage of arrester in co-ordination with ohmic value of NGR shall be decided by the TSP) shall be provided & physically located between the neutral of shunt reactor (brought out at 145kV class bushing) and neutral grounding reactor. The surge arresters shall be of heavy duty station class gapless Metal oxide (ZnO) type conforming in general to IEC-60099-4. Arresters shall be hermetically sealed units, of self-supporting construction, suitable for mounting on structures.

B.2.3 765kV Substation equipment (AIS)

B.2.3.1 Circuit Breakers (AIS)

The circuit breakers and accessories shall conform with IEC: 62271-100, IEC: 62271-1 and shall be of SF6 Type. The circuit breakers shall be of class C2-M2 (as per IEC) with regard to restrike probability during capacitive current breaking and mechanical endurance. The rated break time shall not exceed 40 ms for 765kV circuit breakers. 765kV Circuit breakers shall be provided with single phase and three phase auto reclosing. The Circuit breakers controlling 765kV lines shall be provided either with pre-insertion closing resistor of about 450 ohms maximum with 9 ms minimum insertion time or with Controlled Switching Device. The short line fault capacity shall be same as the rated capacity and this is proposed to be achieved without use of opening resistors. Control switching device shall be provided in Circuit Breaker of switchable line reactor bay and in Main & Tie bay circuit breakers of line with non-switchable line reactors, Bus reactors and 765/400kV Transformers.

B.2.3.2 Isolators (AIS)

The isolators shall comply with IEC 62271-102 in general. 765kV Isolator design shall be double break or vertical break or knee-type. All Isolators and earth switches shall be motor operated. Earth switches shall be provided at various locations to facilitate maintenance. Isolator rated for 765kV shall be of extended mechanical endurance class-M2 and suitable for bus transfer current switching duty as per IEC-62271-102. Main blades and earth blades shall be interlocked and interlock shall be fail safe type. 765kV earth switch for line isolator shall be suitable for induced current switching duty as defined for Class-B.

B.2.3.3 Current Transformers (AIS)

Current Transformers shall comply with IEC 61869 in general. All ratios shall be obtained by secondary taps only. Generally, Current Transformers (CT) for 765kV shall have six cores (four for protection and two for metering). The burden and knee point voltage shall be in accordance with the requirements of the system including possible feeds for telemetry. Accuracy class for protection core shall be PX and for metering core it shall be 0.2S. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system (not more than 20VA for metering core) for better sensitivity and accuracy. The instrument security factor shall be less than 10 for CTs of 765 kV voltage class.

B.2.3.4 Capacitor Voltage Transformers (AIS)

Capacitive Voltage transformers shall comply with IEC 61869 in general. These shall have three secondaries out of which two shall be used for protection and one for metering. Accuracy class for protection cores shall be 3P and for metering core it shall be 0.2. The Capacitive voltage transformers on lines shall be suitable for Carrier Coupling. The Capacitance of CVT for 765kV shall be 8800 pF. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system (not more than 50VA for metering core) for better sensitivity and accuracy.

B.2.3.5 Surge Arresters (AIS)

624kV Station High (SH) duty gapless type Surge arresters with thermal energy (Wth) of minimum 13 kJ/kV conforming to IEC 60099-4 in general shall be provided for 765kV system. Other characteristics of Surge arrester shall be chosen in accordance with system requirements. Surge arresters shall be provided near line entrances, transformers & Reactor so as to achieve proper insulation coordination. Surge Arresters shall be provided with porcelain/ polymer housing fitted with pressure relief devices. A leakage current monitor with surge counter shall be provided with each surge arrester.

B.2.4 Protection Relaying & Control System

The protective relaying system proposed to be provided for transmission lines, auto-transformers, reactors and bus bars to minimize the damage to the equipment in the events of faults and abnormal conditions, is dealt in this section. All main protective relays shall be numerical type with IEC 61850 communication interface and should have interoperability during integration of numerical relays to communicate over IEC61850 protocol with RTU/SAS/IEDs of different OEMs. All numerical relays shall have built in disturbance recording feature.

The protection circuits and relays of transformer and reactor shall be electrically and physically segregated into two groups each being independent and capable of providing uninterrupted protection even in the event of one of the protection groups failing, to obtain redundancy, and to take protection systems out for maintenance while the equipment remains in service.

a) Transmission Lines Protection

765kV lines shall have Main-I numerical three zone distance protection scheme with carrier aided inter-tripping feature. 765kV lines shall also have Main-II numerical distance protection scheme like Main-I but from different make that of Main-I. The Main-I and Main-II protection relays of same make may be provided only if they are of different hardware & manufacturing platform or different principle of operation.

However, Line Current Differential relay (with back up distance protection feature) as Main–I and Main-II shall be considered at both ends for short lines (line length below 30kM) having Fibre Optic communication link. Differential relay at remote end shall be provided by the TSP. Associated power & control cabling and integration with SAS at remote end shall be provided by respective bay owner.

Further, all 765kV lines shall be provided with single and three phase auto-reclosing facility to allow reclosing of circuit breakers in case of transient faults. These lines shall also be provided with distance to fault locators to identify the location of fault on transmission lines.

All 765kV lines shall also be provided with two stages over voltage protection. Over voltage protection & distance to fault locator may be provided as in-built feature of Main-I & Main-II protection relays. Auto reclose as built in function of Bay Control Unit (BCU) is also acceptable.

The Main-I and Main-II protection relays shall be fed from separate DC sources and shall be mounted in separate panels.

For 765kV transmission lines, directional IDMT earth fault relay should be provided as standalone unit or in-built feature of Main-I and Main -II feature.

b) 765kV Reactor Protection

Reactor shall be provided with the following protections:

i) Numerical Differential protection.

ii) Numerical Restricted earth fault protection

iii) Numerical Back-up impedance protection

Besides these, reactors shall also be provided with Buchholz relay, MOG with low oil level alarm, protection against oil and winding temperatures & pressure relief device, etc.

c) Bus bar Protection

The high speed low impedance type bus bar differential protection, which is essential to minimize the damage and maintain system stability at the time of bus bar faults, shall be provided for 765kV buses. Duplicated bus bar protection is envisaged for 765kV bus-bar protection. Bus bar protection scheme shall be such that it operates selectively for each bus and incorporate necessary features required for ensuring security. The scheme shall have complete bus bar protection for present as well as future bays envisaged i.e. input / output modules for future bays shall also be provided.

In case, the bus section is provided, then each side of bus section shall have separate set of bus bar protection schemes.

For existing substations, the existing bus bar protection shall be augmented as per requirement.

d) Local Breaker Back up Protection

This shall be provided for each 765kV circuit breakers and will be connected to de-energize the affected stuck breaker from both sides.

Notes:

1. LBB & REF relays shall be provided separately from transformer differential relay.
2. LBB relay may also be provided as built-in protection function of distributed bus bar protection scheme; however, in such case separate LBB relay shall be provided for tie bays (in case of One and Half breaker scheme).
3. Over fluxing & overload protection can be provided as built-in feature of differential relay.
4. In 765kV switchyard, if spare bay of half diameter is identified as future, Tie CB relay panel shall be with Auto-reclosure feature.

B.2.5 Substation Automation System

a) For all the new substations, state of art Substation Automation System (SAS) conforming to IEC-61850 shall be provided. The distributed architecture shall be used for Substation Automation system, where the controls shall be provided through Bay control units. The Bay control unit is to be provided bay wise for voltage level 220kV and above. All bay control units as well as protection units are normally connected through an Optical fibre high speed network. The control and monitoring of circuit breaker, dis-connector, re-setting of relays etc. can be done from Human Machine Interface (HMI) from the control room.

The functions of control, annunciation, disturbance recording, event logging and measurement of electrical parameters shall be integrated in Substation Automation System.

At new substations, the Substation Automation System (SAS) shall be suitable for operation and monitoring of the complete substation including proposed future bays/elements.

In existing substations with Substation automation system (SAS), augmentation of existing SAS shall be done for bays under present scope.

In existing Substations where Substation automation is not provided, control functions shall be done through control panels.

Necessary gateway & modems (as required) shall be provided to send data to RLDC/SLDC as per their requirement. Any augmentation work at RLDC/SLDC is excluded from TSP's scope. However, all the configuration work at substation end required to send data to RLDC/SLDC shall be in the scope of TSP.

b) **Time synchronisation equipment**

Time synchronization equipment complete in all respect including antenna, cable, processing equipment required to receive time signal through GPS or from National Physical Laboratory (NPL) through INSAT shall be provided at new substations. This equipment shall be used to synchronize SAS & IEDs etc.

B.3.0 Substation Support facilities

Certain facilities required for operation & maintenance of substations as described below shall be provided at new substation. In existing substation, these facilities have already been provided and would be extended/ augmented as per requirement.

B.3.1 AC & DC power supplies

For catering the requirements of three phase & single phase AC supply and DC supply for various substation equipment, existing facilities shall be augmented as required.

B.3.2 Fire Fighting System

Fire-fighting system for substation including transformer & reactor shall conform to CEA (Measures Relating to Safety & Electric Supply) Regulations.

Further, adequate water hydrants and portable fire extinguishers shall be provided in the substations. The main header of firefighting system shall be suitable for extension to bays covered under the future scope; necessary piping interface in this regard shall be provided.

At existing substations, the fire-fighting systems as available shall be extended to meet the additional requirements.

B.3.3 Oil evacuating, filtering, testing & filling apparatus

To monitor the quality of oil for satisfactory performance of transformers, shunt reactors and for periodical maintenance necessary oil evacuating, filtering, testing and filling apparatus would be provided at new substations. Oil storage tanks of adequate capacities for storage of transformer oil would be provided.

B.3.4 Illumination

Normal & emergency AC & DC illumination shall be provided adequately in the switchyard panel room & other buildings of the substation. The switchyard shall also be provided with adequate illumination.

Lighting of the entire switchyard panel room building and other building (if any) and switchyard shall be done by LED based low power consumption luminaries.

B.3.5 Control Room

For new substation, substation control room shall be provided to house substation work stations for station level control (SAS) alongwith its peripheral and recording equipment, AC & DC distribution boards, DC batteries & associated battery chargers, Fire Protection panels, Telecommunication panels & other panels as per requirements. Air conditioning shall be provided in the building as functional requirements. Main cable trenches from the control room shall have adequate space provision for laying of cables from control room for all the future bays also.

At existing substations, the adequacy of size of control room shall be ascertained and the same shall be augmented as per requirement.

B.3.7 Control Concept

All the EHV circuit breakers in substation/switching stations shall be controlled and synchronized from the switchyard control room/remote control center. Each breaker would have two sets of trip circuits which would be connected to separate DC supplies for greater reliability. All the isolators shall have control from remote/local whereas the earth switches shall have local control only.

B.3.8 Visual monitoring system (VMS) for watch and ward of substation premises:

Visual monitoring system for effective watch and ward of substation premises shall cover all the transformers and reactors, all other major AIS Equipment (such as CB, isolators, CT, CVT, SA etc. as applicable), GIS bays, panel room, all the gates of switchyard and all entry and exit points of control room building and accordingly the location of cameras shall be decided. The camera shall be high definition color CCD camera with night vision feature. The VMS data partly/completely shall be recorded (minimum for 15 days) at least @25fps (or better) and stored on network video recorder. The system shall use video signals from various cameras installed at different locations, process them for viewing on workstations/monitors in the control room and simultaneously record all the cameras.

Mouse/keyboard controllers shall be used for pan, tilt, zoom and other functions of the desired camera. The Visual Monitoring System shall have provision of WAN connectivity for remote monitoring.

All camera recordings shall have Camera ID & location/area of recording as well as date/time stamp. The equipment should generally conform to Electromagnetic compatibility requirement for outdoor equipment in EHV substation.

At existing substations, the visual monitoring system if available shall be augmented as per existing or better specification as required.

B.4.0 General Facilities

a) Line Gantry/Towers are envisaged for bays under present scope only. However, for adjacent future line bay, tower shall be designed for extension (considering Quad conductors for 765kV & 400kV future lines and Twin conductor for 220 kV future lines) wherever applicable.

b) Bay extension works at existing substation shall be executed by TSP in accordance with the requirement/provisions mentioned above. However, interface points shall be considered keeping in view the existing design/arrangement at the substation.

c) TSP has to arrange for construction power and water on its own.

d) All outdoor steel structures including anchor/foundation bolts shall be fully galvanized. The weight of the zinc coating shall be at least 610 gm/sq.m and 900 gm/sq.m for coastal/ creek regions (if applicable).

e) In 765kV switchyard, if spare bay of half diameter is identified as future, all the equipment for Tie & Future bay shall be designed considering the current rating of line bay i.e. 3150A.

B.5.0 EXTENSION OF EXISTING SUBSTATION

The following drawings/details of existing substation is attached with the RFP documents for further engineering by the bidder.

Sl. No.	Drawing Title	Drawing No./Details	Rev. No.
A.	**765kV Fatehgarh-3 s/s**		
1.0	Single Line Diagram	Yet to be finalized by the developer.	
2.0	General Arrangement		
3.0	Earthmat Layout		
4.0	Visual Monitoring System		
5.0	Bus Bar Protection (765kV System)		
6.0	Substation Automation System (SAS)		
B.	**765kV Beawar s/s**		
1.0	Single Line Diagram	Developer yet to be finalized by BPC. Drawings shall be provided to TSP later once these drawings are finalized by the developer of 765kV Beawar s/s.	
2.0	General Arrangement		
3.0	Earthmat Layout		
4.0	Visual Monitoring System		
5.0	Bus Bar Protection (765kV System)		
6.0	Substation Automation System (SAS)		

Bidder is also advised to visit the substation sites and acquaint themselves with the topography, infrastructure such as requirement of roads, cable trench, drainage etc. and also the design philosophy.

SPECIFIC TECHNICAL REQUIREMENTS FOR COMMUNICATION

The communication requirement shall be in accordance to CEA (Technical Standards for Communication System in Power System Operations) Regulations, 2020, CERC (Communication System for inter-State transmission of electricity) Regulations, 2017, and CEA (Cyber Security in Power Sector) Guidelines, 2021, all above documents as amended from time to time. The Protections for transmission line and the line compensating equipment shall have hundred percent back up communication channels i.e. two channels for tele- protection in addition to one channel for speech plus data for each direction.

In order to meet the requirement for grid management and operation of substations, Transmission Service Provider (TSP) shall provide following requirements:

C.1.0 Fatehgarh-3 – Beawar 765kV D/c (2nd) line:

On Fatehgarh-3 – Beawar 765kV D/c (2nd) line, TSP shall supply, install & commission One (1) no. OPGW cable containing 24 Fibres (24F) on one E/W peak and conventional earth wire on other E/W peak.

The TSP shall install this OPGW from gantry of Fatehgarh-3 up to the gantry of Beawar S/s with all associated hardware including Vibration Dampers, mid-way & gantry Joint Boxes (called **OPGW Hardware** hereafter) and finally terminate in Joint Boxes at ends Substations. The transmission line length is 380 kms (approx.) where requirement of **repeater/s** is envisaged. TSP shall finalize the location of repeater station depending upon the actual site conditions. Further TSP shall comply to the requirements mentioned as per **Appendix-A**.

Maintenance of OPGW Cable & OPGW Hardware shall be responsibility of TSP.

C.2.0 2 no. of 765 kV line bays at Fatehgarh-3 for Fatehgarh-3 – Beawar 765kV D/c (2nd) line:

i. TSP shall supply, install & commission 1 no. FODP (96 F) alongwith panel and required Approach Cable (24F) with all associated hardware fittings from gantry tower to Bay Kiosk and from the Bay Kiosk to Control room.

ii. TSP shall supply, install & commission One STM-16 (FOTE) equipment alongwith panel/s supporting minimum three (3) directions with MSP (Multiplex Section Protection – 1+1) with necessary interfaces to meet the voice and data communication requirement between Fatehgarh-3 & Beawar S/s. The suitable DC Power Supply and backup to be provided for communication equipment.

iii. FOTE/FODP panel shall be installed in the new Bay Kiosk (Switchyard Panel Room (SPR)). The FOTE under present scope shall be integrated by TSP with the existing FOTE at control room of **Fatehgarh-3** which is communicating / to be communicated with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing FOTE/FODP panels in control room for integration with the existing FOTE for onwards data transmission.

In case spare optical direction is not available in the existing FOTE at the control room, the TSP shall coordinate with station owner to reconfigure the directions in existing FOTE at control room. Alternatively, the TSP may integrate the FOTE under the present scope with FOTE in the nearby Kiosk connected to the control room (if available with spare direction). For this purpose, TSP shall provide necessary FODP sub rack / Splice trays/ Patch cords etc. and suitable optical interfaces/ equipment in the existing FOTE/FODP panels in another Kiosk (SPR).

iv. FOTE & FODP can be accommodated in same panel to optimize space.

v. The new communication equipment under the present scope shall be compatible for integration with existing regional level centralized NMS. The local configuration of the new communication equipment shall be the responsibility of TSP. The configuration work in the existing centralized NMS for integration of new Communication equipment shall be done by Regional ULDC Team, however all the necessary support in this regard shall be ensured by TSP.

vi. TSP shall supply, install & commission required no. of Phasor Measurement Units (PMUs) for all 400kV and above voltage line bays (under the scope of this project) at Fatehgarh-3 s/s and PMUs shall support latest IEEE C-37.118 protocols. These PMUs shall be provided with GPS clock and LAN switch and shall connect with LAN switch of control room with Fibre Optic cable. These PMUs shall be integrated with the existing PDC (Phasor Data Concentrator) located at respective RLDC. Configuration work in existing PDC at RLDC for new PMU integration is not in scope of TSP (shall be done by respective RLDC), however all the necessary support in this regard shall be ensured by TSP. TSP shall provide separate WAMS (PMU, switches etc.) required for extended bays at **Fatehgarh-3 s/s**.

vii. The maintenance of all the communication equipment including FOTE, FODP, approach cable, repeaters, PMUs, DCPS alongwith Battery Bank shall be the responsibility of TSP.

C.3.0 2 no. of 765 kV line bays at Beawar for Fatehgarh-3 – Beawar 765kV D/c (2nd) line

i. TSP shall supply, install & commission 1 no. FODP (96 F) alongwith panel and required Approach Cable (24F) with all associated hardware fittings from gantry tower to Bay Kiosk and from the Bay Kiosk to Control room.

ii. TSP shall supply, install & commission One STM-16 (FOTE) equipment alongwith panel/s supporting minimum three (3) directions with MSP (Multiplex Section Protection – 1+1) with necessary interfaces to meet the voice and data communication requirement between Fatehgarh-3 & Beawar S/s. The suitable DC Power Supply and backup to be provided for communication equipment.

iii. FOTE/FODP panel shall be installed in the new Bay Kiosk (Switchyard Panel Room (SPR)). The FOTE under present scope shall be integrated by TSP with the existing FOTE at control room of Beawar which is communicating / to be communicated with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing FOTE/FODP panels in control room for integration with the existing FOTE for onwards data transmission.

In case spare optical direction is not available in the existing FOTE at the control room, the TSP shall coordinate with station owner to reconfigure the directions in existing FOTE at control room. Alternatively, the TSP may integrate the FOTE under the present scope with FOTE in the nearby Kiosk connected to the control room (if available with spare direction). For this purpose, TSP shall provide necessary FODP sub rack / Splice trays/ Patch cords etc. and suitable optical interfaces/ equipment in the existing FOTE/FODP panels in another Kiosk (SPR).

iv. FOTE & FODP can be accommodated in same panel to optimize space.

v. The new communication equipment under the present scope shall be compatible for integration with existing regional level centralized NMS. The local configuration of the new communication equipment shall be the responsibility of TSP. The configuration work in the existing centralized NMS

for integration of new Communication equipment shall be done by Regional ULDC Team, however all the necessary support in this regard shall be ensured by TSP.

vi. TSP shall supply, install & commission required no. of Phasor Measurement Units (PMUs) for all 400kV and above voltage line bays (under the scope of this project) at Beawar s/s and PMUs shall support latest IEEE C-37.118 protocols. These PMUs shall be provided with GPS clock and LAN switch and shall connect with LAN switch of control room with Fibre Optic cable. These PMUs shall be integrated with the existing PDC (Phasor Data Concentrator) located at respective RLDC. Configuration work in existing PDC at RLDC for new PMU integration is not in scope of TSP (shall be done by respective RLDC), however all the necessary support in this regard shall be ensured by TSP. TSP shall provide separate WAMS (PMU, switches etc.) required for extended bays at Beawar s/s.

vii. The maintenance of all the communication equipment including FOTE, FODP, approach cable, repeaters, PMUs, DCPS along with Battery Bank shall be the responsibility of TSP.

C.4.0 PLCC& PABX:

Power line carrier communication (PLCC) equipment complete for tele-protection commands and data channels shall be provided on each transmission line. The PLCC equipment shall in brief include the following: -

- Coupling device, line traps, carrier terminals, protection couplers, HF cables, PABX (if applicable) and maintenance and testing instruments.
- At new substation, a telephone exchange (PABX) of 24 lines shall be provided at as means of effective communication among various buildings of the substation, remote end substations and with control centres (RLDC/SLDC) etc.
- Coupling devices shall be suitable for phase to phase coupling for 400kV Transmission lines. The pass band of coupling devices shall have sufficient margin for adding communication channel in future if required. Necessary protection devices for safety of personnel and low voltage part against power frequency voltages and transient over voltage shall also be provided.
- The line traps shall be broad band tuned suitable for blocking the complete range of carrier frequencies. Line Trap shall have necessary protective devices such as lightning arresters for the protection of tuning device. Decoupling network

consisting of line traps and coupling capacitors may also be required at certain substation in case of extreme frequency congestion.

- The carrier terminals shall be of single side-band (SSB) amplitude modulation (AM) type and shall have 4 kHz band width. PLCC Carrier terminals and Protection couplers shall be considered for both ends of the line.
- PLCC equipment for all the transmission lines covered under the scheme (consisting of one set of analog PLCC channel along with circuit protection coupler and one set of Digital protection coupler for both ends) shall be provided by TSP. CVT & Wave trap for all the line bays under present scope shall be provided by TSP.
- All other associated equipment like cabling, coupling device and HF cable shall also be provided by the TSP.
- 2 sets of 48 V battery banks for PLCC/ communication equipment shall be provided at each new Substation with at least 10 hour battery backup and extended backup, if required.

Repeater Requirements

- If the repeater location is finalized in the Control Room of a nearby substation, TSP shall provide 1 no. OPGW (48F) on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and 1 no. Approach Cable (48F) with all associated hardware fittings, to establish connectivity between crossing point of main transmission line up to the repeater equipment in substation control room.

  TSP shall co-ordinate for Space & DC power supply sharing for repeater equipment.TSP shall provide FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link.

OR

- If the repeater location is finalized in the nearby substation premises, the TSP shall identify the Space for repeater shelter in consultation with station owner. Further TSP shall provide 1 no. OPGW (48F) on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and 1 no. Approach Cable (48F) / UGFO (48F) with all associated hardware fittings, to establish connectivity between crossing point of main transmission line up to the substation where the repeater shelter is to be housed.

  TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link, reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems.

OR

- If the repeater location is finalized on land near the transmission tower. TSP shall make the provisions for Land at nearby tower for repeater shelter. Further TSP shall provide 1 no. Approach Cable (48F) / UGFO (48F) with all associated hardware fittings to establish connectivity up to the location of repeater shelter.

  TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link,

reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems

Maintenance of OPGW Cable and **OPGW Hardware**, repeater equipment & items associated with repeater shelter shall be responsibility of TSP.

Note: Existing Station owner/s to provide necessary support to integrate different equipment & applications of new extended bays with the existing substation e.g. Communication (through FOTE), PMUs, Voice etc. for smooth operation and monitoring of new added grid elements.

400kV shall be replaced with 765kV in the **Figure-A.1**

Proposed Communication for Transmission system for RFP for communication for Raj 20GW Ph-III Part-G

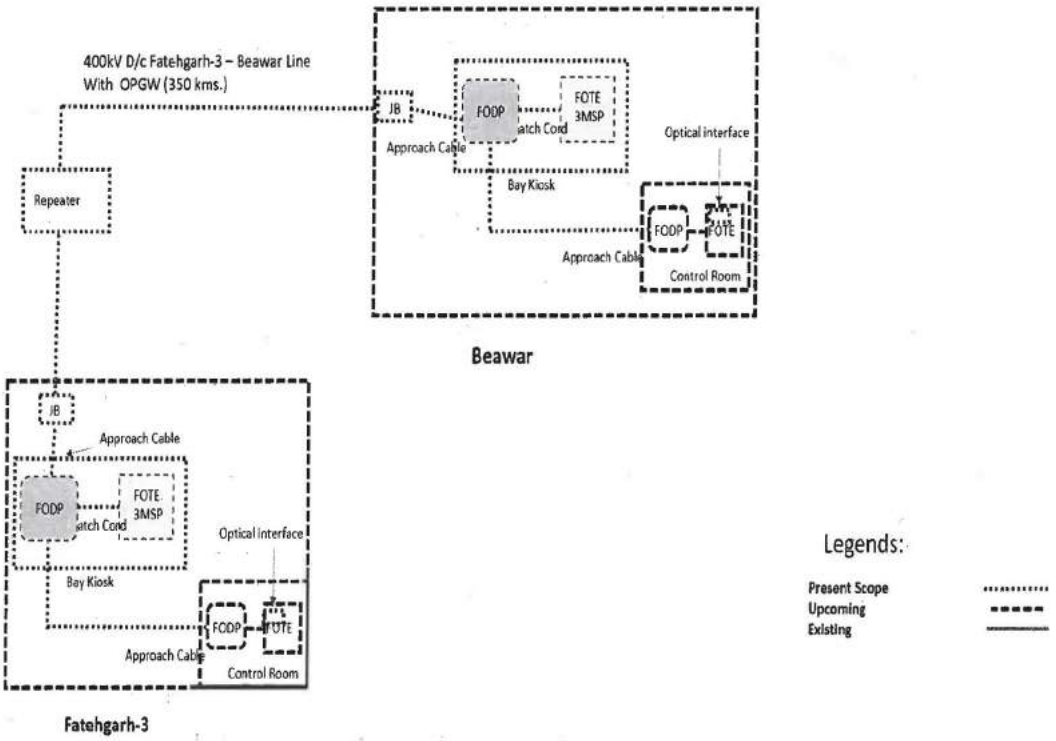

Figure-A.1

Schedule: 2

Scheduled COD

[Note: As referred to in the definition of "Element", "Scheduled COD", and in Articles 3.1.3 (c), 4.1 (b) and 4.3 (a) of this Agreement]

S. No.	Name of the Transmission Element	Scheduled COD in months from Effective Date	Percentage of Quoted Transmission Charges recoverable on Scheduled COD of the Element of the Project	Elements which are pre-required for declaring the commercial operation (COD) of the respective Element
1.	Fatehgarh-3– Beawar 765 kV D/c(2nd) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line	18 months	100%	All elements of scheme are required to be commissioned simultaneously as their utilization is dependent on commissioning of each other.
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3			

Note:

i. Developer of Fategarh-3 S/s to provide space for 2 nos. of 765 kV line bays at Fatehgarh-3 S/s along with space for 765 switchable line reactors.

ii. Developer of Beawar S/s to provide space for 2 nos. of /65 kV line bays at Beawar S/s along with space for 765kV switchable line reactors.

The payment of Transmission Charges for any Element, irrespective of its successful commissioning on or before its Scheduled COD, shall only be considered after successful commissioning of the Element(s), which are pre-required for declaring the commercial operation of such Element as mentioned in the above table.

Scheduled COD for the Project is: 18 months from Effective Date.

[Note: List of Element(s) along with the critical Element(s) to be provided by CEA]

Schedule: 3

Safety Rules and Procedures

[Note: As referred to in Articles 5.6 of this Agreement]

1: Site Regulations and Safety:

The TSP shall establish Site regulations within sixty (60) days from fulfilment of conditions subsequent, as per Prudent Utility Practices setting out the rules to be observed till expiry of the Agreement at the Site and shall comply therewith.

Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety of the Project, gate control, sanitation, medical care, and fire prevention, public health, environment protection, security of public life, etc.

Copies of such Site regulations shall be provided to the Nodal Agency and the CEA for the purpose of monitoring of the Project.

2: Emergency Work:

In cases of any emergency, the TSP shall carry out all necessary remedial work as may be necessary.

If the work done or caused to be done by any entity , other than the TSP, the TSP shall, reimburse the actual costs incurred, to the other Party carrying out such remedial works.

3: Site Clearance:

In the course of execution of the Agreement, the TSP shall keep the Site reasonably free from all unnecessary obstruction, storage, remove any surplus materials, clear away any wreckage, rubbish and temporary works from the Site, and remove any equipment no longer required for execution of the Agreement. After completion of all Elements of the Project, the TSP shall clear away and remove all wreckage, rubbish and debris of any kind from the Site, and shall leave the Site clean and safe.

4: Watching and Lighting:

The TSP shall provide and maintain at its own expense all lighting, fencing, and watching when and where necessary for the proper construction, operation, maintenance / repair of any of the Elements of the Project, or for the safety of the owners and occupiers of adjacent property and for the safety of the public, during such maintenance / repair.

Schedule: 4

Computation of Transmission Charges

1.1 General

The Monthly Transmission Charges to be paid to the TSP for providing Transmission Service for any Contract Year during the term of the Agreement shall be computed in accordance with this Schedule and paid as per Sharing Regulations.

Illustration regarding payment of Transmission Charges under various scenarios (considering definitions of Contract Year, Expiry Date & Monthly Transmission Charges above) is as below: -

Illustration-1: In case the Project Elements achieve COD as per Schedule

Quoted Transmission Charges: **Rs. 140 Million**

Completion Schedule:

Element No.	Completion Schedule in Months	Scheduled CoD of the Element	Actual CoD of the Element	% Charges recoverable on Scheduled CoD of the Element
Element 1	28	1-Feb-2018	1-Feb-2018	25%
Element 2	38	1-Dec-2018	1-Dec-2018	75%

Tariff Payable as follows:

Transmission Charges for Element 1			**Transmission Charges for Element 2**		
1-Feb-18 to 31-Mar-18	140 X 25% X ((28+31)/365)	5.65		--	0.00
1-Apr-18 to 30-Nov-18	140 X 25% X (244/365)	23.39		--	0.00
1-Dec-18 to 31-Mar-19	140 X 100% X (121/365)				46.41
2	140 X 100% X 1				140
3	140 X 100% X 1				140
4	140 X 100% X 1				140
5	140 X 100% X 1				140
.....					
.....					
36 (1-Apr to 30-Nov)	140 X 100% X (244/365)				93.59

Illustration-2: In case of extension of Scheduled COD as per Article 4.4.1 & 4.4.2 of this Agreement

Quoted Transmission Charges: **Rs. 140 Million**

Completion Schedule:

Element No.	Completion Schedule in Months	Scheduled CoD of the Element	Actual CoD of the Element	% Charges recoverable on Scheduled CoD of the Element
Element 1	20	1-Feb-2018	1-Jul-2018	25%
Element 2	28	1-Oct-2018	1-Dec-2018	75%

Tariff Payable as follows:

Transmission Charges for Element 1			Transmission Charges for Element 2		
1-Feb-18 to 31-Mar-18	--	0.00		--	0.00
1-Apr-18 to 30-Jun-18	--	0.00		--	0.00
1-Jul-18 to 30-Nov-18	140 X 25% X (153/365)	14.67		--	0.00
1-Dec-18 to 31-Mar-19	140 X 100% X (121/365)				46.41
2	140 X 100% X 1				140
3	140 X 100% X 1				140
4	140 X 100% X 1				140
5	140 X 100% X 1				140
.....					
.....					
36 (1-Apr to 30-Nov)	140 X 100% X (244/365)				93.59

Illustration-3: In case of delay in achieving COD of Project & all individual Elements (COD of the Project achieved in Contract Year 1)

Quoted Transmission Charges: **Rs. 140 Million**

Completion Schedule:

Element No.	Completion Schedule in Months	Scheduled CoD of the Element	Actual CoD of the Element	% Charges recoverable on Scheduled CoD of the Element
Element 1	20	1-Feb-2018	1-Dec-2018	25%
Element 2	28	1-Oct-2018	1-Dec-2018	75%

Tariff Payable as follows:

Transmission Charges for Element 1			**Transmission Charges for Element 2**		
1-Feb-18 to 31-Mar-18	--	0.00		--	0.00
1-Apr-18 to 30-Sept-18	--	0.00		--	0.00
1-Oct-18 to 30-Nov-18	--	0.00	1-Oct-18 to 30-Nov-18	--	0.00
1-Dec-18 to 31-Mar-19	140 X 100% X (121/365)				46.41
2	140 X 100% X 1				140
3	140 X 100% X 1				140
4	140 X 100% X 1				140
5	140 X 100% X 1				140
.....					
.....					
36 (1-Apr to 30-Nov)	140 X 100% X (244/365)				93.59

FATEHGARH III BEAWAR TRANSMISSION LTD. NEW DELHI

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Illustration-4: In case of delay in achieving COD of Project & all individual Elements (COD of the Project achieved in Contract Year other than Contact Year 1)

Quoted Transmission Charges: **Rs. 140 Million**

Completion Schedule:

Element No.	Completion Schedule in Months	Scheduled CoD of the Element	Actual CoD of the Element	% Charges recoverable on Scheduled CoD of the Element
Element 1	38	1-Oct-2019	1-May-2020	25%
Element 2	38	1-Oct-2019	1-May-2020	75%

Tariff Payment to be paid as:

Transmission Charges for Element 1			**Transmission Charges for Element 2**		
1-Oct-19 to 31-Mar-20	--	0.00	1-Oct-19 to 31-Mar-20	--	0.00
1-Apr-20 to 30-Apr-20	-	0.00	1-Apr-20 to 30-Apr-20	-	0.00
1-May-20 to 31-Mar-21	140 X 100% X (335/365)				128.49
2	140 X 100% X 1				140
3	140 X 100% X 1				140
4	140 X 100% X 1				140
5	140 X 100% X 1				140
.....					
.....					
36 (1-Apr to 30-Apr)	140 X 100% X (30/ 365)				11.51

Illustration5: In case of delay in achieving COD of Element but Project COD achieved on time

Quoted Transmission Charges: **Rs. 140 Million**

Completion Schedule:

Element No.	Completion Schedule in Months	Scheduled CoD of the Element	Actual CoD of the Element	% Charges recoverable on Scheduled CoD of the Element
Element 1	20	1-Feb-2018	1-Jul-2018	25%
Element 2	30	1-Dec-2018	1-Dec-2018	75%

Tariff Payable as follows:

Transmission Charges for Element 1			Transmission Charges for Element 2		
1-Feb-18 to 31-Mar-18	--	0.00		--	0.00
1-Apr-18 to 30-Jun-18	--	0.00		--	0.00
1-Jul-18 to 30-Nov-18	140 X 25% X (153/365)	14.67		--	0.00
1-Dec-18 to 31-Mar-19	140 X 100% X (121/365)				46.41
2	140 X 100% X 1				140
3	140 X 100% X 1				140
4	140 X 100% X 1				140
5	140 X 100% X 1				140
.....					
.....					
36 (1-Apr to 30-Nov)	140 X 100% X (244/365)				93.59

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Illustration-6: In case of early commissioning of Project

Quoted Transmission Charges: **Rs. 140 Million**

Completion Schedule:

Element No.	Completion Schedule in Months	Scheduled CoD of the Element	Actual CoD of the Element	% Charges recoverable on Scheduled CoD of the Element
Element 1	38	1-Oct-2019	1-Jul-2019	25%
Element 2	38	1-Oct-2019	1-Jul-2019	75%

Tariff Payment to be paid as:

Transmission Charges for Element 1		Transmission Charges for Element 2
1-July-19 to 31-Mar-20	140 X 100% X (274/365)	105.09
2	140 X 100% X 1	140
3	140 X 100% X 1	140
4	140 X 100% X 1	140
5	140 X 100% X 1	140
.....		
.....		
36 (1-Apr to 30-Jun)	140 X 100% X (91/365)	34.91

Illustration-7: In case of early commissioning of an element

Quoted Transmission Charges: **Rs. 140 Million**
Completion Schedule:

Element No.	Completion Schedule in Months	Scheduled CoD of the Element	Actual CoD of the Element	% Charges recoverable on Scheduled CoD of the Element
Element 1	38	1-Oct-2019	1-Apr-2019	25%
Element 2	38	1-Jul-2019	1-Jul-2019	75%

Tariff Payment to be paid as:

Transmission Charges for Element 1			Transmission Charges for Element 2		
1-Apr-2019 to 30-Jun-19	140 X 25% X (91/365)	8.72	1-Apr-2019 to 30-Jun-19	--	0.00
1-July-19 to 31-Mar-20	140 X 100% X (274/ 365)				105.09
2	140 X 100% X 1				140
3	140 X 100% X 1				140
4	140 X 100% X 1				140
5	140 X 100% X 1				140
.....					
.....					
36 (1-Apr-30-Jun)	140 X 100% X (91/365)				34.91

The Transmission Charges shall be payable on monthly basis as computed above.

1.2 Computation of Monthly Transmission Charges

The Monthly Transmission Charges for any month m in a Contract Year n shall be calculated as below:

For AC System:

a. If Actual Transmission System Availability for the month m of contract year n is greater than or equal to 98% and less than or equal to 98.5%;

Monthly Transmission Charges MTC(m) = Tmn *1

a. If Actual Transmission System Availability for the month m of contract year n exceeds 98.5% and less than or equal to 99.75%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 98.5%)

c. If Actual Transmission System Availability for the month m of contract year n is greater than 99.75%;

Monthly Transmission Charges MTC(m) = Tmn * (99.75% / 98.5%)

d. If Actual Transmission System Availability for the month m of contract year n is less than 98%and greater than or equal to 95.00%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 98%)

e. If Actual Transmission System Availability for the month m of contract year falls below 95%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 98%) - 0.02 * (Tmn * (AA/ 95%)

For DC System:

a. If Actual Transmission System Availability for the month m of contract year n is greater than or equal to 95% and less than or equal to 96%;

Monthly Transmission Charges MTC(m) = Tmn *1

b. If Actual Transmission System Availability for the month m of contract year n exceeds 96% and less than or equal to 99.75%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 96%)

c. If Actual Transmission System Availability for the month m of contract year n is greater than 99.75%;

Monthly Transmission Charges MTC(m) = Tmn * (99.75% / 96%)

d. If Actual Transmission System Availability for the month m of contract year n is less than 95% and greater than or equal to 92.00%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 95%)

e. If Actual Transmission System Availability for the month m of contract year falls below 92%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 95%) - 0.02 * (Tmn * (AA/ 92%)

where:

- AA is the actual Availability, as certified by RPC, as per procedure provided in Schedule 6.
- m is the month in Contract Year 'n'
- Tmn= Transmission Charges for the month 'm' in Contract Year 'n' = (=Transmission Charge/ no. of days in the Year n)* no. of days in month m

Provided, no Transmission Charges shall be paid during the period for which the RLDC has not allowed the operation of the Element/Project due to the failure of the TSP to operate it as per the provisions of the Grid Code.

1.3 RLDC Fee & Charges

The payment of RLDC fee & charges, in accordance with relevant regulations of CERC, shall be the responsibility of the TSP.

FATEHGARH III BEAWAR TRANSMISSION LTD. NEW DELHI

Central Transmission Utility of India Ltd. Gurugram

Schedule: 5

Quoted Transmission Charges

[Quoted Transmission Charges from Annexure - 21 of the RFP of the Selected Bidder to be inserted here]

[To be incorporated from the Bid of the Selected Bidder submitted during the e-reverse auction after its selection]

Quoted Transmission Charges: Rs. 1357.57 Million

Proportionate Transmission Charges payable for each Element of the Project:

S. No.	Name of the Transmission Element	Percentage of Quoted Transmission Charges recoverable on Scheduled COD of the Element of the Project
1.	Fatehgarh-3– Beawar 765 kV D/c(2nd) along with 330 MVAr Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line	100%
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3	

Schedule: 6

Appendix –II of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 as amended from time to time

Procedure for Calculation of Transmission System Availability Factor for a Month

1. Transmission system availability factor for nth calendar month ("TAFPn") shall be calculated by the respective transmission licensee, got verified by the concerned Regional Load Dispatch Centre (RLDC) and certified by the Member-Secretary, Regional Power Committee of the region concerned, separately for each AC and HVDC transmission system and grouped according to sharing of transmission charges. In case of AC system, transmission System Availability shall be calculated separately for each Regional Transmission System and inter-regional transmission system. In case of HVDC system, transmission System Availability shall be calculated on consolidate basis for all inter-state HVDC system.

2. Transmission system availability factor for nth calendar month ("TAFPn") shall be calculated by consider following:

   i) **AC transmission lines:** Each circuit of AC transmission line shall be considered as one element;

   ii) **Inter-Connecting Transformers (ICTs):** Each ICT bank (three single phase transformer together) shall form one element;

   iii) **Static VAR Compensator (SVC):** SVC along with SVC transformer shall form one element;

   iv) **Bus Reactors or Switchable line reactors:** Each Bus Reactors or Switchable line reactors shall be considered as one element;

   v) **HVDC Bi-pole links:** Each pole of HVDC link along with associated equipment at both ends shall be considered as one element;

   vi) **HVDC back-to-back station:** Each block of HVDC back-to-back station shall be considered as one element. If associated AC line (necessary for transfer of inter- regional power through HVDC back-to-back station) is not available, the HVDC back-to-back station block shall also be considered as unavailable;

   vii) **Static Synchronous Compensation ("STATCOM"):** Each STATCOM shall be considered as separate element.

3. The Availability of AC and HVDC portion of Transmission system shall be calculated by considering each category of transmission elements as under:

TAFMn (in %) for AC system:

$$= \frac{o \times AVo)+(p \times AVp) + (q \times AVq) + (r \times AVr)+(u \times AVu)}{(o + p + q + r+u)} \times 100$$

Where,

o	=	Total number of AC lines.
AVo	=	Availability of o number of AC lines.
p	=	Total number of bus reactors/switchable line reactors
AVp	=	Availability of p number of bus reactors/switchable line reactors
q	=	Total number of ICTs.
AVq	=	Availability of q number of ICTs.
r	=	Total number of SVCs.
AVr	=	Availability of r number of SVCs
u	=	Total number of STATCOM.
AVu	=	Availability of u number of STATCOMs

TAFMn (in %) for HVDC System:

$$= \frac{\sum_{x=1}^{s} Cxbp(act) \times AVxbp + \sum_{y=1}^{t} Cy(act)btb \times AVybtb}{\sum_{x=1}^{s} Cxbp + \sum_{y=1}^{t} Cybtb} \times 100$$

Where

Cxbp(act)	=	Total actual operated capacity of x^{th} HVDC pole
Cxbp	=	Total rated capacity of x^{th} HVDC pole
AVxbp	=	Availability of x^{th} HVDC pole
Cybtb(act)	=	Total actual operated capacity of y^{th} HVDC back-to-back station block
Cybtb	=	Total rated capacity of y^{th} HVDC back-to-back station block
AVybtb	=	Availability of y^{th} HVDC back-to-back station block
s	=	Total no of HVDC poles
t	=	Total no of HVDC Back to Back blocks

4. The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category. The formulae for calculation of Availability of each category of the transmission elements are as per **Appendix-III**. The weightage

factor for each category of transmission elements shall be considered as under:

(a) For each circuit of AC line – Number of sub-conductors in the line multiplied by ckt-km;
(b) For each HVDC pole- The rated MW capacity x ckt-km;
(c) For each ICT bank – The rated MVA capacity;
(d) For SVC- The rated MVAR capacity (inductive and capacitive);
(e) For Bus Reactor/switchable line reactors – The rated MVAR capacity;
(f) For HVDC back-to-back station connecting two Regional grids- Rated MW capacity of each block; and
(g) For STATCOM – Total rated MVAR Capacity.

5. The transmission elements under outage due to following reasons shall be deemed to be available:

i. Shut down availed for maintenance of another transmission scheme or construction of new element or renovation/ upgradation/ additional capitalization in existing system approved by the Commission. If the other transmission scheme belongs to the transmission licensee, the Member Secretary, RPC may restrict the deemed availability period to that considered reasonable by him for the work involved. In case of dispute regarding deemed availability, the matter may be referred to Chairperson, CEA within 30days.

ii. Switching off of a transmission line to restrict over voltage and manual tripping of switched reactors as per the directions of concerned RLDC.

6. For the following contingencies, outage period of transmission elements, as certified by the Member Secretary, RPC, shall be excluded from the total time of the element under period of consideration for the following contingencies:

i) Outage of elements due to acts of God and force majeure events beyond the control of the transmission licensee. However, whether the same outage is due to force majeure (not design failure) will be verified by the Member Secretary, RPC.A reasonable restoration time for the element shall be considered by Member Secretary, RPC and any additional time taken by the transmission licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the transmission licensee. Member Secretary, RPC may consult the transmission licensee or any expert for estimation of reasonable restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available;

ii) Outage caused by grid incident/disturbance not attributable to the transmission licensee, e.g. faults in substation or bays owned by other agency causing outage of the transmission licensee's elements, and tripping of lines,

ICTs, HVDC, etc. due to grid disturbance. However, if the element is not restored on receipt of direction from RLDC while normalizing the system following grid incident/disturbance within reasonable time, the element will be considered not available for the period of outage after issuance of RLDC's direction for restoration;

Provided that in case of any disagreement with the transmission licensee regarding reason for outage, same may be referred to Chairperson, CEA within 30 days. The above need to be resolved within two months:

Provided further that where there is a difficulty or delay beyond sixty days, from the incidence in finalizing the recommendation, the Member Secretary of concerned RPC shall allow the outage hours on provisional basis till the final view.

7. Time frame for certification of transmission system availability: (1) Following schedule shall be followed for certification of availability by Member Secretary of concerned RPC:

- Submission of outage data by Transmission Licensees to RLDC/constituents – By 5th of the following month;
- Review of the outage data by RLDC / constituents and forward the same to respective RPC– by 20th of the month;
- Issue of availability certificate by respective RPC – by 3rd of the next month.

Appendix-III

FORMULAE FOR CALCULATION OF AVAILABILITY OF EACH CATEGORY OF TRANSMISSION ELEMENTS

For AC transmission system

AVo(Availability of o no. of AC lines) = $\frac{\sum_{i=1}^{o} Wi(Ti - TNAi)/Ti}{\sum_{i=1}^{o} Wi}$

AVq(Availability of q no. of ICTs) = $\frac{\sum_{k=1}^{q} Wk(Tk - TNAk)/Tk}{\sum_{k=1}^{q} Wk}$

AVr(Availability of r no. of SVCs) = $\frac{\sum_{l=1}^{r} Wl(Tl - TNAl)/Tl}{\sum_{l=1}^{r} Wl}$

AVp(Availability of p no. of Switched Bus reactors) = $\frac{\sum_{m=1}^{p} Wm(Tm - TNAm)/Tm}{\sum_{m=1}^{p} Wm}$

AVu(Availability of u no. of STATCOMs) = $\frac{\sum_{n=1}^{u} Wn(Tn - TNAn)/Tn}{\sum_{n=1}^{u} Wn}$

AV_{xbp}(Availability of an individual HVDC pole) = $\frac{(Tx - TN\quad)}{Tx}$

AV_{ybtb} (Availability of an individualHVDC Back-to-back Blocks) $= \frac{(Ty - TNAy)}{Ty}$

For HVDC transmission system

For the new HVDC commissioned but not completed twelve months;

For first 12 months: [(AV_{xbp} or AV_{ybtb})x95%/85%], subject to ceiling of 95%.

Where,

o	=	Total number of AC lines;
AVo	=	Availability of o number of AC lines;
p	=	Total number of bus reactors/switchable line reactors;
AVp	=	Availability of p number of bus reactors/switchable line reactors;
q	=	Total number of ICTs;
AVq	=	Availability of q number of ICTs;
r	=	Total number of SVCs;
AVr	=	Availability of r number of SVCs;.
U	=	Total number of STATCOM;

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Central Transmission Utility of India Ltd Gurugram

AVu	=	Availability of u number of STATCOMs;
Wi	=	Weightage factor for *i*th transmission line;
Wk	=	Weightage factor for *k*th ICT;
Wl	=	Weightage factors for inductive & capacitive operation of *l*th SVC;
Wm	=	Weightage factor for mth bus reactor;
Wn	=	Weightage factor for nth STATCOM.

Ti, , *Tk*, *Tl*, , - *Tm*, *Tn*, *Tx*, *Ty*	The total hours of i^{th} AC line, k^{th} ICT, l^{th} SVC, m^{th} Switched Bus Reactor & n^{th} STATCOM, x^{th} HVDC pole, y^{th} HVDC back-to-back blocks during the period under consideration (excluding time period for outages not attributable to transmission licensee for reasons given in Para 5of the procedure)
$T_{NA}i$, $T_{NA}k$ - $T_{NA}l$, $T_{NA}m$, $T_{NA}n$, $T_{NA}x$, $T_{NA}y$	The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per Para 5 of the procedure) for i^{th} AC line, k^{th} ICT, l^{th} SVC , m^{th} Switched Bus Reactor, n^{th} STATCOM, x^{th} HVDC pole and y^{th}HVDC back-to-back block .

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Schedule: 7

Entire Bid (both financial bid and technical bid) of the Selected Bidder to be attached here

Attached at Annexure - 1.

Schedule: 8

Contract Performance Guarantee

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign entities submitting Bids are required to follow the applicable law in their country.)

In consideration of the .....[Insert name of the SPV or Selected Bidder on behalf of the TSP, or Lead Member in case of the Consortium, with address] agreeing to undertake the obligations under the Transmission Service Agreement dated .....and the other RFP Project Documents and the Nodal Agency and the .....[Insert the name of the BPC], agreeing to execute the *RFP Project Documents* with the Selected Bidder, regarding setting up the Project, the ..... [Insert name and address of the bank issuing the guarantee and address of the head office] (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to ..... (being the Nodal Agency) at .....[Insert the Place from the address of the Nodal Agency indicated in the TSA] forthwith on demand in writing from the Nodal Agency or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees ..... Crores (Rs. .....) only [Insert the amount of the bank guarantee] on behalf of M/s. ..... [Insert name of the Selected Bidder or SPV].

This guarantee shall be valid and binding on the Guarantor Bank up to and including .....and shall not be terminable by notice or any change in the constitution of the Bank or the term of the Transmission Service Agreement or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs. ..... Crores (Rs. .....) only. Our Guarantee shall remain in force until ..... [Insert the date of validity of the Guarantee as per Article 3.1.2 of this Agreement]. The Nodal Agency, shall be entitled to invoke this Guarantee up to three hundred sixty five (365) days of the last date of the validity of this Guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from ..... (in its roles as the Nodal Agency), made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to Nodal Agency.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by ..... [Insert name of the Selected Bidder], ... [Insert name of the TSP] and / or any other person. The Guarantor Bank shall not require Nodal Agency to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against Nodal Agency in respect of any payment made hereunder.

THIS BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

THIS BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

THIS BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly Nodal Agency shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against ..... [Insert name of the SPV] or the Selected Bidder, as the case may be, to make any claim against or any demand on ..... [Insert name of the SPV] or the Selected Bidder, as the case may be, or to give any notice to ..... [Insert name of the SPV] or the Selected Bidder, as the case may be, or to enforce any security held by the Nodal Agency or to exercise, levy or enforce any distress, diligence or other process against ..... [Insert name of the SPV] or the Selected Bidder, as the case may be.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to Nodal Agency and may be assigned, in whole or in part, (whether absolutely or by way of security) by Nodal Agency to any entity to whom the Nodal Agency is entitled to assign its rights and obligations under the Transmission Service Agreement.

The Guarantor Bank hereby agrees and acknowledges that Nodal Agency shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. ..... Crores (Rs. .....) only and it shall remain in force until .....[Date to be inserted on the basis of Article 3.1.2 of the Transmission Service Agreement], with an additional claim period of three hundred sixty five (365) days thereafter. This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by

..... [Insert name of the Selected Bidder or Lead Member in case of the Consortium or SPV]. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if Nodal Agency serves upon us a written claim or demand.

In witness where of:

Signature .....

Name: .....

Power of attorney No.: .....

For:

..... [Insert Name of the Bank]

Banker's Seal and Full Address, including mailing address of the Head Office

Schedule: 9

Methodology for determining the Relief Under Force Majeure Event & Change in Law during Construction Period

The relief in the form of revision in tariff due to Force Majeure Event leading to extension of Scheduled COD for a period beyond one hundred eighty (180) days and/ or Change in Law during the construction period shall be as under:

$\Delta T = [(P \times d)] \div [1-(1+ d)^{(-n)}]$

Where,

ΔT = Change in Transmission Charges for each year

P = Sum of cumulative increase or decrease in the cost of the Project due to Change in Law and interest cost during construction corresponding to the period exceeding one hundred eighty (180) due to Force Majeure Event leading to extension of Scheduled COD for a period beyond one hundred eighty (180) days

n = number of years over which the Transmission Charges has to be paid

d = Discount rate as notified by the CERC, applicable on the Bid Deadline

The increase in Transmission Charges as stated above shall be applicable only if the value of increase in Transmission Charges as calculated above exceeds 0.30% (zero point three percent) of the quoted Transmission Charges of the TSP.

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Central Transmission Utility of India Ltd. Gurugram

FORM-I

Application Form for Grant of Transmission licence

1. Particulars of the Applicant

I.	Name of the Applicant:	: Fatehgarh III Beawar Transmission Limited
II.	Status:	: Public Limited Company
III.	Address:	: DLF Cyberpark, Tower – B, 9th Floor, Udyog Vihar, Phase-III, Sector 20, Gurugram – 122008.
IV.	Name, Designation & Address of the contact person	: Balaji Sivan : Authorized Signatory of the Applicant DLF Cyberpark, Tower – B, 9th Floor, Udyog Vihar, Phase-III, Sector 20, Gurugram-122008.
V.	Contact Tel. No.:	: -
VI.	Fax No.:	: -
VII.	Email ID:	: balaji.sivan@sterlite.com
VIII.	Place of Incorporation/ Registration	: Registrar of Companies, Delhi
	Year of Incorporation:	: 2022
IX.	Registration Following documents are to be enclosed:	

a. Certificate of registration:

b. Original Power of Attorney of the signatory to commit the Applicant or its promoter:

Fatehgarh III Beawar Transmission Limited

2. **Particulars of the Project for which licence is being sought:**

(a) Transmission Lines:

Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part G	
S. No.	**Name of the Transmission Element**
1.	Fatehgarh-3 – Beawar 765kV D/C (2nd) along with 330MVAR Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765kV D/C line • Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 nos. • 765 kV, 330 MVAR Switchable line reactor- 4 nos.
2.	2 nos. of 765kV line bays at both at Beawar & Fatehgarh-3 • 2 nos. of 765 kV line bays - 4 nos

(b) Sub-stations: -

(c) Commissioning schedule:

The target completion date for the Transmission works described in Point 2(a) above is 18 months from the effective date.

(d) Identified Long-term transmission customers of the Project: -

(Agreements or status of discussion on Agreements to be submitted along with application)

(e) Any other relevant information: -

3. Levelised transmission charges in case of project selected through the transparent process of competitive bidding and estimated completion cost of the project in other cases

(*The levelised transmission charges estimated cost should be indicated in INR, along with the base month and year in case of the estimated cost):*

Rs. 1357.57 million

4. In case applicant has been selected in accordance with the guidelines for competitive bidding, enclose:

a) Recommendation of selection by the Empowered Committee:

Fatehgarh-III Beawar Transmission Limited

b) Evaluation report made public by the Bid Process Coordinator:

5. List of documents enclosed: As mentioned in the Index

Date: 05.08.2023

Place: New Delhi

(Signature of the applicant or the person authorized)

Fatehgarh III Beawar Transmission Limited,
DLF Cyber Park Tower-B, 9th Floor, Udyog Vihar Phase-III, Sector-20,
Gurugram - 122008, Haryana India +91 0124 4562 000

///Sterlite Power

CERTIFIED TRUE COPY OF THE RESOLUTION PASSED IN THE MEETING OF THE BOARD OF DIRECTORS OF FATEHGARH III BEAWAR TRANSMISSION LIMITED ON TUESDAY, AUGUST 01, 2023

Authority for making petitions to Central Electricity Regulatory Commission ("CERC") and to deal on behalf of the Company

"RESOLVED FURTHER THAT Mr. Ashok Amrutlal Gandhi, Mr. Ankit Bharadwaj and Ms. Rachna Mohan, the directors of the Company, and Mr. Balaji Sivan Authorized Representative be and are hereby severally authorized to:

a) make an application / petition to CERC for grant of transmission license and adoption of tariff under Electricity Act, 2003 and Tariff Adoption, approval for creation of security and to execute all necessary applications, documents, undertakings in connection therewith and personally appear before CERC or any other related statutory authority as may be required;
b) file petitions before CERC from time to time on behalf of the Company;
c) appoint any consultant and lawyers for representing before CERC;
d) deal with Nodal Agency/ Central Transmission Utility of India Limited or any other statutory agency for the purpose of Transmission License and Tariff Adoption;
e) register and operate online account of the Company to be created on CERC Portal for e-filing of petitions; and
f) do all such acts, deeds, matters and things necessary to give effect to this resolution

for **Establishment of TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ IN RAJASTHAN (20GW) UNDER PHASE-III PART G** (hereinafter referred to as **"Project")** awarded to the Company by PFC Consulting Limited, the Bid Process Coordinator, appointed by the Ministry of Power.

RESOLVED FURTHER THAT certified true copy of this resolution be issued under the signatures of any one of the Directors of the Company."

For Fatehgarh III Beawar Transmission Limited

FATEHGARH III BEAWAR TRANSMISSION LTD ★ Director NEW DELHI

Ashok Amrutlal Gandhi
Director
DIN: 09851129
Address: 20-D, Neelkanth Apartments,
Plot No-46 I.P. Extension,
Patparganj, Shakarpur, East Delhi 110092

Date: 03-08-2023
Place: Gurugram

NOTARY
RAM PAL SINGH
DELHI
No. 16973
[illegible]-02-2025
GOVT. OF INDIA

04 AUG 2023

Sterlite Grid 19 Limited, DLF Cyber Park Tower-B, 9th Floor,
Udyog Vihar Phase-III, Sector-20, Gurugram-122008, Haryana India +91 0124 4562 000

Annexure-14 (Colly.)

Ref: - SPTL/2022-23/BA/Part-G/03 **Date: 01.04.2023**

To,

General Manager
PFC Consulting Limited
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi - 110001, India

Subject: Regarding acquisition of the SPV, signing of the Transmission Service Agreement ('**TSA**'), and submission of the Contract Performance Guarantee ('**CPG**') for the execution of "Transmission System for Evacuation of Power from REZ in Rajasthan (20GW) under Phase-III Part-G ("**Project"**)" in compliance with Request for Proposal ('**RFP**') dated Jan 19th, 2022

Reference:

1. Letter of Intent issued to Sterlite Grid 19 Limited ("**SGL 19**") by PFC Consulting Limited ('**PFCCL**') dated 03 Mar 2023
2. Our unconditional acceptance of Letter of Intent ('**LOI**') dated 10 Mar 2023
3. Request for initiation of due diligence process – E mail dated 10 Mar 2023 & 14 Mar 2023

Dear Sir,

This is in reference to RFP issued by PFCCL for the Project and subsequent issuance of LOI dated 03 Mar 2023 by M/s PFCCL to SGL 19 for declaration of the SGL 19 as the successful bidder.

We would like to state that we are keen for the acquisition of SPV and signing of the TSA as per terms & conditions of the RFP to expedite the execution process for the Project.

In reference to the above, we would like to request BPC to inform us the date of SPV acquisition & signing of TSA to enable us to initiate the financial, secretarial, and legal due diligence process for timely acquisition of the SPV.

Further the above date for signing of the TSA is also required for inclusion in the CPG and the said date is required by the bank for issuance of the CPG in favor of the Nodal Agency. The relevant clause from the format of CPG as provided in the RFP (Annexure 15) is as follows- *"In consideration of the …….. agreeing to undertake the obligations under the Transmission Service Agreement dated ……".*

We look forward to your kind and immediate response to the above.

Thanking You,

Yours Faithfully,
For Sterlite Grid 19 Limited,

Mayank Bhatnagar
(Authorized Signatory)

True Copy

Sterlite Grid 19 Limited
DLF Cyber City, Tower- B, 9th Floor, Udyog Vihar
Phase III, Sector-20, Gurugram-122008, Haryana

Ref. No.: SGL19/FM/2023/01 **Date:** 07.04.2023

To,

Sh. P.C Garg,
Chief Operating Officer (COO),
Central Transmission Utility of India (CTUIL),
"Saudamini", Plot No. 2, Sector-29,
Gurgaon, Haryana-122001.

Sub: Intimation of Force Majeure event on account of delay in execution of Transmission Service Agreement and subsequent delay in acquisition of SPV by Sterlite Grid 19 Limited.

Ref:

1. Request for Proposal (RfP) dated 19.01.2022
2. Letter of Intent (LoI) issued to Sterlite Grid 19 ("SGL19") by PFC Consulting Limited ("PFFCL") dated 03.03.2023
3. SGL19's unconditional acceptance of Letter of Intent dated 10.03.2023
4. Letter dated 01.04.2023 to PFC consulting Ltd. regarding acquisition of SPV.

Dear Sir,

1. This is in reference to the captioned subject matter and documents referred to hereinabove.

2. A special purpose vehicle **(SPV)** has been incorporated by BPC for the purposes of establishing the transmission system for *"Evacuation of Power from REZ in Rajasthan (20GW) under Phase-III – Part G"* (**Project**).

3. It is stated that PFFCL (**BPC**) has issued Letter of Intent **(LoI)** dated 03.03.2023 to Sterlite Grid 19 Limited **(Successful Bidder)**, after successfully winning the bid to build, own, operate and maintain the Project. Further, it is stated in the LoI to adhere to Clause 2.15.2 of the Request for Proposal (**RfP**) as per which**,** the Successful Bidder is required to acquire the 100% equity shareholding of SPV from the BPC within 10 days of issuance of the LoI. However, it is informed that even though Successful Bidder is ready and willing to acquire the SPV in accordance with the RfP, BPC has failed to facilitate the acquisition of the SPV by SGL19. Article 2.15.2 of the RfP is reproduced as follows:

   "2.15 Other Aspects
   ……..

   2.15.2. Within ten (10) days of the issue of the Letter of Intent, the Selected Bidder shall:

……..
……..

c) acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of SPV [which is under incorporation] from PFC Consulting Limited, who shall sell to the Selected Bidder, the equity shareholding of SPV [which is under incorporation], along with all its related assets and liabilities;

Stamp duties payable on purchase of one hundred percent (100%) of the equity shareholding of SPV [which is under incorporation], along with all its related assets and liabilities, shall also be borne by the Selected Bidder."

Copy of LoI dated 03.03.2023 is attached herewith as ***Annexure-I***.

4. Please note that the acquisition of SPV by the Successful Bidder has been delayed at the end of the BPC for almost a month now, for the reasons which are neither in control nor attributable to the Successful Bidder. On the other hand, the Successful Bidder is ready to comply with the conditions prescribed under the Bid Documents and LoI.

5. Further, this delay is adversely impacting the timely commencement of Project execution activities and constitutes a Force Majeure event under the provisions of the TSA. Though the TSA is not effective on the L1 bidder until the acquisition of SPV (as defined under the effective date clause of the TSA), being the L1 bidder and a prudent utility we are issuing the instant intimation under the TSA provided by the BPC. Furthermore, the delay in SPV acquisition might also have cost implications in terms of variation in land rates, commodity price variations and IDC increase or any liquidated damages due to any potential loss to the beneficiaries, which shall not be applicable on the Successful Bidder as it is not to be blamed for the said delay.

6. It is further stated that the Successful Bidder vide letter dated 01.04.2023 has already requested the BPC to intimate the date of acquisition of SPV and signing of TSA.

   Copy of letter dated 01.04.2023 from SGL 19 to BPC is attached herewith as ***Annexure-II.***

7. The Nodal Agency (CTUIL) is requested to promptly intervene and help expedite the signing of the TSA and transferring the SPV by all means necessary. It is hereby intimated that any bottling of power due to mismatch would not fasten any liability on SGL 19 or the SPV to pay any liquidated damages to CTUIL for up to one month and such further period until the SPV is successfully acquired by SGL19. Further no alternate arrangement shall be provided to beneficiaries for evacuation of its power beyond the SCOD for the total period of delay in acquisition of SPV.

8. SGL 19 has deployed and exhausted all measures to mitigate the above event. As on date of this notice the event has become critical for achieving the commissioning of the Project by its SCOD and if any further delay is caused, the commissioning of the Project cannot be achieved by the SCOD.

9. Although, Successful Bidder has been proactively making efforts to the best of its abilities to monitor, mitigate and control adverse effects of the aforesaid force majeure event, the exact impact of the present force majeure event cannot be ascertained or quantified until acquisition of SPV is achieved. Successful Bidder as a prudent utility practice is employing all efforts to mitigate adverse impact of force majeure event.

10. This may kindly be considered as a notice intimating Force Majeure and it is issued without prejudice to all legal rights, contentions and claims available with SGL19 under the applicable laws, regulations, rules and provisions of the TSA, if any.

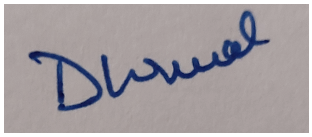
Thanking You,
Yours faithfully

For and on behalf of Sterlite Grid 19 Limited (SGL 19)

Balaji Sivan
Director – Policy and Regulatory

CC:

Sh. Sanjay Nayak (General Manager),
PFC Consulting Limited.
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi – 110001.



True Copy

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION, NEW DELHI.
PETITION NO._____ /TL/2023

IN THE MATTER OF:

Fatehgarh III Beawar Transmission Limited ...Petitioner

Versus

Central Transmission Utility of India Limited & Ors. ...Respondents

VAKALATNAMA

I/We, Fatehgarh III Beawar Transmission Limited, the Petitioner in the above Suit/Appeal/ Reference/Petition appoint and retain Mr. Gaurav Dudeja (D/1125/2009: Email: gaurav.dudeja@phoenixlegal.in :Mob:+91 9818833778), Mr. Dhruval Singh (UP/M/03243/2020 Email: dhruval.singh@phoenixlegal.in Mob: + 91 9099760530) Ms. Diya Dutta (D/4274/2022 Email diya.dutta@phoenixlegal.in +91 8800765832) and Phoenix Legal to act and appear for me/us in the above Suit/Appeal/Petition/Reference on my/our behalf to conduct and prosecute (or defend) he same and all proceedings that may be taken in respect of any Application connected with the same or any decree or other passed herein, to file and obtain return of documents, and to deposit and receive on my/our behalf in the said Suit/Appeal/Petition/Reference and in Application of Revenue and represent me/us and take all necessary steps on my/our behalf in the above matter. I/We agree to ratify all acts done by the aforesaid Advocate in pursuance of this authority.

ADVOCATES' WELFARE FUND STAMP 0264664 BAR COUNCIL OF DELHI DELHI ₹25 TWENTYFIVE RUPEES

₹2 NCT OF DELHI COURT FEE DLCT140480612250 14-SEP-2022

Fatehgarh III Beawar Transmission Limited

PETITIONER

MEMO OF APPEARANCE

Sir,

Please enter appearance on behalf of the Petitioner(s)/Appellant(s)/Respondent(s) in the above matter.

Dated this the 5th day of August, 2023

D/4274/2022 Dhruval UP/03243/2020

Gaurav Dudeja, Partner
Phoenix Legal
Advocates for Petitioner
Phoenix House, 254, 1st Floor,
Okhla Industrial Estate, Phase- III,
New Delhi- 110020

Fatehgarh III Beawar Transmission Limited

PETITIONER