LAKADIA II POWER TRANSMISSION LIMITED

(A 100% wholly owned subsidiary of Power Grid Corporation of India Limited)

B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi – 110 016

CIN : U42202DL2026GOI466344

Ref: PG_ LIIPTL/TL/ **Dated: 19.10.2026**

To,

The Secretary,
Central Electricity Regulatory Commission,
7th Floor, Tower B, World Trade Centre,
Nauroji Nagar, New Delhi-110029

Sub: **Petition under Section 14 & 15 of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2024 with respect to Transmission License to Lakadia II Power Transmission Limited (a 100% wholly owned subsidiary of Power Grid Corporation of India Limited)**

Sir,

Three copies (1 original + 2 copies) of the petition for the above subject matter have been enclosed and e-filing has been done on CERC website. As per the public notice issued on 28.08.2010 by the Hon'ble Commission, the amount of Rs.1,00,000/- (Rupees One Lakh only) for filing the petition is being paid through RTGS and in accordance with the Regulations 12(2), Payment of Fees Regulations 2012. Form-1 duly filled in against the aforementioned petition is also enclosed herewith.

Electronic Copies of the petition are being forwarded to the CTUIL (Nodal Agency) and to the Bid Process Coordinator and DICs & beneficiaries of the Western Region as party to the Petition based on the list of the beneficiaries furnished by the CTUIL. The complete petition along with Annexures is posted on the website: **www.powergrid.in/subsidiaries**.

Thanking You,

Yours faithfully,

Haresh Uttamlal Patel
Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 19:59:10 +05'30'

(Haresh Uttamlal Patel)
Project In-charge
Lakadia II Power Transmission Limited
Email : regulatory@powergrid.in

Enclosures: As above.

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO. :……..…….

IN THE MATTER OF:-

Petition under Section 14 & 15 of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2024 with respect to Transmission License to Lakadia II Power Transmission Limited (a 100% wholly owned subsidiary of Power Grid Corporation of India Limited)

Lakadia II Power Transmission Limited
(A 100% wholly owned subsidiary of Power Grid Corporation of India Limited)
Registered office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016
Address for correspondence: C/o ED (Commercial & RC), Power Grid Corporation of India Limited, Floor No. 02, Tower-01, IRCON International Tower, Plot No. 16, Institutional Area, Sector-32, Gurgaon-122003 …..**PETITIONER**

VERSUS

Central Transmission Utility of India Limited,
Floor No. 02, Tower-01, IRCON International Tower,
Plot No. 16, Institutional Area, Sector-32,
Gurgaon-122003
& Ors. ....**RESPONDENTS**

Haresh Uttamlal Patel
Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 19:59:48 +05'30'

(Haresh Uttamlal Patel)
Project In-charge
Lakadia II Power Transmission Limited

Place: Gurugram

Date: 19.10.2026

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION

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FILED BY

Haresh Uttamlal Patel

Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 20:00:25 +05'30'

(Haresh Uttamlal Patel)
Project In-charge
Lakadia II Power Transmission Limited

Place: Gurugram

Date: 19.10.2026

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION

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MEMO OF AUTHORISATION

Lakadia II Power Transmission Limited ….. PETITIONER

I, Haresh Uttamlal Patel, the Petitioner abovenamed do hereby nominate, appoint and constitute, to act, plead and appear on my/our behalf in the aforesaid matter.

1. Haresh Uttamlal Patel, Project In-charge
2. A Jagannath Rao, Chief General Manager
3. Ashish Agrawal, Sr Dy General Manager
4. Prashant Kumar, Dy General Manager
5. Abhijit Daimari, Dy General Manager

IN WITNESS WHEREOF I/We have set and subscribed my/our hands to this writing on this 16th day of October, 2026.

FILED BY

Haresh Uttamlal Patel
Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 20:00:58 +05'30'

(Haresh Uttamlal Patel)
Project In-charge
Lakadia II Power Transmission Limited

Place: Gurugram

Date: 19.10.2026

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION,

NEW DELHI

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VERSUS

Central Transmission Utility of India Limited,
Floor No. 02, Tower-01, IRCON International Tower,
Plot No. 16, Institutional Area, Sector-32,
Gurgaon-122003
& Ors. ....**RESPONDENT(S)**

MEMO OF PARTIES

Lakadia II Power Transmission Limited
(A 100% wholly owned subsidiary of Power Grid Corporation of India Limited)
Registered office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110 016
Address for correspondence: C/o ED (Commercial & RC), Power Grid Corporation of India Limited, Floor No. 02, Tower-01, IRCON International Tower, Plot No. 16, Institutional Area, Sector-32, Gurgaon-122003 ….**PETITIONER**

VERSUS

1. **Central Transmission Utility of India Limited**,
   Floor No. 02, Tower-01, IRCON International Tower,

Plot No. 16, Institutional Area, Sector-32,
Gurgaon-122003
Email: coo-ctu@ctuil.in

2. **REC Power Development and Consultancy Limited**
D-Block, REC Corporate Headquarter,
Plot No. I-4, Sector-29, Gurugram (Haryana)-122001
Email: co@recpdcl.in

3. **Chhattisgarh State Power Distribution Co. Ltd.**
CSPDCL, Post: Sundernagar, Dangania, Raipur - 492013
Email: cecomcseb@rediffmail.com ; manoj.k@cspc.co.in

4. **Goa Electricity Department**
Goa Electricity Department, Curti, Ponda - 403401, Goa
Email: eediv3@yahoo.co.in

5. **Gujarat Urja Vikas Nigam Limited**
Sardar Patel Vidyut Bhavan, Race Course, Vadodara - 390007, Gujarat
Email: de1csp.guvnl@gebmail.com; aocom2.guvnl@gebmail.com

6. **Heavy Water Board**
Ground Floor, Vikram Sarabhai Bhavan, Trombay,
Anushaktinagar, Mumbai - 400094, Maharashtra
Email: dksingh@mum.hwb.gov.in; dksingh1164@yahoo.com

7. **HVDC Bhadrawati, POWERGRID**
POWERGRID RHQ, WR-I, Sampriti Nagar,
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Email: wr1commercial@powergrid.co.in ; tripat_m@powergrid.in

8. **HVDC Vindhyachal, POWERGRID**
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Off National Highway No. 8, PO Uppalwadi,
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Email: wr1commercial@powergrid.co.in; tripat_m@powergrid.in

9. **M.P. Power Management Company Limited**
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Jabalpur - 482008, Madhya Pradesh
Email: rajvarman.saxena@mppmcl.com ; comml.deptt@mppmcl.com

10. **Maharashtra State Electricity Distribution Co. Ltd.**
Plot No. 9, Prakashgad, A. K. Marg, Bandra East, Mumbai - 400051, Maharashtra
Email: gmppmsedcl@gmail.com; ceppmsedcl@gmail.com

11. **ACB India Limited**
7th Floor, Corporate Tower, Ambience Mall,
NH-8, Gurugram - 122001, Haryana
Email: acbpower@acbindia.com ; lopamudra.kashyap@acbindia.com

12. **Torrent Power Limited**
Naranpura Zonal Office, Sola Road,
Ahmedabad - 380013, Gujarat
Email: satyanarayansoni@torrentpower.com ; niralishah@torrentpower.com

13. **Thermal Powertech Corporation India Limited**
6-3-1090, Block C, Level 2, TSR Towers,
Raj Bhavan Road, Somajiguda, Hyderabad - 500082, Telangana
Email: oa_commercial.seil@sembcorp.com ; spotsales.india@sembcorp.com

14. **Bhabha Atomic Research Centre**
Anushakti Nagar, Mumbai - 400085, Maharashtra
Email: electricitybill@barctara.gov.in ; craman@barc.gov.in

15. **GMR Warora Energy Limited**
Plot B-1, MIDC Growth Centre, Mohabala,
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Email: Pramod.Khandelwal@gmrgroup.in ; santu.pal@gmrgroup.in

16. **HVDC Champa, POWERGRID**
POWERGRID RHQ, WR-I, Sampriti Nagar,
Off National Highway No. 8, PO Uppalwadi,
Nagpur - 440026, Maharashtra
Email: wr1commercial@powergrid.co.in; tripat_m@powergrid.in

17. **West Central Railway**
General Manager's Office, Electrical Branch,
Jabalpur - 482001, Madhya Pradesh
Email: dyceetrdwcr@gmail.com

18. **Western Railway**
Office of the Chief Electrical Engineer,
Western Railway Headquarters Office,
Churchgate, Mumbai-400 020,Maharashtra
Email: cede@wr.railnet.gov.in

19. **DB Power Limited - Untied**
3rd Floor, Naman Corporate Link,
Opposite Dena Bank, C-31, G-Block,
Bandra-Kurla Complex, Bandra (East),
Mumbai-400 051, Maharashtra
Email: sales@dbpower.in ; sanjay.jadhav@dbpower.in

20. **Chhattisgarh State Power Trading Company Limited**
Vidyut Sewa Bhawan, Dangania,
Raipur-492 013, Chhattisgarh
Email: ce.techcell@gmail.com ; manoj.k@cspc.co.in

21. **TRN Energy Private Limited - Untied**
7th Floor, Office Tower,
Ambience Mall, NH-8,
Gurugram-122 001, Haryana
Email: acbpower@acbindia.com ; lopamudra.kashyap@acbindia.com

22. **Adani Power (Mundra) Limited**
Adani Corporate House, Shantigram,
Near Vaishnodevi Circle, S. G. Highway,
Ahmedabad - 382421, Gujarat
Email: hitesh.modi@adani.com ; nilanjan.chakraborty@adani.com

23. **Raigarh HVDC Station**
RPT HVDC Office, Hebbal,
Bengaluru - 560094, Karnataka
Email: pkmahalik@powergridindia.com

24. **ArcelorMittal Nippon Steel India Limited**
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Hazira - 394270, Gujarat
Email: naresh.yadav@amns.in

25. **Central Railway**
PCEE Office, 2nd Floor, Parcel Building,
CSMT, Mumbai - 400001, Maharashtra
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26. **Dadra and Nagar Haveli and Daman and Diu Power Distribution Corporation Limited**
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Email: bhavikshah@torrentpower.com ; namanshah@torrentpower.com

27. **MPSEZ Utilities Limited**
3rd Floor, Adani Corporate House, Ahmedabad, Gujarat
Email: rajesh.sirigirisetty@adani.com

28. **TEQ Green Power XIII Private Limited**
2nd Floor, Square One Mall, Saket Business District,
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Email: pe8@o2power.in ; ka.vishwanath@o2power.in

29. **Clean Max Solaris Private Limited**
13A, 13th Floor, Plot 400, The Peregrine Apartments,
Swatantrya Veer Savarkar Marg,
Prabhadevi, Mumbai - 400025, Maharashtra
Email: ashu.gupta@cleanmax.com ; vidisha.dubey@cleanmax.com

30. **JSW Neo Energy Limited**
JSW Centre, Bandra Kurla Complex, Bandra East,
Mumbai - 400051, Maharashtra
Email: pritpal.singh@jsw.in ; abhay.yagnik@jsw.in

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Okhla Industrial Estate, Phase III, New Delhi - 110020
Email: ashutosh.vyas@herofutureenergies.com ; bdsolargrid@herofutureenergies.com

32. **Avaada Energy Private Limited**
406, 4th Floor, Solaris One,
N. S. Phadke Marg, Andheri East,
Mumbai - 400069, Maharashtra
Email: narayans@tatapower.com ; prashanthkudva@tatapower.com

33. **SJVN Green Energy Limited**
SJVN Corporate Office Complex, Shanan,
Shimla - 171006, Himachal Pradesh
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34. **Azure Power Sixty Three Private Limited**
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35. **Femund Solar Private Limited**
5th Floor, North Tower,
M3M Tee Point, Sector 65,
Gurugram - 122018, Haryana
Email: pushvinder.singh@ibvogt.com ; femundsolar@ibvogt.com

36. **Juniper Green Energy Limited**
1103A & 1103B, 11th Floor, Hemkunt Chamber,
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Email: pavan.gupta@junipergreenenergy.com ; bd@junipergreenenergy.com

37. **BN Dispatchable-2 Private Limited**
Unit 4A, Skootr Managed Office,
2nd Floor, Infinity Tower-A, DLF Cyber City,
Gurugram - 122002, Haryana
Email: naveen@brightnightpower.com ; vineet@brightnightpower.com

38. **BN Peak Power-2 Private Limited**
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2nd Floor, Infinity Tower-A, DLF Cyber City,
Gurugram - 122002, Haryana
Email: naveen@brightnightpower.com ; vineet@brightnightpower.com

39. **Adani Renewable Energy Ten Limited**
Adani Corporate House, Shantigram,
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Khodiyar, Ahmedabad - 382421, Gujarat
Email: mahendrasingh.dabi@adani.com ; rajesh.gupta@adani.com

40. **Reliance Industries Limited**
3rd Floor, Maker Chambers IV,
222, Nariman Point,
Mumbai - 400021, Maharashtra
Email: mukesh.rathod@ril.com ; ashok3.singh@ril.com

41. **Tapi Renewable Private Limited**
2nd Floor, Mira Corporate Suites,
Plot Nos. 1 & 2, Old Ishwar Nagar,
New Friends Colony, New Delhi - 110065
Email: nishant_thakkar@welspun.com ; kaushik_tl@welspun.com

42. **ACME Solar Holdings Limited**
Plot No. 152, Sector 44,
Gurugram - 122002, Haryana
Email: yogesh@acme.in ; apradhan@acme.in

43. **Terra Clean Limited**
NBCC Commercial Space, 10th Floor, Tower 2,
Kidwai Nagar, Sarojini Nagar, New Delhi - 110023
Email: ajparmar@indianoil.in ; sajal@indianoil.in

….RESPONDENTS

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Haresh Uttamlal Patel

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(Haresh Uttamlal Patel)
Project In-charge
Lakadia II Power Transmission Limited

Place: Gurugram

Date: 19.10.2026

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION

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PETITION NO.:…….

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(A 100% wholly owned subsidiary of Power Grid Corporation of India Limited)
Registered office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016
Address for correspondence: C/o ED (Commercial & RC), Power Grid Corporation of India Limited, Floor No. 02, Tower-01, IRCON International Tower, Plot No. 16, Institutional Area, Sector-32, Gurgaon-122003 …..**PETITIONER**

VERSUS

Central Transmission Utility of India Limited,
Floor No. 02, Tower-01, IRCON International Tower,
Plot No. 16, Institutional Area, Sector-32,
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& Ors. ....**RESPONDENTS**

PETITION

I. BACKGROUND

1. **Brief background of the Petitioner**

The Petitioner, i.e., Lakadia II Power Transmission Limited ("LIIPTL"/"Petitioner") is a company incorporated on 19.05.2026 under the Companies Act, 2013 as a Special Purpose Vehicle (SPV) under the TBCB framework for implementation of Inter-State transmission system scheme - "**Transmission system for Integration of Power from RE Projects in**

Lakadia REZ in Gujarat-Phase II (7500MW)" ("the Project") under Tariff Based Competitive Bidding under Section 63 of the Act on a Build, Own, Operate and Transfer ("BOOT") basis. The SPV was incorporated by REC Power Development and Consultancy Limited and, upon completion of the Tariff Based Competitive Bidding process, its entire shareholding was transferred on **12.10.2026** to Power Grid Corporation of India Limited (POWERGRID), the Successful Bidder. LIIPTL is presently a wholly owned subsidiary of POWERGRID.

2. **Brief background of the Respondent(s)**

a) Respondent No. 1, Central Transmission Utility of India Limited ("CTUIL"), is a Government Company and has been notified by the Ministry of Power, Government of India, vide Gazette Notification dated 09.03.2021 as the Central Transmission Utility ("CTU") under Section 38 of the Electricity Act, 2003. CTUIL is responsible for discharging all functions of the CTU, including undertaking transmission of electricity through the inter-State transmission system, and planning and coordination relating to such system, as specified under the Act. CTUIL is also the Nodal Agency as per the RfP and TSA of the instant project.

b) Respondent No. 2, REC Power Development and Consultancy Limited (RECPDCL), was incorporated on 12.07.2007 as a wholly owned subsidiary of REC Limited, a Maharatna Central Public Sector Enterprise under the Ministry of Power, Government of India. RECPDCL was appointed by the Government of India vide Gazette notification no. S.O. 725(E) [CG-DL-E-19022026-270309] dated 11.02.2026 as the BPC for selection of the TSP for the Project through the TBCB process. Further, the approval was modified vide notification no. S.O.3257(E) [CG-DL-E-24062026-273789] dated 19.06.2026.

c) Respondent Nos. 3 to 43 are the DICs and beneficiaries of Western Region, which are the beneficiaries of the Project.

3. **Proof of service**

It is submitted that a copy of the complete petition along with annexures has been served electronically upon the Respondents and proof of such service is enclosed as **Annexure-15**. For any Respondent not registered on the Commission's e-filing portal, service shall

additionally be effected in accordance with the applicable CERC (Conduct of Business) Regulations, 2023 requirements.

4. **Status of the Petitioner**

The Petitioner is a company incorporated under the Companies Act, 2013 and is a 100% wholly owned subsidiary of POWERGRID.

5. **Important events/ clearances relevant to the assets under consideration**

The important events/clearances relevant to the assets under consideration in the petition are tabulated below :-

Date	Event / Milestone
19.01.2026	37th NCT meeting: Scheme approved
11.02.2026	Ministry of Power appointed RECPDCL as Bid Process Coordinator
04.05.2026	Request for Proposal issued by RECPDCL
18.05.2026	41st NCT meeting: Scheme modified and approved
19.05.2026	LIIPTL incorporated as the project SPV
05.08.2026	Bid submitted by POWERGRID
28.08.2026	Electronic reverse auction concluded
01.09.2026	Bid Evaluation Committee certificate issued
02.09.2026	Letter of Intent issued to POWERGRID
17.09.2026	Ministry of Power approved sale and transfer of the Project
12.10.2026	SPA executed and SPV transferred to POWERGRID
19.10.2026	TSA executed

6. **Proof of Eligibility and jurisdiction**

a. The Petitioner was incorporated by RECPDCL as the SPV for the purpose of implementation of the Project under Tariff Based Competitive Bidding (TBCB) and POWERGRID emerged as the successful bidder to acquire 100% equity shareholding of

the Petitioner pursuant to the competitive bidding process for the Project under section 63 of the Electricity Act.

b. The Petitioner submits that it is fully entitled, both in law and on facts, to be granted a transmission licence under Sections 14 and 15 of the Act. The Petitioner is the SPV incorporated exclusively for implementation of the Project and has been selected as the TSP pursuant to a TBCB process conducted under Section 63 of the Act.

c. Section 14 & 15 of the Act contemplates that a transmission licence shall be granted to any person who is duly authorised to establish, operate and maintain a transmission system. In the present case, the Petitioner derives its authority directly from the outcome of a statutorily governed competitive bidding process, conducted under Section 63 of the Act.

d. Further, Section 79(1)(e) of the Act vests this Hon'ble Commission with exclusive jurisdiction to grant licences for Inter-State transmission systems. In addition, this Hon'ble Commission exercises jurisdiction over the present Petition under the CERC (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2024 (Transmission Licence Regulations), which govern the manner, form and procedure for grant of transmission licences. The Project, being part of Inter-State transmission network, squarely falls within the territorial and subject matter jurisdiction of this Hon'ble Commission.

e. Accordingly, the present Petition is fully maintainable before this Hon'ble Commission under the Act read with the Transmission Licence Regulations.

II. DETAILED PETITION

7. The present petition is being filed by Lakadia II Power Transmission Limited under Section 14 & 15 of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2024 seeking grant of a Transmission Licence to the petitioner for implementation of Inter-State transmission system scheme - "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" under Tariff Based Competitive Bidding as per Section 63 of the Act on Build, Own, Operate and Transfer basis.

8. The details regarding the Project for which the present transmission licence is sought and Scheduled Commercial Operation Date ("**SCOD**") are set out as below:

Sl. No.	Name of the Transmission Element	Scheduled COD	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.	**Establishment of 765/400 kV, 6X1500 MVA & 10X500 MVA, 400/220 kV Lakadia-II (Near Chitrod)** with 2x330 MVAr 765 kV Bus reactor and 2x125 MVAr 400 kV Bus reactor. *[765 kV, 400 kV & 220 kV levels to be established in two sections with Sectionaliser arrangement.* ***The 220 kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400 kV and 765 kV Sectionaliser shall be kept normally closed.*** *(3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-I & 3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-II)]* • 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos.	36 months	22.54%	All the elements are required simultaneously to ensure their utilization

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	• 220 kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAr single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 765 kV line bays: 6 Nos. (4 Nos. on Sec-I (2 for Halvad D/C & 2 for Ahmedabad D/C) and 2 Nos. on Sec-II (for Vataman)) • 765 kV Sectionaliser bay: 1 set • 400 kV Sectionaliser bay: 1 set • 220 kV Sectionaliser bay: 1 set • 220 kV BC– 2 Nos. • 220 kV TBC – 2 Nos. • 1x125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Bus reactor bay - 2 Nos. • 400 kV line bays - 3 Nos. (2 Nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 Nos. on Sec-I & 8 Nos. on Sec-II for interconnection of RE Projects)			

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	Future provision (space for): • 765 kV line bays along with switchable line reactors – 8 Nos. (2 Nos. on Sec-I & 6 Nos. on Sec-II) • 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II) + 4 Nos. 400 kV bays (2 nos. on each section) for HVDC Interconnection • 420 kV, 125 MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II • Synchronous Condenser (+300/-200 MVAr) along with 400 kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)			
2.	Installation of Synchronous Condenser (+300/-200 MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW-s • Synchronous Condenser along with associated 400 kV bay-2 Nos. (one each on		15.09%	

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	Sec-I & II)			
3.	Lakadia-II – Halvad 765 kV D/C line		12.70%	
3a.	2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765kV D/c line. • 765 kV line bays- 2 nos. (AIS)		0.66%	
3b.	765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of Lakadia-II – Halvad 765 kV D/c line • 240 MVAr, 765 kV Switchable Line Reactor- 2 Nos. (2 for Lakadia-II end) • 765 kV Switchable Line Reactor bay - 2 Nos. for Lakadia-II end. • 80 MVAr spare single-phase reactor at Lakadia-II as proposed under Sl. 9 for above 240 MVAr Switchable Line Reactor shall be utilized.		1.64%	
4.	Lakadia-II – Ahmedabad 765 kV D/C line		17.18%	
5.	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765 kV D/C line • 765 kV line bays – 2 Nos. (AIS)		0.66%	
6.	765 kV, 330 MVAr Switchable line reactors on each circuit at Lakadia-II end of Lakadia-II – Ahmedabad 765 kV D/C line • 330 MVAr, 765 kV Switchable Line Reactor- 2 Nos. • 765 kV Switchable Line Reactor bay - 2		1.82%	

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	Nos. • 110 MVAr spare single phase reactor at Lakadia-II S/s is already provided in scope of work above and same shall be used for subject Switchable Line Reactor.			
7.	Lakadia-II – Vataman 765 kV D/C line		23.62%	
8.	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765 kV D/C line		0.66%	
9.	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765 kV D/C line • 240 MVAr, 765 kV Switchable Line Reactor- 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV Switchable Line Reactor bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80 MVAr spare single-phase reactor at Lakadia-II for above 240 MVAr Switchable Line Reactor. • 80 MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Switchable Line		3.43%	

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	Reactor.			

9. The transmission scheme was deliberated and approved in the 37th National Committee on Transmission (NCT) meeting dated 19.01.2026 and minutes issued on 30.01.2026 for execution under the Tariff Based Competitive Bidding ("**TBCB**") framework. The scope of the project was modified subsequently and the final scope as given in above table was finalized in the 41st National Committee on Transmission (NCT) meeting dated 18.05.2026 and minutes issued on 09.06.2026.

   All the relevant extracts of aforesaid 37th NCT meeting dated 19.01.2026 and 41st NCT meeting dated 09.06.2026 are enclosed and marked as **Annexure-1**.

   Pursuant to the approval of the Project by the 37th National Committee on Transmission, Ministry of Power, Government of India, vide Gazette notification no. S.O. 725(E) [CG-DL-E-19022026-270309] dated 11.02.2026 has notified REC Power Development and Consultancy Limited ("RECPDCL" / "Respondent No. 2") as the Bid Process Coordinator ("BPC") for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish the instant project through Tariff Based Competitive Bidding process on Build, Own, Operate and Transfer basis. Further, the approval was modified vide notification no. S.O.3257(E) [CG-DL-E-24062026-273789] dated 19.06.2026. Copy of the said gazette notifications are enclosed and marked as **Annexure-2 (Colly)**.

10. In furtherance, RECPDCL, in its capacity as the duly appointed BPC, issued the Request for Proposal dated 04.05.2026 ("RfP") inviting bids for development of the Project through the

TBCB process in accordance with the TBCB Guidelines and the Guidelines for Encouraging Competition in Development of Transmission Projects issued by the Ministry of Power under Section 63 of the Act, as amended from time to time.

Copy of relevant extract of RfP dated 04.05.2026 along with the Global Invitation and advertisements is annexed herewith and marked as **Annexure-3 (Colly)**.

The bid documents included the survey reports and amendment to the survey report for the Project, covering the Lakadia-II substation and the associated 765 kV transmission lines. These reports formed part of the technical documents made available by RECPDCL for implementation of the Project.

11. RECPDCL intimated this Hon'ble Commission regarding the RfP and its notification vide letter dated 07.05.2026. Further, RECPDCL also formally informed Ministry of Power vide letter dated 07.05.2026, that the TBCB process for the Project had been initiated by issuance of the Global Invitation and RfP and requested Ministry of Power to publish the RfP notice and RfP documents on its website. A copy of the said letters are annexed herewith and marked as **Annexure-4 and Annexure-5** respectively.

12. In terms of the RfP, the Project was to be implemented through a Special Purpose Vehicle ("SPV") structure. Accordingly, the Petitioner "Lakadia II Power Transmission Limited" having its registered office at New Delhi was incorporated on 19.05.2026 by RECPDCL as the SPV under the Companies Act 2013 for the purpose of implementation of the Project, and bidders were required to acquire 100% of the equity shareholding of the Petitioner, together with all its assets and liabilities, and to undertake the development, financing, construction, operation and maintenance of the Project. Subsequently, Ministry of Power has granted the section 68 approval to the petitioner on 24.08.2026.

    A copy of the Certificate of Incorporation of Lakadia II Power Transmission Limited and approval under Section 68 of the Electricity Act, 2003 is annexed herewith and marked as **Annexure-6**.

13. RECPDCL issued the Request for Proposal dated 04.05.2026 for the instant scheme.

14. On 30.06.2026, in furtherance of the RfP and in accordance with Clause 1.6.2.1(5) thereof, RECPDCL issued a letter to POWERGRID communicating the tentative Acquisition Price

payable by the Selected Bidder for acquisition of 100% equity shareholding of the Petitioner, together with all its assets and liabilities.

A copy of the letter dated 30.06.2026 issued by RECPDCL to POWERGRID is annexed herewith and marked as **Annexure-8**.

15. POWERGRID submitted its bids (Technical & Financial) on 05.08.2026. Post opening of bids, e-Reverse Auction for the project was conducted on 28.08.2026 in accordance with the RfP and the TBCB Guidelines.

16. After completion of the e-Reverse Auction and verification of the bid documents submitted by POWERGRID, the Bid Evaluation Committee ("**BEC**") constituted under the TBCB Bidding framework evaluated the bids in accordance with the "Tariff Based Competitive Bidding Guidelines for Transmission Service" and the "Guidelines for Encouraging Competition in Development of Transmission Projects" issued by the MoP under Section 63 of the Electricity Act, 2003.

17. Thereafter, on 01.09.2026, the Bid Evaluation Committee issued its Certificate confirming the following :-

(i) the entire bidding process for the Project was conducted in compliance with the applicable TBCB Guidelines,

(ii) POWERGRID, having quoted the lowest Annual Transmission Charges of Rs.11,524.88 million per annum pursuant to the e-Reverse Auction, emerged as the Successful Bidder, and

(iii) the quoted tariff discovered through e-reverse bidding process was acceptable.

A copy of the Bid Evaluation Committee Certificate dated 01.09.2026 is annexed herewith and marked as Annexure-7.

18. Pursuant to the bidding process conducted by RECPDCL in accordance with the RfP, including the e-reverse auction held on 28.08.2026, a Letter of Intent dated 02.09.2026 ("LoI") by RECPDCL to POWERGRID.

Subsequently, vide revised LoI letter dated 10.10.2026, the BPC provided extension for completion of various activities under clause 2.15.2 of the RfP document till **19.10.2026.**

A copy of the LoI dated 02.09.2026 and revised LoI dated 10.10.2026 issued by RECPDCL to POWERGRID is annexed herewith and marked as **Annexure-9**. Further, the final acquisition price was communicated by RECPDCL vide letter dated 28.09.2026, which is annexed herewith and marked as **Annexure-8**.

19. On 17.09.2026, Ministry of Power officially approved the sale and transfer of the project to successful bidder.

    A copy of the approval of MoP dated 17.09.2026, POWERGRID is annexed herewith and marked as **Annexure-10**.

20. In accordance with the RfP and the LoI, the Petitioner was transferred to the Successful Bidder i.e. POWERGRID on 12.10.2026 and RECPDCL, POWERGRID & the Petitioner executed the Share Purchase Agreement ("SPA"). In addition, the Transmission Service Agreement ("TSA") was signed between the Petitioner and CTUIL, pursuant to which 100% of the equity shareholding of the Petitioner stood transferred to POWERGRID, and the Petitioner became the duly appointed Transmission Service Provider ("TSP") for the Project.

    Copies of the SPA dated 12.10.2026 and TSA dated 19.10.2026 are annexed herewith and marked as **Annexure-11** and **Annexure-12** respectively.

21. Further, Clause 2.15.4 of the RfP required that, upon completion of the acquisition of the Petitioner by the Successful Bidder, the Petitioner, as the duly appointed TSP, is required to apply to the Appropriate Commission for grant of a Transmission Licence within five (5) working days.

22. The present Petition is therefore being filed strictly in compliance with the above contractual and statutory requirement.

Re. Compliance with CERC Transmission Licence Regulations, 2024

23. Regulation 5 of the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2024 requires that a petition for grant of transmission licence be made in Form-I and be accompanied by the prescribed affidavit and documents. The present Petition has been filed strictly in the said format.

    A true copy of the duly completed Form-I, together with all enclosures thereto, is annexed herewith and marked as **Annexure-13**.

24. The Petitioner shall publish a notice of its petition for grant of licence in Form-II of the Transmission Licence Regulations in at least two leading daily digital newspapers, one in English language and another in the Indian language of the State or Union Territory, where an element of the project or concerned transmission line is situated or proposed to be situated, within 03 working days of filing the petition, inviting comments from the general public in compliance with Regulations 5(5) of the said Regulations.

25. In accordance with Section 5(3) of the License Regulations, a copy of the present Petition is being simultaneously served upon CTUIL, being the nodal agency, for its comments and recommendations. A copy of the present petition is also being served upon RECPDCL, the Bid Process Coordinator, to enable it to place on record its confirmation in respect of the Tariff Based Competitive Bidding process undertaken for the Project.

26. The Petition along with annexures and enclosures has been hosted on the website of the Applicant i.e. www.powergrid.in/subsidiaries to facilitate access to the Petition by any person through the internet.

27. The Applicant/Petitioner shall publish the requisite Notices in the newspapers as per the Transmission Licence Regulations and after publication of the same, the Applicant/Petitioner shall place a copy of the said publications before this Hon'ble Commission.

28. In view of the above, it is humbly submitted that the Applicant/Petitioner fulfils the eligibility criteria for grant of transmission licence as stipulated in Section 14 and 15 of the Act and the Transmission License Regulations and therefore, this Hon’ble Commission may kindly grant the prayers, as prayed for.

29. The present Petition is filed bona fide and in the interest of justice.

III. LIMITATION

30. The Petitioner declares that the present petition is within the applicable period of limitation.

IV. PRAYER

31. The Applicant/Petitioner hereby humbly prays the Hon'ble Commission to:

    (a) Grant a Transmission Licence under Sections 14 and 15 of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2024 in favour

of the Petitioner, Lakadia II Power Transmission Limited, to Build, Own, Operate and Transfer of the "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)", being the Inter-State transmission scheme; and

(b) Direct issuance of the Transmission Licence in the prescribed Form-III of the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2024, subject to the general and specific conditions contained therein; and/or

(c) Condone any minor, inadvertent or procedural defects or omissions, if any, in the present Petition and permit the Applicant to place on record such additional documents, information or clarifications as this Hon'ble Commission may require from time to time in the interest of justice; and

(d) Pass such other order / orders, as may be deemed fit and proper in the facts and circumstances of the case.

V. LIST OF ENCLOSURES

32. As per Index.

VI. PROOF OF PAYMENT OF FEES FOR FILING OF THE PETITION

33. Details provided in **Form-I** attached to this petition.

Haresh Uttamlal Patel
Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 20:02:05 +05'30'

PETITIONER

DATE: 19.10.2026

PLACE: Gurugram

DECLARATION

The Petitioner above named hereby solemnly declare(s) that nothing material has been concealed or suppressed and further declare(s) that the enclosures and typed set of material papers relied upon and filed herewith are true copies of the original(s)/fair representation of the originals/true translation thereof.

Verified at Gurugram on this 16th day of October, 2026.

Haresh Uttamlal Patel
Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 20:02:52 +05'30'

PETITIONER

FORM-I

Particulars	
1. Name of the Petitioner	**Lakadia II Power Transmission Limited**
2. Address of the Petitioner	B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi – 110016
3. Subject Matter	Petition under Section 14 & 15 of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2024 with respect to Transmission License to Lakadia II Power Transmission Limited (a 100% wholly owned subsidiary of Power Grid Corporation of India Limited)
4. Petition No., if any	
5. Details of generation assets (a) generation station/units (b) Capacity in MW (c) Date of commercial operation (d) Period for which fee paid (e) Amount of fee paid (f) Surcharge, if any	NA
6. Details of transmission assets (a) Transmission line and sub-stations (b) Date of commercial operation (c) Period for which fee paid (d) Amount of fee paid (e) Surcharge, if any	NA
7. Fee paid for Adoption of tariff for (a) Generation asset (b) Transmission asset	NA
8. Application fee for licence (a) Trading licence (b) Transmission licence (c) Period for which paid	

(d) Amount of fee paid	Rs 1,00,000/-
9. Fee paid for Miscellaneous Petition	NA
10. Fees paid for Interlocutory Application	
11. Fee paid for Regulatory Compliance petition	
12. Fee paid for Review Petition	NA
13. Licence fee for inter-State Trading (a) Category (b) Period (c) Amount of fee paid (d) Surcharge, if any	NA
14. Licence fee for inter-State Transmission (a) Expected/Actual transmission charge (b) Period (c) Amount of fee paid (d) Surcharge, if any	NA
15. Annual Registration Charge for Power Exchange (a) Period (b) Amount (c) Fee paid (d) Surcharge, if any	NA
16. Details of fee remitted (a) NEFT/RTGS Reference No. (b) Date of remittance (c) Amount remitted	 CMS/002031587455/2400312192 19.10.2026 Rs. 1,00,000/-

Haresh Uttamlal Patel

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Date: 2026.10.19 20:03:12 +05'30'

Signature of the authorized signatory with date

BEFORE THE HON'BLE CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO.:.....

IN THE MATTER OF

Petition under Section 14 & 15 of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and other related matters) Regulations, 2024 with respect to Transmission License to Lakadia II Power Transmission Limited (a 100% wholly owned subsidiary of Power Grid Corporation of India Limited)

Lakadia II Power Transmission Limited **.....PETITIONER**

VERSUS

Central Transmission Utility of India Limited

& Ors. **....RESPONDENT(S)**

AFFIDAVIT

I, Shri Haresh Patel, son of Uttamlal Chhanabhai Patel, aged 57 years, Project In-Charge, residing at 400/220 KV Bhachau Substation, PO: Bhimasar, Taluka: Anjar, Dist.:Kutch, Gujarat-370240, and presently at Gurugram do hereby solemnly affirm and state as follows:

1. That the deponent is the Authorised Signatory of the Petitioner Company in the above matter, and is well conversant with the facts and the circumstances of the case and therefore competent to swear this affidavit.
2. That the accompanying Petition under Section 14 & 15 of the Electricity Act, 2003, has been filed by my authorised representative under my instruction and the contents of the same are true and correct to the best of my knowledge and belief.
3. That the contents of Para Nos. 1 to 33 of the facts as mentioned in the Petition are true and correct based on my personal knowledge, belief and records maintained in the office and the contents of Para Nos. 1 to 33 of the Petition are believed to be true on the basis of the legal advice received.
4. That the annexures annexed to the Petition are correct and true copies of the respective originals.

NOTARY
Mahender S. Punia
GURUGRAM
Regn. No. 3999
GOVT. OF INDIA

Haresh Uttamlal Patel

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Date: 2026.10.19 20:03:33 +05'30'

5. That the Deponent has not filed any other Petition or Appeal before any other forum or court of law with respect to the subject matter of the dispute.

DEPONENT

Haresh Uttamlal Patel

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Date: 2026.10.19 20:03:53 +05'30'

VERIFICATION:

Verified at Gurugram on this 16th day of October, 2026 that the contents of my above noted affidavit are true and correct to my knowledge and no part of it is false and nothing material has been concealed therefrom.

DEPONENT

Haresh Uttamlal Patel

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Date: 2026.10.19 20:04:20 +05'30'

NOTARY
Mahender S. Punia
GURUGRAM
Regn. No. 3999
GOVT. OF INDIA

ATTESTED

MAHENDER S. PUNIA
ADVOCATE & NOTARY
Distt. Gurugram (Haryana) India



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

सेवा में /To

As per list of Addresses

विषय: ट्रांसमिशन पर राष्ट्रीय समिति (एनसीटी) की सैंतीसवी बैठक का कार्यवृत्त ।

Subject: Minutes of the 37th Meeting of the National Committee on Transmission (NCT)-reg.

महोदया (Madam) / महोदय (Sir),

The 37th meeting of the National Committee on Transmission (NCT) was held on 19th January, 2026 at New Delhi. The minutes of the meeting are enclosed herewith.

भवदीय / Yours faithfully

Digitally signed by
Bhagwan Sahay Bairwa
Date: 30-01-2026
11:19:56

(बी.एस.बैरवा / B.S. Bairwa)
मुख्य अभियन्ता एवं सदस्य सचिव,(एन.सी.टी.)/
Chief Engineer & Member Secretary (NCT)

Sl. No.	Scope of the Transmission Scheme	Capacity /km	Estimated cost (₹ Cr.)
		about 3.6 GW load under Phase-I in Jamnagar area" scheme) • 220kV ICT bays – 3 Nos.	
9.	4 nos. 220kV line bays for RE interconnection	220kV line bays – 4 Nos.	

Note:

- *TSP of Jamnagar S/s shall provide space for above scope of work at Sl. 3, 8 & 9 on free of cost basis*
- *GETCO shall provide space for above scope of work at Sl. 6 on free of cost basis*
- *Bay(s) required for completion of diameter (GIS) in one-and-half breaker scheme shall also be executed by the TSP.*
- *Above Syncons (at Sl. 7) shall be considered as 'transmission asset' similar to STATCOM & SVC for its tariff mechanism.*

II. Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)

Sl. No.	Scope of the Transmission Scheme	Capacity /km	Estimated cost (₹ Cr.)
1.	**Establishment of 765/400 kV, 6x1500MVA & 10x500MVA, 400/220kV Lakadia-II (Near Chitrod)** with 2x330 MVAR 765kV bus reactor and 2x125 MVAR 400kV bus reactor. *[765kV, 400kV & 220kV levels to be established in two sections with Sectionaliser arrangement.* ***The 220kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400kV and 765kV Sectionaliser shall be kept normally closed****.* ***The bus operation may be reviewed after proposed HVDC implementation as per requirement of Grid***	• 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II)	7506

	operator. *(3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVA 765kV BR & 1x125MVAr 420kV BR shall be on Sec-I & 3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVA 765kV BR & 1x125MVAr 420kV BR shall be on Sec-II)]* **Future provision (space for):** ➢ 765 kV line bays along with switchable line reactors – 6 Nos. (2 Nos. on Sec-I & 4 Nos. on Sec-II) ➢ 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 7 Nos. *(3 on Sec-I & 4 on Sec-II) + 4 Nos. 400kV bays (2 nos. on each section) for HVDC Interconnection* ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II ➢ Establishment of 6000 MW, ± 800 kV Lakadia-II (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard & all associated equipment	• 765 kV Bus reactor bay – 2 Nos. • 765kV line bays: 8 nos. (4 Nos. on Sec-I (2 for Halvad D/c & 2 for Ahmedabad D/c) and 4 Nos. on Sec-II (2 for Kandla D/c and 2 for Vataman)) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220kV BC– 2 No. • 220kV TBC – 2 No. • 125 MVAr, 420 kV reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 nos. on Sec-I & 8 nos. on Sec-II for interconnection of RE Projects)	

	(incl. filters)/bus extension, etc. (2x1500MW poles on each 400kV section) ➢ Synchronous Condenser (+300/-200MVAr) along with 400kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)		
2.	Installation of Synchronous Condenser (+300/-200MVAr) (Minimum) & Short circuit contribution at PCC of 1200MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (MW-s) shall be defined in RfP document.	Synchronous Condenser along with associated 400kV Bay-2 Nos. (one each on Sec-I & II)	
3.	LILO of Halvad – Kandla 765kV D/c line at Lakadia-II	LILO route length ~22km. (88ckm)	
4.	Lakadia-II – Ahmedabad 765kV D/c line	190 km (380 ckm)	
5	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765kV D/c line	765 kV line bays – 2 Nos. (AIS)	
6	765kV, 330MVAr Switchable line reactors on each circuit at Ahmedabad end of Lakadia-II – Ahmedabad 765kV D/c line	• 330 MVAr, 765 kV switchable line reactor- 2 Nos. • 765 kV Switchable Line Reactor Bay - 2 Nos. • 110MVAr spare single phase reactor at Ahmedabad S/s is already available and same shall be used for subject Sw LR.	
7	Lakadia-II – Vataman 765kV D/c line (220km.)	220 km (440 ckm)	
8	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765kV D/c line	765 kV line bays – 2 Nos. (AIS)	

9	765kV, 240MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765kV D/c line	• 240 MVAr, 765 kV switchable line reactor- 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV switchable Line Reactor Bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80MVAr spare single-phase reactor at Lakadia-II for above 240MVAr Sw LR. • 80MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Sw LR.	

Note:

- *TSPs of Ahmedabad S/s & Vataman S/s to provide space for above scope of work in their respective substations (free of cost)*
- *Above Syncons (at Sl. No. 2) shall be considered as 'transmission asset' similar to STATCOM & SVC for its tariff mechanism.*

III. Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-A (Est. Cost: 2252 Cr.)

Sl. No.	*Scope of the Transmission Scheme*	*Capacity /km*
1.	Augmentation of transformation capacity at South Olpad (GIS) S/s by 1x1500MVA, 765/400kV (3rd) ICT	• 765/400 kV, 1500 MVA ICT – 1 No. • 765 kV ICT bays – 1 No. (GIS) (Being constructed as a part of diameter completion under Khavda Ph-IV Part-C Scheme) • 400 kV ICT bays – 1 No. (GIS)
2.	Vadodara(GIS) – Halvad 765kV D/c line to be terminated into Lakadia – Halvad 765kV D/c line (near Halvad S/s) so as to form Lakadia – Vadodara (GIS) 765kV D/c line	250 km (500 ckm) *(Length of complete Lakadia – Vadodara (GIS) 765kV D/c line after implementation of above line section between Vadodara and Halvad is expected to be around 350km.)*

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

सेवा में /To

As per list of Addresses

विषय: ट्रांसमिशन पर राष्ट्रीय समिति (एनसीटी) की इकतालीसवी बैठक का कार्यवृत्त ।

Subject: Minutes of the 41st Meeting of National Committee on Transmission (NCT) – regarding.

महोदया (Madam) / महोदय (Sir),

The 41st meeting of the "National Committee on Transmission" (NCT) was held on 18th May, 2026 at New Delhi. The minutes of the meeting are enclosed herewith.

भवदीय / Yours faithfully

Digitally signed by
Bhagwan Sahay Bairwa
Date: 09-06-2026
11:24:33

(बी.एस.बैरवा / B.S. Bairwa)
मुख्य अभियन्ता एवं सदस्य सचिव,(एन.सी.टी.)/
Chief Engineer & Member Secretary (NCT)

Sl. No.	Original scope of the Transmission Scheme		Modified scope of the Transmission Scheme	
	• 400/220kV, 500 MVA, ICTs – 10 Nos. • 400kV ICT bays – 10 Nos. • 220kV ICT bays – 10 Nos. • 220kV line bays – 16 Nos. • 220kV Bus Sectionalizer : 3 set • 220 kV Bus Coupler (BC) Bay – 4 Nos. • 220 kV Transfer Bus Coupler (TBC) Bay – 4 Nos.	termination of LILO of Kalpakka – Maradam 400 kV (quad) D/c line at Pendurthi)	**switchyard:** • 400/220kV, 500 MVA, ICTs – 10 Nos. • 400kV ICT bays – 10 Nos. • 220kV ICT bays – 10 Nos. • 220kV line bays – 16 Nos. • 220kV Bus Sectionalizer : 3 set • 220 kV Bus Coupler (BC) Bay – 4 Nos.	termination of LILO of Kalpakka – Maradam 400 kV (quad) D/c line at Pendurthi)
2.	• ± 300 MVAr STATCOM with 2x125 MVAr MSC at Pendurthi (Vizag) GIS with control switching arrangement for proposed 1x330 MVAr bus reactor • Space provision for 2nd ± 300 MVAr STATCOM with 2x125 MVAr MSC at Pendurthi (Vizag) GIS	• 400kV bay – 1 no. • ± 300 MVAr STATCOM with 2x125 MVAr MSC at Pendurthi (Vizag) GIS with control switching arrangement for proposed 1x330 MVAr bus reactor – 1 set	• ± 300 MVAr STATCOM with 2x125 MVAr MSC at Pendurthi (Vizag) GIS with control switching arrangement for proposed 1x330 MVAr bus reactor • Space provision for 2nd ± 300 MVAr STATCOM with 2x125 MVAr MSC at Pendurthi (Vizag) GIS **along with associated 400kV bay**	• 400kV bay – 1 no. • ± 300 MVAr STATCOM with 2x125 MVAr MSC at Pendurthi (Vizag) GIS with control switching arrangement for proposed 1x330 MVAr bus reactor – 1 set

3.2 **Modification in "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500 MW)" due to non-visibility of Green Hydrogen/ Ammonia demand in Kandla area.**

3.2.1 Representative of CTUIL stated that the transmission system for integration of power from RE Projects in Lakadia area in Gujarat for 7.5 GW capacity, namely *"Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500 MW)"* was recommended in the 37th NCT meeting held on 19.01.2026, with an implementation schedule of 36 Months with RECPDCL as BPC, with the condition that the implementation schedule may be reviewed prior to award based on the bidding status of the Transmission System for supply of power to Green Hydrogen/Ammonia manufacturing potential in Kandla area of Gujarat (Phase-I: 3 GW). The subject transmission scheme, inter-alia, includes establishment of 765/400 kV, 6x1500 MVA & 400/220 kV, 10x500 MVA Lakadia-II S/s (Near Chitrod), LILO of Halvad – Kandla 765 kV D/c line at Lakadia-II, Lakadia-II – Ahmedabad 765 kV D/c line, and Lakadia-II – Vataman 765 kV D/c line.

3.2.2 The BPC informed the following regarding the bidding status of the Transmission System for supply of power to Green Hydrogen/Ammonia manufacturing potential in Kandla area of Gujarat (Phase-I: 3 GW):

- Upon conclusion of the bidding process, LoI was issued to the successful bidder, M/s Reliance Industries Ltd. (RIL), on 19/02/2025.
- However, SPV transfer was kept on hold by BPC based on communication from MoP due to absence of GNA applications from Green Hydrogen/Green Ammonia developers.
- RIL, vide letter dated 18.02.2026, expressed inability to extend the validity of the bid and bid bond for the subject transmission scheme, citing delay of more than a year since submission of their techno-commercial offer, followed by e-reverse auction process.
- BEC meeting for re-initiating the bidding was held on 02.04.2026, however, bidding process remains on hold awaiting further direction from MoP.

3.2.3 CTUIL also informed that no Green Hydrogen/Ammonia application has been received in the Kandla area as on date. However, M/s L&T Energy GreenTech Ltd. (LTEGL), vide letter dated 13.04.2026 addressed to MoP, submitted the following:

- A Term Sheet has been signed with ITOCHU Corporation, Japan, for development of a 300 KTPA Green Ammonia project, expandable up to 1.8 MMTPA in six phases, at Kandla, catering to the marine sector.
- A project-specific SPV, L&T Green Energy Kandla Pvt. Ltd., has been incorporated, which shall, in due course, apply for GNA in line with the project requirements and commissioning schedule.
- Timely implementation of the Kandla Transmission System is essential for enabling scalable development of green hydrogen/ammonia projects.
- LTEGL has requested expediting completion of the bidding process, including SPV transfer, targeting power drawal by the end of CY 2029 and emphasized closure of tendering process by December 2026.

3.2.4 Representative of CTUIL proposed that deliberations are required on whether to re-initiate the bidding process for the Kandla Green Hydrogen Transmission Scheme (Phase-I: 3 GW) in absence of firm GNA applications.

It was further highlighted that the Lakadia REZ Phase II (7500 MW) transmission scheme, which is also under bidding, is dependent on the Kandla (Phase-I: 3 GW) scheme. In case establishment of Kandla 765/400 kV S/s and Halvad – Kandla 765 kV D/c line do not materialize, then instead of LILO of Halvad – Kandla 765 kV D/c line at Lakadia-II S/s (~22 km or 88 ckm), the following would be required:

- Lakadia-II – Halvad 765 kV D/c line (~140 km or 280 km) along with associated bays at both ends.
- 240 MVAr, 765 kV Switchable Line Reactors at Lakadia-II end of Lakadia-II – Halvad 765 kV D/c line.

3.2.5 Representative from MNRE indicated lack of visibility of Green Hydrogen projects in the Kandla area.

3.2.6 Representative of CTUIL stated that as there is no visibility of load, the transmission scheme for Kandla Transmission System may be reviewed.

3.2.7 Expert Member Sh. S.R. Narasimhan stated that it would require modification in the Transmission System for supply of power to Green Hydrogen/Ammonia manufacturing potential in Kandla area of Gujarat (Phase-I: 3 GW) scheme. He suggested that while approving the modification in the scheme for Kandla, the voltage level of substation may be seen depending upon the load requirement fructifying.

3.2.8 Regarding, Transmission scheme for Lakadia Ph-II, CTUIL informed that the future space provision for establishment of ± 800 kV, 6000 MW HVDC (LCC) terminal station at Lakadia-II along with associated interconnections with 400 kV HVAC Switchyard & all associated equipment (incl. filters)/bus extension, etc. may be deleted, as the HVDC requirement is under review and not envisaged currently. Based on the proposed modifications, the revised project cost is ₹8238 Crore, reflecting an increase of ₹732 Crore (~ 9.75%) over the earlier estimate of ₹7506 Crore.

3.2.9 After deliberations, NCT recommended the modification in the scheme *"Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500 MW)"* as detailed below:

	Original Scope		**Modified Scope**	
Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**	**Scope of the Transmission Scheme**	**Capacity /km**
1.	**Establishment of 765/400 kV, 6x1500 MVA & 10x500 MVA, 400/220 kV Lakadia-II (Near Chitrod)** with 2x330 MVAR 765 kV Bus reactor and	• 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-	**Establishment of 765/400 kV, 6x1500MVA & 10x500MVA, 400/220kV Lakadia-II (Near Chitrod)** with 2x330 MVAR 765kV Bus reactor	• 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on

	Original Scope		Modified Scope	
Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**	**Scope of the Transmission Scheme**	**Capacity /km**
	2x125 MVAR 400 kV Bus reactor. [765 kV, 400 kV & 220 kV levels to be established in two sections with Sectionaliser arrangement. The 220 kV Sectionaliser shall be kept normally open and may be closed under contingency conditions. The 400 kV and 765 kV Sectionaliser shall be kept normally closed. The bus operation may be reviewed after proposed HVDC implementation as per requirement of Grid operator. (3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVAr 765kV BR & 1x125MVAr 420kV BR shall be on Sec-I & 3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVAr 765kV BR & 1x125MVAr 420kV BR shall be on Sec-II)] **Future provision**	I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • **765kV line bays: 8 nos. (4 Nos. on Sec-I (2 for Halvad D/c & 2 for Ahmedabad D/c) and 4 Nos. on Sec-II (2 for Kandla D/c and 2 for Vataman))** • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220kV BC– 2 Nos. • 220kV TBC – 2 Nos. • 1x125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I &	and 2x125 MVAR 400kV Bus reactor. [**765kV**, 400kV & 220kV levels to be established in two sections with Sectionaliser arrangement. The 220kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400kV and 765kV Sectionaliser shall be kept normally closed. The bus operation may be reviewed after proposed HVDC implementation as per requirement of Grid operator. (3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVAr 765kV BR & 1x125MVAr 420kV BR shall be on Sec-I & 3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVAr 765kV BR & 1x125MVAr 420kV BR shall be on Sec-II)] **Future provision (space for):**	Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • **765kV line bays: 6 nos. (4 Nos. on Sec-I (2 for Halvad D/c & 2 for Ahmedabad D/c) and 2 Nos. on Sec-II (for Vataman))** • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220kV BC– 2 Nos. • 220kV TBC – 2 Nos. • 1x125 MVAr, 420 kV bus

	Original Scope		Modified Scope	
Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**	**Scope of the Transmission Scheme**	**Capacity /km**
	(space for): ➢ 765 kV line bays along with switchable line reactors **– 6 Nos. (2 Nos. on Sec-I & 4 Nos. on Sec-II)** ➢ 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II) + **4 Nos. 400kV bays (2 nos. on each section) for HVDC Interconnection** ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II ➢ **Establishment of 6000 MW, ± 800 kV Lakadia-II (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV**	1 on Sec-II) • 400 kV Bus reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 nos. on Sec-I & 8 nos. on Sec-II for interconnection of RE Projects)	➢ 765 kV line bays along with switchable line reactors – **8 Nos. (2 Nos. on Sec-I & 6 Nos. on Sec-II)** ➢ 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II) ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II ➢ Synchronous Condenser (+300/-200MVAr) along with 400kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)	reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Bus reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 nos. on Sec-I & 8 nos. on Sec-II for interconnection of RE Projects)

	Original Scope		Modified Scope	
Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**	**Scope of the Transmission Scheme**	**Capacity /km**
	HVAC Switchyard & all associated equipment (incl. filters)/bus extension, etc. (2x1500MW poles on each 400kV section) ➢ Synchronous Condenser (+300/-200MVAr) along with 400kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)			
2.	Installation of Synchronous Condenser (+300/-200MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW-s	Synchronous Condenser along with associated 400kV bay-2 Nos. (one each on Sec-I & II)	Installation of Synchronous Condenser (+300/-200MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW-s	Synchronous Condenser along with associated 400kV bay-2 Nos. (one each on Sec-I & II)
3.	LILO of Halvad – Kandla 765kV D/c line at Lakadia-II	LILO route length ~22km. (88ckm)	**Lakadia-II – Halvad 765kV D/c line**	**140 km. (280ckm)**
3a	-	-	**2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765kV D/c line**	**765 kV line bays – 2 Nos. (AIS)**
3b.	-	-	• **765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of**	• **240 MVAr, 765 kV Switchable Line Reactor- 2 Nos. (2 for**

	Original Scope		Modified Scope	
Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**	**Scope of the Transmission Scheme**	**Capacity /km**
			Lakadia-II – Halvad 765 kV D/c line	**Lakadia-II end)** • **765 kV Switchable Line Reactor bay - 2 Nos. for Lakadia-II end** • **80 MVAr spare single-phase reactor at Lakadia-II as proposed under Sl. 9 for above 240 MVAr Switchable Line Reactor shall be utilized.**
4.	Lakadia-II – Ahmedabad 765kV D/c line	190 km (380 ckm)	Lakadia-II – Ahmedabad 765kV D/c line	190 km (380 ckm)
5.	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765kV D/c line	765 kV line bays – 2 Nos. (AIS)	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765kV D/c line	765 kV line bays – 2 Nos. (AIS)
6.	765kV, 330MVAr Switchable line reactors on each circuit at Ahmedabad end of Lakadia-II – Ahmedabad 765 kV D/c line	• 330 MVAr, 765 kV Switchable Line Reactor- 2 Nos. • 765 kV Switchable Line Reactor bay - 2 Nos. • 110MVAr spare single-phase reactor at Ahmedabad S/s is already available and same shall be used for subject Switchable Line Reactor.	765kV, 330MVAr Switchable line reactors on each circuit at Ahmedabad end of Lakadia-II – Ahmedabad 765kV D/c line	• 330 MVAr, 765 kV Switchable Line Reactor- 2 Nos. • 765 kV Switchable Line Reactor bay - 2 Nos. • 110 MVAr spare single-phase reactor at Ahmedabad S/s is already available and same shall be used for subject Switchable Line Reactor.
7.	Lakadia-II –	220 km (440 ckm)	Lakadia-II –	220 km (440 ckm)

	Original Scope		Modified Scope	
Sl. No.	**Scope of the Transmission Scheme**	**Capacity /km**	**Scope of the Transmission Scheme**	**Capacity /km**
	Vataman 765 kV D/c line (220 km.)		Vataman 765kV D/c line (220km.)	
8.	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765 kV D/c line	765 kV line bays – 2 Nos. (AIS)	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765kV D/c line	765 kV line bays – 2 Nos. (AIS)
9.	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765kV D/c line	• 240 MVAr, 765 kV Switchable Line Reactor - 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV Switchable Line Reactor bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80 MVAr spare single-phase reactor at Lakadia-II for above 240 MVAr Switchable Line Reactor. • 80 MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Switchable Line Reactor.	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765 kV D/c line	• 240 MVAr, 765 kV Switchable Line Reactor- 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV Switchable Line Reactor bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80 MVAr spare single-phase reactor at Lakadia-II for above 240 MVAr Switchable Line Reactor. • 80 MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Switchable Line Reactor.

3.3 **Modification in the transmission scheme "Transmission System for integration of Krishnagiri REZ Phase-I"**

3.3.1 Representative of CTUIL informed that the transmission system for integration of

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित
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विद्युत मंत्रालय

अधिसूचना

नई दिल्ली, 11 फरवरी, 2026

का.आ. 725(अ).— विद्युत अधिनियम, 2003 (2003 की सं .36) की धारा 63 के अंतर्गत परिचालित दिशा-निर्देशों के पैरा 3 के उप पैरा-3.2 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए केंद्र सरकार ने 37वीं राष्ट्रीय पारेषण समिति की बैठक की सिफारिशों पर, संबंधित बोली प्रक्रिया समन्वयक-(बीपीसी) के विवरण सहित टीबीसीबी मोड के अंतर्गत निम्नलिखित पारेषण स्कीमों को एतदद्वारा अधिसूचित करती है: -

1. भड़ला-III, रामगढ़ पीएस और कानपुर में संवर्धन। (पीजी)

संभावित कार्यान्वयन समय सीमा :दिनांक 20.01.2029

बीपीसी :आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड

कार्यक्षेत्र:

क्र सं.	पारेषण स्कीम का कार्यक्षेत्र	घटक विवरण
1.	765/400/220 केवी भड़ला-III पीएस में 400/220 केवी, 5x500 एमवीए (छठे से 10वें) आईसीटी का	• 500 एमवीए, 400/220 केवी आईसीटी - 5 • (220 केवी सेक्शन-2 (छठे से 9वें) में 4 आईसीटी

	संवर्धन	और 220 केवी सेक्शन-1 (10वां) में 1 आईसीटी) • 400 केवी आईसीटी बे - 5 • 220 केवी आईसीटी बे - 4 • 220 केवी आईसीटी (जीआईएस) बे - 1 (10 वें आईसीटी के लिए)। • आईसीटी (10वें) के 220 केवी साइड से 220 केवी जीआईएस बे (सेक्शन-1) के इंटरकनेक्शन के लिए 220 केवी जीआईएस बस डक्ट / केबल
2.	765/400/220 केवी भड़ला-III पीएस में 5, 220 केवी लाइन बे का कार्यान्वयन।	• 220 केवी लाइन बे -5
3.	765/400/220 केवी भड़ला।।।- पीएस में एक 400 केवी लाइन बे का कार्यान्वयन।	• 400 केवी लाइन बे -5
4.	765 / 400/220 केवी भड़ला-III पीएस पर 2 सेट 400 केवी सेक्शनलाइजर बे का कार्यान्वयन	• 400 केवी सेक्शनलाइज़र बे -2 सेट
5.	765/400 केवी रामगढ़ पीएस में 765/400 केवी, 2x1500 एमवीए तीसरे) और चौथे) आईसीटी का संवर्धन	• 1500 एमवीए, 765/400 केवी आईसीटी -2 • 765 केवी आईसीटी बे -2 • 400 केवी आईसीटी बे -2
6.	765/400 केवी रामगढ़ पीएस में 400/220 केवी, 2x500 एमवीए तीसरे) और चौथे) आईसीटी का संवर्धन	• 500 एमवीए, 400/220 केवी आईसीटी -2 • 400 केवी आईसीटी बे -2 • 220 केवी आईसीटी बे -2
7.	765/400 केवी रामगढ़ पीएस में दो 220 केवी लाइन बे का कार्यान्वयन	• 220 केवी लाइन बे -2
8.	765/400 केवी रामगढ़ पीएस में एक 400 केवी लाइन बे का कार्यान्वयन	• 400 केवी लाइन बे -1
9.	765/400 केवी कानपुर सबस्टेशन में (पीजी) 765/400 केवी, 1x1500 एमवीए (तीसरा) आईसीटी का संवर्धन	• 1500 एमवीए (3 x 500 एमवीए), 765/400 केवी आईसीटी - 1 • 765 केवी आईसीटी बे (जीआईएस) जिसमें व्यास का पूरा होना शामिल है। • मौजूदा स्पेयर बे में 400 केवी आईसीटी बे (जीआईएस) • समाप्ति के साथ सभी संबंधित जीआईएस डक्ट।

अनंतपुरम-III पीएस आरईजेड चरण-1 (3 गीगावाट) के एकीकरण के लिए पारेषण प्रणाली।

संभावित कार्यान्वयन समय सीमा :30 माह।

बीपीसी :पावर फाइनेंस कॉर्पोरेशन लिमिटेड (पीएफसी)

कार्यक्षेत्र:

क्रसं.	पारेषण स्कीम का कार्यक्षेत्र	क्षमता /किमी
1	अनंतपुरम-III पीएस में 2 x 330 एमवीएआर (765 केवी) बस रिएक्टर सहित 400 केवी स्तर पर प्रत्येक 4500 एमवीए के दो (2) खंडों के प्रावधान के साथ-साथ अनंतपुर जिले में उरवाकोंडा/ बेलुगुप्पा/कल्याणदुर्ग क्षेत्रों के पास 3x1500 एमवीए, 765/400 केवी और 7x500 एमवीए, 400/220 केवी अनंतपुरम-III	• 765/400 केवी, 1500 एमवीए, आईसीटी - 3 (1 अतिरिक्त यूनिट सहित 10x500 एमवीए) • 765 केवी आईसीटी बे - 3 • 400 केवी आईसीटी बे- 3 • 765 केवी लाइन बे - 2 (अनंतपुरम-III पीएस पर अनंतपुरम-III से कृष्णागिरि 765 केवी डी/सी लाइन की समाप्ति के लिए) • 765 केवी, 330 एमवीएआर बस रिएक्टर- 2

	पूलिंग स्टेशन की स्थापना। **भावी स्थान का प्रावधान :** • 765/400 केवी, 1500 एमवीए, आईसीटी – 3 • 765 केवी आईसीटी बे – 3 • 400 केवी आईसीटी बे – 3 • 400/220 केवी, 500 एमवीए, आईसीटी – 7 • 400 केवी आईसीटी बे – 7 • 220 केवी आईसीटी बे – 7 • 765 केवी लाइन बे – 12 • (एसएलआर के प्रावधान के साथ) • 400 केवी लाइन बे – 11 (एसएलआर के प्रावधान के साथ) • 220 केवी लाइन बे – 15 • 220 केवी बस सेक्शनलाइज़र: 2 सेट • 220 केवी बस कपलर (बीसी) बे – 2 • 220 केवी ट्रांसफर बस कपलर (टीबीसी) बे – 2 • 400 केवी बस सेक्शनलाइज़र: 1 सेट	(बस रिएक्टर और लाइन रिएक्टर के लिए एक स्विचेबल अतिरिक्त यूनिट सहित 7×110 एमवीएआर) • 765 केवी बस रिएक्टर बे - 2 • 400/220केवी, 500 एमवीए, आईसीटी - 7 • 400 केवी आईसीटी बे - 7 • 220 केवी आईसीटी बे - 7 • 220 केवी लाइन बे - 10 • 220 केवी बस सेक्शनलाइज़र: 1 सेट • 220 केवी बस कपलर (बीसी) बे - 2 • 220 केवी ट्रांसफर बस कपलर (टीबीसी) बे - 2
2	अनन्तपुरम-III पीएस में ±300 एमवीएआर स्टेटकॉम	• 400 केवी बे -1 • ± 300 एमवीएआर स्टेटकॉम -1 सेट
3	अनंतपुरम-III छोर के दोनों सर्किटों पर 240 एमवीएआर एसएलआर के साथ (कनवर्टिबल) -अनंतपुरम III से कृष्णागिरि 765 केवी डी / सी लाइन	~ 140 किमी • 765 केवी लाइन बे - 2 (कृष्णागिरि में) • अनंतपुरम-III पीएस में 765 केवी, 240 एमवीएआर एसएलआर - 2 (एक स्विचेबल अतिरिक्त यूनिट सहित 7x80 एमवीएआर) अनंतपुरम-III पीएस में 765 केवी एसएलआर के लिए स्विचिंग उपकरण - 2

गुजरात में जाम खंभालिया आरई परियोजना से विद्युत के एकीकरण के लिए पारेषण प्रणाली – चरण-।। (5500 मेगावाट) और जामनगर चरण-। (1000 मेगावाट)।

संभावित कार्यान्वयन समयसीमा :31.03.2030

बीपीसी :पावर फाइनेंस कॉपोरेशन लिमिटेड (पीएफसी)

कार्यक्षेत्र:

क्रसं.	**पारेषण स्कीम का कार्यक्षेत्र**	**क्षमता किमी /**
1.	2x330 एमवीएआर, 765 केवी बस रिएक्टर एवं 2x125 एमवीएआर, 420 केवी बस रिएक्टर के साथ कल्याणपुर के निकट (जीआईएस)4x1500 एमवीए, 765/400 केवी तथा 10x500 एमवीए, 400/220 केवी सबस्टेशन की स्थापना। **भावी प्रावधान :(स्थान के लिए)** 1. बे के साथ-साथ 765/400 केवी, 1500	• 765 / 400 केवी, 1500 एमवीए आईसीटी - 4 (एक अतिरिक्त आईसीटी यूनिट सहित 13 x 500 एमवीए सिंगल फेज यूनिट) (सेक्शन-I पर 3 और सेक्शन-II पर 1) • 400/220 केवी, 500 एमवीए आईसीटी – 10 (सेक्शन-I पर 5 और सेक्शन-II पर 5)

	एमवीए आईसीटी - 2 (सेक्शन-II पर) 2. स्विचेबल लाइन रिएक्टर के साथ-साथ 765 केवी लाइन बे - 8 (सेक्शन-1 पर 4 और सेक्शन-।। पर 4) 3. बे के साथ-साथ 765 केवी, 330 एमवीएआर बस रिएक्टर : 2 (सेक्शन-I पर 1 और सेक्शन-।। पर 1) 4. स्विचेबल लाइन रिएक्टर के साथ-साथ 400 केवी लाइन बे - 12 । (सेक्शन-1 पर 4 और सेक्शन-II पर 8) 5. बे के साथ-साथ 420 केवी, 125 एमवीएआर बस रिएक्टर: 2 (सेक्शन-I पर 1 सेक्शन-II पर 1) ➢ 220 केवी लाइन बे: सेक्शन-I पर 3 और सेक्शन-II पर 3 ➢ 400 केवी एचवीएसी स्विचयार्ड तथा सभी संबंधित उपकरणों (फिल्टर सहित)/बस एक्सटेंशन आदि सहित संबद्ध इंटरकनेक्शन (प्रत्येक 400 केवी बस सेक्शन पर 2x1500 मेगावाट पोल) के साथ-साथ 6000 मेगावाट, ± 800 केवी कल्याणपुर (जीआईएस) (एचवीडीसी) [एलसीसी] टर्मिनल स्टेशन (4x1500 मेगावाट) की स्थापना। ➢ 400 केवी बे के साथ ±400 एमवीएआर स्टेटकॉम- 2 (सेक्शन-1 पर 1 और सेक्शन-2 पर 1)	• 765 केवी आईसीटी बे - 4 • 400 केवी आईसीटी बे - 14 • 220 केवी आईसीटी बे - 10 • 765 केवी लाइन बे - 4 (सेक्शन-1 पर 2 और सेक्शन-II पर 2) • 765 केवी सेक्शनलाइज़र बे- 1 सेट • 400 केवी सेक्शनलाइजेशन बे- 1 सेट • 220 केवी सेक्शनलाइजेशन बे- 1 सेट • 1x330 एमवीएआर, 765 केवी बस रिएक्टर- 2 (बस / लाइन रिएक्टरों के लिए एक अतिरिक्त यूनिट सहित 7x110 एमवीएआर सिंगल फेज रिएक्टर) (सेक्शन-I पर 1 और सेक्शन-II पर 1) • 765 केवी बस रिएक्टर बे- 2 • 125 एमवीएआर, 420 केवी रिएक्टर- 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) • 400 केवी रिएक्टर बे- 2 • 220 केवी बीसी बे- 2 • 400 केवी लाइन बे – 1 (सेक्शन-I में आरई परियोजना के इंटर-कनेक्शन के लिए) • 220 केवी लाइन बे - 12 (आरई परियोजनाओं के इंटर-कनेक्शन के लिए, सेक्शन-1 पर 6 और सेक्शन-II पर 6)
2.	कल्याणपुर (जीआईएस) जामनगर - (जीआईएस) 765 केवी डीसी लाइन/	95 किमी
3.	जामनगर (जीआईएस)एसएस/ पर दो 765 केवी लाइन बे	765 केवी लाइन बे -2 (जीआईएस)
4.	कल्याणपुर राजकोट के) सौराष्ट्र - (जीआईएस) (जीईटीसीओ) (निकट**765** केवी डीसी लाइन/	225 किमी
5.	कल्याणपुर (जीआईएस) – सौराष्ट्र (राजकोट के पास) (जीईटीसीओ) 765 केवी डी/सी लाइन (एनजीआर बाईपास व्यवस्था के साथ) के कल्याणपुर (जीआईएस) छोर के प्रत्येक सर्किट पर 330 एमवीएआर स्विचेबल लाइन रिएक्टर	• 330 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर- 2 • 765 केवी लाइन रिएक्टर के लिए स्विचिंग उपकरण- 2
6.	सौराष्ट्र (राजकोट के निकट) (जीईटीसीओ) एस/एस पर दो 765 केवी लाइन बे	• 765 केवी लाइन बे -2
7.	कल्याणपुर (जीआईएस) में 1200 एमवीए (न्यूनतम) के पीसीसी पर सिंक्रोनस कंडेनसर की स्थापना (+300/-200एमवीएआर) (न्यूनतम) और शॉर्ट सर्किट का योगदान – 2 जड़त्व का मान (मेगावाट-सेकेंड) आरएफपी दस्तावेज में परिभाषित किया जाएगा।	• 400 **केवी संबद्ध बे के साथ-साथ सिंक्रोनस कंडेनसर - 2 (प्रत्येक सेक्शन-1 और 2 पर एक)**

8.	जामनगर (जीआईएस) एस/एस में 3x500 एमवीए, 400/220 केवी आईसीटी की स्थापना के साथ 220 केवी स्विचयार्ड का निर्माण	• 220 केवी बस सेक्शन-I का निर्माण • 220 केवी बीसी बे - 1 • 400/220 केवी, 500 एमवीए आईसीटी – 3 (400 केवी और 220 केवी सेक्शन-I पर) • 400 केवी आईसीटी बे- 1 (2 आईसीटी को 2 जीआईएस बे में टर्मिनेट किया जाना है, जिसे जामनगर एस/एस में व्यास कंप्लीशन के हिस्से के तौर पर "जामनगर क्षेत्र में फेज़-I के तहत लगभग 3.6 गीगावाट लोड की आपूर्ति के लिए गुजरात में नेटवर्क विस्तार स्कीम" स्कीम के तहत लागू किया जा रहा है) • 220 केवी आईसीटी बे - 3
9.	आरई इंटरकनेक्शन के लिए चार 220 केवी लाइन बे	220 केवी लाइन बे - 4

टिप्पणी:

- *जामनगर एस क्रम सं ,एस का टीएसपी/**3, 8** और **9** पर निशुल्क आधार पर उपर्युक्त कार्यक्षेत्र के लिए : स्थान उपलब्ध कराएगा।*
- *जीईटीसीओ क्रम सं ,**6** में उपर्युक्त कार्यक्षेत्र के लिए निशुल्क आधार पर स्थान उपलब्ध कराएगा।:*
- *डेढ़ ब्रेकर स्कीम में व्यास को पूरा करने (जीआईएस)के लिए आवश्यक बे का निष्पादन भी टीएसपी (ओं) द्वारा किया जाएगा।*
- *उपर्युक्त सिंकोनों -.सं.क्र)7 पर को इसके टैरिफ तंत्र के लिए स्टेटकॉम और एसवीसी के समान ("पारेषण परिसंपत्ति" माना जाएगा।*

4. **गुजरात में लकड़िया आरईजेड में आरई परियोजनाओं से विद्युत के एकीकरण के लिए पारेषण प्रणाली) ।।-चरण -7500 मेगावाट(**

संभावित कार्यान्वयन समयसीमा :36 महीने

बीपीसी :आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड

कार्यक्षेत्र:

क्रसं.	**पारेषण स्कीम का कार्यक्षेत्र**	**क्षमता किमी /**
1.	2x330 एमवीएआर 765 केवी बस रिएक्टर और 2x125 एमवीएआर 400 केवी बस रिएक्टर के साथ 765/400 केवी, 6x1500 एमवीए और 10x500 एमवीए, 400/220 केवी लकड़िया-।। (चित्रोड के निकट) की स्थापना। *[765 केवी, 400 केवी और 220 केवी स्तरों को सेक्शनलाइज़र व्यवस्था के साथ दो खंडों में स्थापित किया जाएगा। 220 केवी सेक्शनलाइज़र को सामान्य रूप से खुला रखा जाएगा और आकस्मिक स्थिति में बंद किया जा सकता है। 400 केवी और 765 केवी सेक्शनलाइज़र को सामान्य रूप से बंद रखा जाएगा। ग्रिड ऑपरेटर की आवश्यकता के अनुसार प्रस्तावित एचवीडीसी कार्यान्वयन के बाद बस संचालन की समीक्षा की*	• 765/400 केवी, 1500 एमवीए आईसीटी - 6 (एक अतिरिक्त आईसीटी यूनिट सहित 19 x 500 एमवीए सिंगल फेज यूनिट) • 400/220 केवी आईसीटी - 10 (सेक्शन-I पर 5 और सेक्शन-II पर 5) • 765 केवी आईसीटी बे - 6 • 400 केवी आईसीटी बे - 16 • 220 केवी आईसीटी बे - 10 • 1x330 एमवीएआर, 765 केवी बस रिएक्टर- 2 (बस/लाइन रिएक्टर के लिए एक अतिरिक्त इकाई सहित 7x110 एमवीएआर सिंगल फेज रिएक्टर) (सेक्शन-I पर 1 और सेक्शन-II पर 1) • 765 केवी बस रिएक्टर बे- 2 • 765 केवी लाइन बे- 8 (सेक्शन-I पर 4 (हलवाद

	जा सकती है। *(3x1500 एमवीए 765/400 केवी आईसीटी, 5x500 एमवीए 400/220 केवी आईसीटी, 1x330 एमवीए 765 केवी बीआर और 1x 125 एमवीएआर 420 केवी बीआर सेक्शन-1 पर होंगे और 3 x1500 एमवीए 765/400 केवी आईसीटी, 5x500 एमवीए 400/220 केवी आईसीटी, 1x330 एमवीए 765 केवी बीआर और 1x125 एमवीएआर 420 केवी बीआर सेक्शन-2 पर होंगे)]* **भावी प्रावधान (स्थान के लिए):** ➢ 765 केवी लाइन बे के साथ स्विचेबल लाइन रिएक्टर - 6 (सेक्शन-I पर 2 सेक्शन-II पर 4) ➢ 765 केवी बस रिएक्टर के साथ बे: 2 (सेक्शन-I पर 1 और सेक्शन-II पर पर 1) ➢ स्विचेबल लाइन रिएक्टर के साथ 400 केवी लाइन बे - 7 (सेक्शन-I पर 3 और सेक्शन-II पर 4) + एचवीडीसी इंटरकनेक्शन के लिए चार 400 केवी बे (प्रत्येक सेक्शन पर 2) ➢ बे के साथ-साथ 420 केवी, 125 एमवीएआर बस रिएक्टर: 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) ➢ 220 केवी लाईन बे-2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) ➢ 400 केवी एचवीएसी स्विचयार्ड और सभी संबंधित उपकरणों (फिल्टर सहित)/बस एक्सटेंशन आदि सहित संबद्ध इंटरकनेक्शन (प्रत्येक 400 केवी सेक्शन पर 2x1500 मेगावाट पोल) के साथ-साथ 6000 मेगावाट, ± 800 केवी लकड़िया-II (एचवीडीसी) [एलसीसी] टर्मिनल स्टेशन (4x1500 मेगावाट) की स्थापना। ➢ 400 केवी बे के साथ-साथ सिंक्रोनस कंडेनसर (+300/-200 एमवीएआर)- 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1)	डी/सी के लिए 2 और अहमदाबाद डी/सी के लिए 2) और सेक्शन-II पर 4 (कांडला डी/सी के लिए 2 और वातमन के लिए 2) • 765 केवी सेक्शनलाइज़र बे- 1 सेट • 400 केवी सेक्शनलाइज़र बे- 1 सेट • 220 केवी सेक्शनलाइज़र बे- 1 सेट • 220 केवी बीसी - 2 • 220 केवी टीबीसी - 2 • 125 एमवीएआर, 420 केवी रिएक्टर - 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) • 400 केवी रिएक्टर बे - 2 • 400 केवी लाइन बे - 3 (आरई परियोजनाओं के इंटरकनेक्सन के लिए सेक्शन-I पर 2 और सेक्शन-II पर 1) • 220 केवी लाइन बे- 15 (आरई परियोजनाओं के इंटरकनेक्सन के लिए सेक्शन-I पर 7 और सेक्शन-II पर 8)
2.	लकड़िया-II पर सिंक्रोनस कंडेनसर की स्थापना (+300/-200 एमवीएआर) (न्यूनतम) तथा 1200 एमवीए (न्यूनतम) के पीसीसी पर शॉर्ट सर्किट कंट्रीब्यूशन। जड़त्व का मान (मेगावाट-एस) आरएफपी दस्तावेज़ में परिभाषित किया जाएगा।	संबदध 400 केवी बे के साथ-साथ सिंक्रोनस कंडेनसर -2 (सेक्शन-I और सेक्शन-II प्रत्येक पर एक)
3.	लकड़िया-II पर हलवाद - कांडला 765 केवी डी/सी लाइन का लिलो	लिलो मार्ग की लंबाई ~22 किमी. (88 सीकेएम)
4.	लकड़िया-II- अहमदाबाद 765 केवी डी/सी लाइन	190 किमी (380 सीकेएम)
5	लकड़िया-II - अहमदाबाद 765 केवी डी/सी	765 केवी लाइन बे - 2 (एआईएस)

	लाइन के लिए अहमदाबाद एस/एस में दो 765 केवी लाइन बे	
6	लकड़िया-।। - अहमदाबाद 765 केवी डी/सी लाइन के अहमदाबाद छोर के प्रत्येक सर्किट पर 330 एमवीएआर स्विचेबल लाइन रिएक्टर	• 330 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर- 2 • 765 केवी स्विचेबल लाइन रिएक्टर बे - 2 • अहमदाबाद एस/एस में 110 एमवीएआर स्पेयर सिंगल फेज रिएक्टर पहले से ही उपलब्ध हैं और इसका उपयोग एसडब्ल्यू एलआर के लिए किया जाएगा।
7	लकड़िया-।। - वटामण 765 केवी डी/सी लाइन (220 किमी)	220 किमी (440 सीकेएम)
8	लकड़िया- 2,765 केवी डी/सी लाइन के लिए वटामण एस/एस में 765 केवी लाइन बे	765 केवी लाइन बे -2 (एआईएस)
9	लकड़िया-।। - वटामण 765 केवी डी/सी लाइन के दोनों छोरों के प्रत्येक सर्किट पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर	• 240 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर - 4 (लकड़िया-II छोर के लिए 2 और वटामण छोर के लिए 2) • 765 केवी स्विचेबल लाइन रिएक्टर बे - 4 (लकड़िया-।। के लिए 2 और वटामण के लिए 2)। • उपर्युक्त 240 एमवीएआर एसडब्ल्यू एलआर के लिए लकड़िया-।। पर 80 एमवीएआर अतिरिक्त सिंगल-फेज रिएक्टर। • वटामण एस/एस पर 80 एमवीएआर स्पेयर सिंगल-फेज रिएक्टर पहले से ही उपलब्ध हैं और उसी का उपयोग एसडब्ल्यू एलआर के लिए किया जाएगा।

नोट:

- *अहमदाबाद एस/एस और वटामण एस/एस के टीएसपी को अपने संबंधित सबस्टेशनों में उपर्युक्त कार्यक्षेत्र के लिए स्थान (नि:शुल्क) उपलब्ध कराएगा।*
- *उपर्युक्त सिंकोनों -.सं.क्र) 2 पर को इसके टैरिफ तंत्र के लिए स्टेटकॉम और एसवीसी के समान ('पारेषण परिसंपत्ति' माना जाएगा।*

5. लकड़िया (चरण-2: 7.5 गीगावाट), जाम खंभालिया (चरण-2: 5.5 गीगावाट) और जामनगर (चरण-1: 1 गीगावाट) से विद्युत निकासी के लिए सामान्य पारेषण प्रणाली- भाग- क

संभावित कार्यान्वयन समयसीमा :36 महीने

बीपीसी :पावर फाइनेंस कॉपोरेशन लिमिटेड (पीएफसी)

कार्यक्षेत्र:

क्रसं.	**पारेषण स्कीम का कार्यक्षेत्र**	***क्षमता किमी /***
1.	दक्षिण ओलपैड एस में/एस (जीआईएस) 1x1500 एमवीए, 765/400 केवी (तीसरा) आईसीटी द्वाराट्रांसफॉर्मेशन क्षमता में संवर्धन	• 765/400 केवी, 1500 एमवीए आईसीटी - 1
2.	लकड़िया (जीआईएस) वडोदरा -765 केवी डी सी लाइन/के निर्माण हेतु वड़ोदरा हलवाद - (जीआईएस)765 केवी डीसी / हलवाद - लाइन को लकाडिया765 केवी	400 केवी आईसीटी बे - 1 (जीआईएस) (इसे खावदा फेज-4 भाग-ग स्कीम के तहत व्यास कम्पलीशन के एक भाग के रूप में निर्मित किया जा रहा है)

	डी/सी लाइन (हलवाद एस/एस के निकट) में समाप्त किया जाएगा।	
3.	लकड़िया - वडोदरा 765 केवी डी /सी लाइन (ऊपर क्रमांक 2 पर विवरण के अनुसार बनाई गई) की समाप्ति के लिए वड़ोदरा (जीआईएस) छोर पर 765 केवी लाइन बे	• 765 केवी लाइन बे - 2 (जीआईएस) *(इसका निर्माण "फेज़- IV (7 गीगावाट): भाग ख के तहत गुजरात के खावदा क्षेत्र में संभावित नवीकरणीय ऊर्जा क्षेत्र से विद्युत निकासी के लिए पारेषण प्रणाली" के तहत व्यास कम्पलीशन के हिस्से के रूप में किया जा रहा है। इन बेज़ पर लाइन को समाप्त करने के लिए लाइन साइड उपकरण को इस पारेषण स्कीम के तहत लागू किया जाएगा)*
4.	लकड़िया- वडोदरा (जीआईएस) 765 केवी डी/सी लाइन के वडोदरा (जीआईएस) छोर के प्रत्येक सर्किट पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर। (क्र.सं.- 2 पर उपर्युक्त विवरण के अनुसार निर्मित)	• 240 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर- 2 । • 765 केवी स्विचेबल लाइन रिएक्टर बे- 2 (इसका निर्माण "फेज़- IV (7 गीगावाट): भाग ख के तहत गुजरात के खावदा क्षेत्र में संभावित नवीकरणीय ऊर्जा क्षेत्र से विद्युत निकासी के लिए पारेषण प्रणाली" के तहत व्यास कम्पलीशन के हिस्से के रूप में किया जा रहा है। • वडोदरा एस/एस में 80 एमवीएआर, 1 फेज अतिरिक्त रिएक्टर पहले से ही उपलब्ध है और उसी का इस्तेमाल स्विचेबल एलआर के लिए किया जाएगा।
5.	लकड़िया- वडोदरा (जीआईएस) 765 केवी डी/सी लाइन के हलवाद स्विचिंग स्टेशन के बाईपास बिंदु पर 765 केवी, 330 एमवीएआर स्विचेबल मिड-पॉइंट रिएक्टर (टिप्पणी घ देखें)	• 330 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर- 2 • 765 केवी स्विचेबल लाइन रिएक्टर बे- 2 • हलवाद एस/एस के निकट बाईपास बिंदु पर 110 एमवीएआर अतिरिक्त सिंगल फेज रिएक्टर।

टिप्पणी :

(क). डेढ़ ब्रेकर स्कीम में व्यास जीआईएस)) को पूरा करने के लिए ज़रूरी बे का काम भी टीएसपी (ओं) द्वारा किया जाएगा।

(ख). दक्षिण ओलपाड एसएस क/ा टीएसपी ,क्रसं. 1 के अनुसार ऊपर्युक्त कार्यक्षेत्र के लिए स्थान (निशुल्क) उपलब्ध कराएगा।

(ग). वडोदरा का टीएसपी (जीआईएस), ऊपर्युक्त कार्यक्षेत्र के लिए क्र सं .3 और 4 के अनुसार स्थान (निशुल्क)उपलब्ध कराएगा।

(घ). (घ). चूंकि "चरण-3 भाग क के तहत खवड़ा आरई पार्क से अतिरिक्त 7 गीगावाट आरई की निकासी के लिए पारेषण स्कीम" परियोजना (हलवाद ट्रांसमिशन लिमिटेड- एईएसएल द्वारा कार्यान्वयनाधीन) के तहत हलवाद स्विचिंग स्टेशन पर स्थान आवंटित करते समय लकड़िया - वडोदरा (जीआईएस) 765 केवी डी/सी लाइन पर हलवाद स्विचिंग स्टेशन के बाईपास पॉइंट पर 765 केवी, 330 एमवीएआर स्विचेबल मिड-पॉइंट रिएक्टर के प्रावधान की परिकल्पना नहीं की गई थी, इसलिए रिएक्टर को हलवाद स्विचिंग स्टेशन पर अन्य पारेषण घटकों के लिए आरक्षित स्थान का उपयोग करके स्थापित किया जाएगा, जिसे आरएफपी दस्तावेज़ में निर्दिष्ट किया जाएगा।

6. लकाडिया -चरण)2: 7.5 गीगावाट(, जाम खंभालिया -चरण)2: 5.5 गीगावाट-चरण) और जामनगर (1: 1 गीगावाट(से विद्युत निकासी के लिए सामान्य पारेषण प्रणाली ख- भाग –

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बीपीसी :आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड

कार्यक्षेत्र:

क्रमं.	**पारेषण स्कीम का कार्यक्षेत्र**	*क्षमता किमी /*
1.	2x330 एमवीएआर 765 केवी बस रिएक्टर एवं 2x125 एमवीएआर 400 केवी बस रिएक्टर के साथ 765/400 केवी, 3x1500 एमवीए और 400/220 केवी, 3x500 एमवीए नासिक एस एस/ की स्थापना (नासिक के दक्षिण की ओर) **भावी प्रावधान (स्थान के लिए)** ➢ बे के साथ 765/400 केवी, 1500 एमवीए आईसीटी - 3 (सेक्शन-II पर)। ➢ स्विचेबल लाइन रिएक्टरों के साथ 765 केवी लाइन बे - 10 (सेक्शन-I पर 4 और सेक्शन-II पर 6)। ➢ बे के साथ 765 केवी, 330एमवीए बस रिएक्टर: 2 (सेक्शन-II पर) ➢ 765 केवी सेक्शनलाइजर बे: 1 सेट ➢ 400 केवी सेक्शनलाइजर बे: 1 सेट ➢ बे के साथ 400/220 केवी, 500 एमवीए आईसीटी- 7 (सेक्शन-I पर 2 और सेक्शन-II पर 5)। ➢ स्विचेबल लाइन रिएक्टर के साथ 400 केवी लाइन बे - 10 (सेक्शन-I पर 4 और सेक्शन-II पर 6)।	• 765 / 400 केवी, 1500 एमवीए आईसीटी - 3 (एक अतिरिक्त आईसीटी इकाई सहित 10x500 एमवीए एकल चरण इकाइयां • • 400/220केवी आईसीटी - 3 • 765 केवी आईसीटी बे - 3 • 400 केवी आईसीटी बे - 6 • 220 केवी आईसीटी बे - 3 • 765 केवी लाइन बे - 2 • 1x330 एमवीएआर, 765 केवी बस रिएक्टर - 2 (बस / लाइन रिएक्टर के लिए एक अतिरिक्त इकाई सहित 7x110 एमवीएआर सिंगल फेज रिएक्टर) • 765 केवी बस रिएक्टर बे - 2 • 220 केवी बीसी - 1 • 220 केवी टीबीसी - 1 • 125 एमवीएआर, 420 केवी रिएक्टर - 2 • 400 केवी रिएक्टर बे - 2 • 400 केवी लाइन बे - 2

	➢ बे के साथ 420 केवी, 125 एमवीएआर बस रिएक्टर- 2 (सेक्शन-II पर)। ➢ 220 केवी सेक्शनलाइजर बे- 1 सेट ➢ 220 केवी बीसी और टीबीसी - प्रत्येक 1 ➢ 220 केवी लाइन बे: सेक्शन-I पर 2 और सेक्शन-II पर 8	• • 220 केवी लाइन बे - 6 (एमएसईटीसीएल 220 केवी लाइनों के लिए: अडवाड़ी 220 केवी डी/सी, नासिक जीसीआर 220 केवी डी/सी और नासिक ओसीआर 220 केवी डी/सी)
2.	दक्षिण ओलपाड (जीआईएस) - नासिक 765 केवी डी/सी लाइन (240 किमी)।	• 240 किमी ;(480 सीकेएम)
3.	दक्षिण ओलपाड - नासिक 765 केवी डी/सी लाइन के लिए दक्षिण ओलपाड (जीआईएस) एस/एस (सेक्शन-II) में दो 765 केवी लाइन बे।	• 765 केवी सेक्शन-।। के निर्माण के लिए 765 केवी सेक्शनलाइजर के 1 सेट के साथ 765 केवी लाइन बे- 2 (जीआईएस) (सेक्शन-।।)
4.	दक्षिण ओलपाड - नासिक 765 केवी डी/सी लाइन के दोनों छोरों के प्रत्येक सर्किट पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर	• 240 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर- 4 (दक्षिण ओलपाड छोर के लिए 2 और नासिक छोर के लिए 2) • 765 केवी स्विचेबल लाइन रिएक्टर बे- 4 (दक्षिण ओलपाड छोर के लिए 2 और नासिक छोर के लिए 2) • 240 एमवीआर स्विचेबल एलआर के लिए नासिक में 80 एमवीआर अतिरिक्त सिंगल-फेज रिएक्टर • 80 एमवीएआर स्पेयर सिंगल-फेज रिएक्टर साउथ ओलपाड एस/एस में पहले से ही उपलब्ध है और इसका उपयोग स्विचेबल एलआर के लिए किया जाएगा ।
5.	नासिक-पिंपलगांव (एमएसईटीसीएल) 400 केवी डी/सी लाइन (क्वाड एसीएसआर/एएएसी/एएल59 मूस समतुल्य) (लाइन को सिनर टीपीपी / रेमंड अर्थात् नासिक के पूर्वी हिस्से के पास से रूट किया जाएगा)।...	80 किमी (160 किमी)
6.	नासिक-पिंपलगांव (एमएसईटीसीएल) 400 केवी लाइन (क्वाड एसीएसआर / एएएसी / एएल59 मूस समकक्ष) के लिए पिंपलगांव एस / एस में 400 केवी लाइन बे की संख्या 2	400 केवी लाइन बे - 2

टिप्पणी:

क) डेढ़ ब्रेकर स्कीम में व्यास (जीआईएस) को पूरा करने के लिए आवश्यक बे (जीआईएस) का भी टीएसपी द्वारा निष्पादन किया जाएगा।

ख) दक्षिण ओलपाड (जीआईएस) का टीएसपी, उपर्युक्त कार्यक्षेत्र के लिए स्थान (निःशुल्क) उपलब्ध कराएगा।

ग) एमएसईटीसीएल, पिंपलगांव एस/एस में उपर्युक्त कार्यक्षेत्र के लिए स्थान (निःशुल्क) उपलब्ध कराएगा।

घ) एमएसईटीसीएल, नासिक एस/एस से 220 केवी के लिए डाउनस्ट्रीम प्रणाली को नियत समय-सीमा में लागू करेगा।

7. लकाडिया (चरण-2: 7.5 गीगावाट), जाम खंभालिया (चरण-2: 5.5 गीगावाट) और जामनगर (चरण-1: 1 गीगावाट) से विद्युत निकासी के लिए सामान्य पारेषण प्रणाली- भाग- ग

संभावित कार्यान्वयन समयसीमा :36 महीने

बीपीसी :पावर फाइनेंस कॉपोरेशन लिमिटेड (पीएफसी)

कार्यक्षेत्र:

क्र.सं	पारेषण स्कीम का कार्यक्षेत्र	*क्षमता किमी /*
1.	2 x 330 एमवीएआर 765 केवी बस रिएक्टर और 2 x 125 एमवीएआर 400 केवी बस रिएक्टर के साथ 765/400 केवी, 2 x 1500 एमवीए और 400/220 केवी, 3x 500 एमवीए आलेफाटा एस/एस की स्थापना। [765 केवी और 400 केवी बस सेक्शनलाइज़र को सामान्य रूप से बंद रखा जाना चाहिए। ग्रिड स्थितियों के आधार पर खोला जा सकता है] **भावी प्रावधान (स्थान के लिए):** ➢ बे के साथ 765/400 केवी, 1500 एमवीए आईसीटी - 4 (सेक्शन-I पर 2 और सेक्शन-II पर 2) ➢ स्विचेबल लाइन रिएक्टर के साथ 765 केवी लाइन बे - 6 (सेक्शन-I पर 2 और सेक्शन-II पर 4) ➢ बे के साथ 765 केवी, 330 एमवीएआर बस रिएक्टर: 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) ➢ बे के साथ 400/220 केवी, 500 एमवीएआर आईसीटी - 7 (सेक्शन-I पर 2 1 और सेक्शन-II पर 5) ➢ स्विचेबल लाइन रिएक्टर के साथ 400 केवी लाइन बे - 10 (सेक्शन- I पर 4 और सेक्शन- II पर 6) + 400 केवी एचवीडीसी इंटरकनेक्शन के लिए 4 बे	• 765 / 400 केवी, 1500 एमवीए आईसीटी - 2 (7x500 एमवीए एकल चरण इकाइयां जिनमें एक अतिरिक्त आईसीटी इकाई शामिल है) (सेक्शन-I पर 1 और सेक्शन-II पर 1) • 400 / 220 केवी आईसीटी - 3 (सेक्शन-1 पर)। • 765 केवी आईसीटी बे - 2 • 400 केवी आईसीटी बे - 5 • 220 केवी आईसीटी बे - 3 • 765 केवी लाइन बे - 6 (4 सेक्शन-1 पर: नासिक डी / सी, पुणे (शिक्रापुर) और पडघे एस / सी और सेक्शन-2 पर2: पुणे (शिक्रापुर) और औरंगाबाद) • 1x330 एमवीएआर, 765 केवी बस रिएक्टर- 2 (7x110 एमवीएआर सिंगल फेज रिएक्टर सहित बस / लाइन रिएक्टर के लिए एक अतिरिक्त इकाई) (सेक्शन-I पर 1 पर और सेक्शन-II पर 1) • 765 केवी बस रिएक्टर बे - 2 • 220 केवी बीसी - 1 • 220 केवी टीबीसी - 1 • 125 एमवीएआर, 420 केवी रिएक्टर - 2 (सेक्शन-I पर1 और सेक्शन-II पर 1)। • 400 केवी रिएक्टर बे - 2 • 400 केवी लाइन बे - 2 (सेक्शन-I पर)।

	(प्रत्येक सेक्शन पर 2) ➢ बे के साथ 420 केवी, 125 एमवीएआर बस- 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) ➢ 220 केवी सेक्शनलाइजर बे: 1 सेट ➢ 220 केवी बीसी और टीबीसी - प्रत्येक 1 ➢ 220 केवी लाइन बे: सेक्शन-I पर 4 और सेक्शन-II पर 8 ➢ 400 केवी एचवीएसी स्विचयार्ड तथा सभी संबंधित उपकरणों (फिल्टर सहित)/बस एक्सटेंशन आदि सहित संबद्ध इंटरकनेक्शन (प्रत्येक 400 केवी बस सेक्शन पर 2x1500 मेगावाट पोल) के साथ-साथ 6000 मेगावाट, ± 800 केवी आलेफाटा (एचवीडीसी) [एलसीसी] टर्मिनल स्टेशन (4x1500 मेगावाट) की स्थापना।	• 220 केवी लाइन बे - 4 (एमएसईटीसीएल 220 केवी लाइनों के लिए: आलेफाटा (एम) 220 केवी डी / सी और ब्रिजस्टोन 220 केवी डी / सी) • 765 केवी सेक्शनलाइजर बे: 1 -सेट • 400 केवी सेक्शनलाइजर बे: 1 - सेट
2.	आलेफाटा - लोनिकंद-I 400 केवी डी/सी लाइन (क्वाड एसीएसआर/ एएएसी/एएल 59 मूस समतुल्य) (~70 किमी.)	70 **किमी** (140 **सीकेएम**)
3.	आलेफाटा - लोनिकंद-I 400 केवी डी/सी लाइन के लिए लोनिकंद-I (एमएसईटीसीएल) एस/एस में दो 400 केवी लाइन बे	400 **केवी लाइन बे** - 2
4.	आलेफाटा एस/एस पर औरंगाबाद- पुणे (शिक्रापुर) (जीआईएस) 765 केवी एस/सी लाइन एवं पादघे (जीआईएस) - पुणे (शिक्रापुर) (जीआईएस) 765 केवी एस/सी लाइन का लिलो (लिलो मार्ग की लंबाई ~ 20 किमी)	लिलो मार्ग की लंबाई - 20 किमी. (80 सीकेएम)
5.	नासिक - आलेफाटा 765 केवी डी/सी लाइन (~100 किमी.)	100 **किमी** (200 **सीकेएम**)
6.	नासिक में नासिक - आलेफाटा 765 केवी डी/सी लाइन के लिए दो 765 केवी बे	765 केवी लाइन बे -2

टिप्पणी-1:

क) नासिक एस/एस का टीएसपी, क्र.सं.-6 के रूप में उपर्युक्त कर्यक्षेत्र के लिए स्थान (निःशुल्क) उपलब्ध कराएगा।

ख) एमएसईटीसीएल, क्र.सं.-3 के रूप में उपर्युक्त कर्यक्षेत्र के लिए स्थान (निःशुल्क) उपलब्ध कराएगा।

ग) एमएसईटीसीएल, आलेफाटा एस/एस से 220 केवी डाउनस्ट्रीम प्रणाली को नियत समय-सीमा में लागू करेगा।

टिप्पणी-2:

क) पुणे (जीआईएस) - औरंगाबाद 765 केवी लाइन के पुणे (जीआईएस) छोर पर 240 एमवीएआर लाइन रिएक्टर पहले से ही स्विचेबल है। चूंकि आलेफाटा (पुणे (जीआईएस) - आलेफाटा) में एलआईएलओ के बाद लाइन की लंबाई कम हो जाएगी, इसलिए छोटी लाइन पर ओवरकॉम्पेनसेशन के कारण समानांतर अनुनाद की घटना से बचने के लिए एनजीआर बाईपासिंग के साथ-साथ इंटर ट्रिपिंग स्कीम को लागू करने की आवश्यकता होगी। एनजीआर बाईपास लाइन सेवा से बाहर होने पर स्विचेबल एलआर का उपयोग बस रिएक्टर के रूप में करने में भी मदद करता है। पावरग्रिड द्वारा दिनांक 02.12.2024 के ई-मेल द्वारा की गई पुष्टि के अनुसार, पुणे (जीआईएस) में 765 केवी पुणे (जीआईएस) - औरंगाबाद लाइन के 240 एमवीएआर लाइन रिएक्टर में एनजीआर बाईपास व्यवस्था उपलब्ध है। इसलिए, मुख्य लाइन ब्रेकर के साथ ट्रिप स्विचेबल एलआर को ट्रिप करने के लिए केवल इंटर ट्रिपिंग स्कीम को लिलो के कार्यान्वियन के बाद सक्षम करने की आवश्यकता होगी, जिसे टीएसपी द्वारा पावरग्रिड के समन्वय में सुनिश्चित किया जाएगा।।

लिलो के बाद, आलेफाटा - औरंगाबाद लाइन की लंबाई लगभग 190-200 किमी, आलेफाटा - पदघे: लगभग 140 किमी और आलेफाटा - पुणे (जीआईएस): लगभग 70 किमी होने की उम्मीद है। लंबाई अस्थायी है और इसमें बदलाव हो सकता है।

ख) आलेफाटा - पुणे (पश्चिम) 765 केवी डी/सी लाइन को एमएसईटीसीएल द्वारा वर्ष 2030 के लिए अपनी मास्टर स्कीम में प्रस्तावित किया गया है। आवश्यकतानुसार दोनों छोरों पर संबंधित बे के साथ एमएसईटीसीएल द्वारा इसे लागू किया जा सकता है। लाइन को एलेफाटा एस/एस के 765 केवी सेक्शन-II पर समाप्त किया जाएगा।

ग) विषय स्कीम के तहत टीएसपी द्वारा आलेफाटा - लोनिकंद-I 400 केवी डी/सी लाइन और इन-एसटीएस स्कीम के तहत एमएसईटीसीएल द्वारा पुणे (पूर्व) (कर्जत-II) एस/एस - लोनिकंद-II 400 केवी डी/सी लाइन के कार्यान्वियन के बाद, लोनिकंद-I और लोनिकंद-I के बीच 400 केवी इंटरकनेक्टर को सामान्य रूप से खुला रखा जा सकता है (फॉल्ट नियंत्रण के लिए) और ग्रिड संचालन की आवश्यकता के आधार पर बंद किया जा सकता है। उपर्युक्त लाइनों के पूरा होने के बाद टीएसपी एमएसईटीसीएल को संवेदनशील बनाएगा।

8. बोली प्रक्रिया समन्वयक की नियुक्ति, विद्युत मंत्रालय द्वारा इस संबंध में जारी और समयसमय पर संशोधित - दिशानिर्देशोंमें निर्धारित शर्तों के अध्यधीन होगी।

9. बीपीसी तकनीकी विकल्पों के माध्यम से मार्ग के अधिकार की चौड़ाई में कमी की गणना के लिए सीईए (आरओडब्ल्यू) कीसमिति की रिपोर्ट दिनांक 24.09.2024 के अनुसार आरओडब्ल्यू अनुकूलन सुनिश्चित करेंगे।

10. शहरीवन क्ष/शहरी-अर्ध/ेत्रों में मोनोपोल टॉवर संरचनाएं, इंसुलेटेड क्रॉस आर्म्स और अन्य रो कॉरिडोर अनुकूलन उपाय अपनाए जाएंगे।

11. जहां आरओडब्ल्यू की संभावना हैवहां , मोनोपोल टॉवर संरचनाओं का उपयोग किया जाएगा, जबकि लैटिस टावरों का उपयोग अन्य सेक्शन में किया जाएगा।

12. इसके अलावा, मार्ग को पीएम गति शक्ति पोर्टल पर सत्यापन और भौतिक सर्वेक्षण के बादही अंतिम रूप दिया जाना चाहिए।

[फा. सं. 34-15/3/2026- ट्रांस]

नोओरेम इंद्रकुमार सिंह, अवर सचिव (पारेषण)

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 11th February, 2026

S.O. 725(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 on the recommendations of 37th meeting of National Committee on Transmission, hereby notifies the following transmission schemes under TBCB mode, with details of respective Bid-Process Coordinator (BPC): -

1. Augmentation at Bhadla-III, Ramgarh PS and Kanpur (PG)

Tentative implementation timeframe: 20.01.2029

BPC: REC Power Development and Consultancy Limited

Scope:

Sl. No.	Scope of the Transmission Scheme	Item Description
1.	Augmentation of 400/220 kV, 5x500 MVA (6th to 10th) ICTs at 765/400/220kV Bhadla-III PS	• 500 MVA, 400/220 kV ICT - 5 nos. (4 nos. ICTs in 220kV Sec-2 (6th to 9th) and 1 no. ICT in 220kV Sec-1 (10th) • 400kV ICT bays – 5 nos. • 220 kV ICT bay – 4 nos. • 220 kV ICT (GIS) bay – 1 no. (for 10th ICT) • 220kV GIS bus duct/Cable for interconnection of 220 kV side of ICT (10th) to 220kV GIS bay (Section-1)
2.	Implementation of 5 nos. of 220kV line bays at 765/400/220kV Bhadla-III PS.	• 220kV line bay – 5 nos.
3.	Implementation of 1 no. of 400kV line bay at 765/400/220kV Bhadla-III PS.	• 400kV line bay – 1 no.
4.	Implementation of 2 sets 400kV sectionlizer bay at 765/400/220kV Bhadla-III PS	• 400kV sectionlizer bay – 2 sets
5.	Augmentation of 765/400 kV, 2x1500 MVA (3rd & 4th) ICTs at 765/400kV Ramgarh PS	• 1500 MVA, 765/400 kV ICT - 2 nos. • 765kV ICT bays – 2 nos. • 400 kV ICT bay – 2 nos.
6.	Augmentation of 400/220 kV, 2x500 MVA (3rd & 4th) ICTs at 765/400kV Ramgarh PS	• 500 MVA, 400/220 kV ICT - 2 nos. • 400kV ICT bays – 2 nos. • 220 kV ICT bay – 2 nos.
7.	Implementation of 2 nos. of 220kV line bays at 765/400kV Ramgarh PS	• 220kV line bay – 2 nos.
8.	Implementation of 1 no. of 400kV line bay at 765/400kV Ramgarh PS	• 400kV line bay – 1 no.
9.	Augmentation of 765/400 kV, 1x1500 MVA (3rd) ICT at 765/400kV Kanpur (PG) substation	• 1500 MVA(3x500MVA), 765/400 kV ICT - 1 no. • 765kV ICT bay (GIS) including completion of diameter. • 400 kV ICT bay (GIS) in existing spare bay • All associated GIS duct with terminations.

2. Transmission System for integration of Ananthpuram-III PS REZ Phase-I (3GW)

Tentative implementation timeframe: 30 Months

BPC: Power Finance Corporation Limited (PFC)

Scope:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1	Establishment of 3x1500 MVA, 765/400 kV and 7x500 MVA, 400/220kV Ananthapuram-III Pooling Station near Urvakonda / Beluguppa / Kalyandurg areas in Anantapur district along with 2x330 MVAr (765 kV) bus reactors at Ananthapuram-III PS with provision of two (2) sections of 4500 MVA each at 400kV level Future Space Provisions: • 765/400kV, 1500 MVA, ICTs – 3 Nos. • 765kV ICT bays – 3 Nos. • 400kV ICT bays – 3 Nos. • 400/220kV, 500 MVA, ICTs – 7 Nos. • 400kV ICT bays – 7 Nos. • 220kV ICT bays – 7 Nos. • 765kV line bays – 12 Nos. (with provision for SLR) • 400kV line bays – 11 Nos. (with provision for SLR) • 220kV line bays – 15 Nos. • 220kV Bus Sectionalizer : 2 sets • 220 kV Bus Coupler (BC) Bay – 2 nos. • 220 kV Transfer Bus Coupler (TBC) Bay – 2 nos. • 400kV Bus Sectionalizer : 1 set	• 765/400kV, 1500 MVA, ICTs – 3 Nos. (10x500 MVA incl. 1 spare unit) • 765kV ICT bays – 3 Nos. • 400kV ICT bays – 3 Nos. • 765kV line bays – 2 Nos. (at Ananthapuram-III PS for termination of Ananthapuram-III – Krishnagiri 765kV D/c line) • 765 kV, 330 MVAr Bus Reactor – 2 Nos. (7x110 MVAr inc. 1 switchable spare unit for both bus reactor and line reactor) • 765 kV Bus Reactor bays – 2 Nos. • 400/220kV, 500 MVA, ICTs – 7 Nos. • 400kV ICT bays – 7 Nos. • 220kV ICT bays – 7 Nos. • 220kV line bays – 10 Nos. • 220kV Bus Sectionalizer: 1 set • 220 kV Bus Coupler (BC) Bay – 2 Nos. 220 kV Transfer Bus Coupler (TBC) Bay – 2 Nos.
2	± 300 MVAr STATCOM at Ananthapuram-III PS	• 400kV bay – 1 no. • ± 300 MVAr STATCOM – 1 set
3	Ananthapuram-III – Krishnagiri 765 kV D/c line with 240 MVAr SLR (convertible) at Ananthapuram-III end on both circuits	~ 140 km • 765 kV line bays – 2 Nos. (at Krishnagiri) • 765 kV, 240 MVAr SLR at Ananthapuram-III PS – 2 Nos. (7x80 MVAr inc. 1 switchable spare unit) Switching Equipment for 765 kV SLR at Ananthapuram-III PS – 2 Nos.

3. Transmission system for Integration of Power from RE Projects in Jam Khambhaliya REZ in Gujarat - Phase II (5500MW) and Jamnagar Phase-I (1000 MW)

Tentative implementation timeframe: 31.03.2030

BPC: Power Finance Corporation Limited (PFC)

Scope:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Establishment 4x1500 MVA, 765/400 kV & 10x500MVA, 400/220kV Substation near Kalyanpur (GIS) with 2x330 MVAR, 765 kV bus reactor and 2x125 MVAR, 420 kV bus reactor **Future provision (space for):** ➢ 765/400 kV, 1500MVA ICT along with bays- 2 Nos. (on Sec-II) ➢ 765 kV line bays along with switchable line reactors – 8 Nos. (4 Nos. on Sec-I & 4 Nos. on Sec-II) ➢ 765 kV, 330MVAr Bus Reactor	• 765/400 kV, 1500 MVA ICT – 4 Nos. (13x500 MVA single phase units including one spare ICT Unit) (3 on Sec-I & 1 on Sec-II) • 400/220kV, 500MVA ICT – 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 4 Nos. • 400 kV ICT bays – 14 Nos. • 220kV ICT bays – 10 Nos. • 765 kV Line bays – 4 Nos. (2 on Sec-I & 2 on

	along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 12 Nos. *(4 Nos. on Sec-I & 8 Nos. on Sec-II)* ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 220 kV line bays: 3 No. on Sec-I & 3 Nos. on Section-II ➢ Establishment of 6000 MW, ± 800 kV Kalyanpur (GIS) (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard & all associated equipment (incl. filters)/bus extension, etc. (2x1500MW Poles on each 400kV bus section) ➢ ±400MVAr STATCOM with 400kV bay – 2 No. (1 on Sec-I & 1 on Sec-II)	Sec-II) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionalization bay: 1- set • 220 kV Sectionalization bay: 1 set • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactors) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 125 MVAr, 420 kV reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Reactor bay- 2 Nos. • 220kV BC Bay-2 No. • 400 kV line bay – 1 No. (for interconnection of RE Project at Sec-I) • 220kV line bays – 12 Nos. (for interconnection of RE Projects, 6 on Sec-I & 6 on Sec-II)
2.	Kalyanpur (GIS) – Jamnagar (GIS) 765 kV D/c line	95 km
3.	2 Nos. 765 kV line bays at Jamnagar (GIS) S/s	765 kV line bays – 2 Nos. (GIS)
4.	Kalyanpur (GIS) – Saurashtra (near Rajkot) (GETCO) 765 kV D/c line	225km.
5.	330MVAr Switchable line reactors on each circuit at Kalyanpur (GIS) end of Kalyanpur (GIS) – Saurashtra (near Rajkot) (GETCO) 765 kV D/c line (with NGR bypass arrangement)	• 330 MVAr, 765 kV switchable line reactor- 2 Nos. • Switching equipment for 765 kV line reactor- 2 Nos.
6.	2 Nos. 765 kV line bays at Saurashtra (near Rajkot) (GETCO) S/s	• 765 kV line bays – 2 Nos.
7.	Installation of Synchronous Condenser (+300/-200MVAr) (Minimum) & Short circuit contribution at PCC of 1200MVA (Minimum) at Kalyanpur (GIS)– 2 Nos. Value of Inertia (MW-s) shall be defined in RfP document.	• Synchronous Condenser along with associated 400kV Bay-2 Nos. (one on each Sec-I & II)
8.	Creation of 220kV switchyard along with Installation of 3x500MVA, 400/220kV ICTs at Jamnagar (GIS) S/s	• Creation of 220kV Bus Section-I • 220kV BC Bay – 1 No. • 400/220 kV, 500 MVA ICT – 3 Nos. (on 400kV & 220kV Sec-I) • 400 kV ICT bays – 1 No. (*2 Nos. ICTs to be terminated in 2 nos. GIS bays being implemented as part of Diameter completion at Jamnagar S/s under "Network Expansion scheme in Gujarat for drawl of about 3.6 GW load under Phase-I in Jamnagar area" scheme)* • 220kV ICT bays – 3 Nos.
9.	4 nos. 220kV line bays for RE interconnection	220kV line bays – 4 Nos.

Note:

➢ *TSP of Jamnagar S/s shall provide space for above scope of work at Sl. 3, 8 & 9 on free of cost*

basis

- ➢ *GETCO shall provide space for above scope of work at Sl. 6 on free of cost basis*
- ➢ *Bay(s) required for completion of diameter (GIS) in one-and-half breaker scheme shall also be executed by the TSP.*
- ➢ *Above Syncons (at Sl. 7) shall be considered as 'transmission asset' similar to STATCOM & SVC for its tariff mechanism.*

4. Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)

Tentative implementation timeframe: 36 Months

BPC: REC Power Development and Consultancy Limited

Scope:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	**Establishment of 765/400 kV, 6x1500MVA & 10x500MVA, 400/220kV Lakadia-II (Near Chitrod)** with 2x330 MVAR 765kV bus reactor and 2x125 MVAR 400kV bus reactor. *[765kV, 400kV & 220kV levels to be established in two sections with Sectionaliser arrangement.* ***The 220kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400kV and 765kV Sectionaliser shall be kept normally closed. The bus operation may be reviewed after proposed HVDC implementation as per requirement of Grid operator.*** *(3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVA 765kV BR & 1x125MVAr 420kV BR shall be on Sec-I & 3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVA 765kV BR & 1x125MVAr 420kV BR shall be on Sec-II)]* **Future provision (space for):** ➢ 765 kV line bays along with switchable line reactors – 6 Nos. (2 Nos. on Sec-I & 4 Nos. on Sec-II) ➢ 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 7 Nos. *(3 on Sec-I & 4 on Sec-II) + 4 Nos. 400kV bays (2 nos. on each section) for HVDC Interconnection* ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II ➢ Establishment of 6000 MW, ± 800 kV Lakadia-II (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard & all associated equipment (incl. filters)/bus extension, etc. (2x1500MW poles on each 400kV section)	• 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 765kV line bays: 8 nos. (4 Nos. on Sec-I (2 for Halvad D/c & 2 for Ahmedabad D/c) and 4 Nos. on Sec-II (2 for Kandla D/c and 2 for Vataman)) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220kV BC– 2 No. • 220kV TBC – 2 No. • 125 MVAr, 420 kV reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 nos. on Sec-I & 8 nos. on Sec-II for interconnection of RE Projects)

	➢ Synchronous Condenser (+300/-200MVAr) along with 400kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)	
2.	Installation of Synchronous Condenser (+300/-200MVAr) (Minimum) & Short circuit contribution at PCC of 1200MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (MW-s) shall be defined in RfP document.	Synchronous Condenser along with associated 400kV Bay-2 Nos. (one each on Sec-I & II)
3.	LILO of Halvad – Kandla 765kV D/c line at Lakadia-II	LILO route length ~22km. (88ckm)
4.	Lakadia-II – Ahmedabad 765kV D/c line	190 km (380 ckm)
5	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765kV D/c line	765 kV line bays – 2 Nos. (AIS)
6	765kV, 330MVAr Switchable line reactors on each circuit at Ahmedabad end of Lakadia-II – Ahmedabad 765kV D/c line	• 330 MVAr, 765 kV switchable line reactor- 2 Nos. • 765 kV Switchable Line Reactor Bay - 2 Nos. • 110MVAr spare single phase reactor at Ahmedabad S/s is already available and same shall be used for subject Sw LR.
7	Lakadia-II – Vataman 765kV D/c line (220km.)	220 km (440 ckm)
8	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765kV D/c line	765 kV line bays – 2 Nos. (AIS)
9	765kV, 240MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765kV D/c line	• 240 MVAr, 765 kV switchable line reactor- 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV switchable Line Reactor Bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80MVAr spare single-phase reactor at Lakadia-II for above 240MVAr Sw LR. • 80MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Sw LR.

Note:

➢ *TSPs of Ahmedabad S/s & Vataman S/s to provide space for above scope of work in their respective substations (free of cost)*

➢ *Above Syncons (at Sl. No. 2) shall be considered as 'transmission asset' similar to STATCOM & SVC for its tariff mechanism.*

5. Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-A

Tentative implementation timeframe: 36 Months

BPC: Power Finance Corporation Limited (PFC)

Scope:

Sl. No.	*Scope of the Transmission Scheme*	*Capacity /km*
1.	Augmentation of transformation capacity at South Olpad (GIS) S/s by 1x1500MVA, 765/400kV (3rd) ICT	• 765/400 kV, 1500 MVA ICT – 1 No. • 765 kV ICT bays – 1 No. (GIS) (Being constructed as a part of diameter completion under Khavda Ph-IV Part-C Scheme) • 400 kV ICT bays – 1 No. (GIS)
2.	Vadodara(GIS) – Halvad 765kV D/c line to be	250 km (500 ckm)

	terminated into Lakadia – Halvad 765kV D/c line (near Halvad S/s) so as to form Lakadia – Vadodara (GIS) 765kV D/c line	*(Length of complete Lakadia – Vadodara (GIS) 765kV D/c line after implementation of above line section between Vadodara and Halvad is expected to be around 350km.)*
3.	765kV line bays at Vadodara (GIS) end for termination of Lakadia – Vadodara 765kV D/c line (formed as per details above at Sl. 2)	• 765kV line bays – 2 nos. (GIS) (being constructed as a part of diameter completion under ***"Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part B"***. Line side equipment for termination of the line at these bays to be implemented under the subject transmission scheme)
4.	765kV, 240MVAr Switchable line reactors on each circuit at Vadodara (GIS) end of Lakadia – Vadodara (GIS) 765kV D/c line (formed as per details above at Sl. 2)	• 240 MVAr, 765 kV switchable line reactor- 2 Nos. • 765 kV switchable Line Reactor Bay- 2 Nos. (being constructed as a part of diameter completion under ***"Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part B"***) • 80MVAr, 1-Ph spare reactor at Vadodara S/s is already available and same shall be utilized for subject switchable LR.
5.	765kV, 330MVAr Switchable Mid-point reactors at the bypass point at Halvad Switching Station on Lakadia – Vadodara (GIS) 765kV D/c line *(refer Note d)*	• 330 MVAr, 765 kV switchable line reactor- 2 Nos. • 765 kV switchable Line Reactor Bay - 2 Nos. • 110MVAr spare single phase reactor at bypass point near Halvad S/s

Note:

a) *Bay(s) required for completion of diameter (GIS) in one-and-half breaker scheme shall also be executed by the TSP.*

b) *TSP of South Olpad S/s to provide space for above scope of work as Sl. 1 (Free of cost)*

c) *TSP of Vadodara (GIS) to provide space for above scope of work as Sl. 3 & 4 (Free of cost)*

d) *As the provision for 765kV, 330MVAr switchable mid-point reactor at the bypass point at Halvad Switching Station on Lakadia – Vadodara (GIS) 765kV D/c line was not envisaged while allocating space for future scope at Halvad Switching Station under the **"Transmission Scheme for evacuation of additional 7GWE of RE power from Khavda RE Park under Phase III Part A"** project (under implementation by Halvad Transmission Ltd-AESL), the reactor shall be installed at Halvad Switching Station by utilizing the space reserved for other transmission elements, which will be specified in the RfP document.*

6. Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-B

Tentative implementation timeframe: 36 Months

BPC: REC Power Development and Consultancy Limited

Scope:

Sl. No.	*Scope of the Transmission Scheme*	*Capacity /km*
1.	**Establishment of 765/400 kV, 3x1500MVA & 400/220kV, 3x500MVA Nasik S/s (towards South of Nasik)** with 2x330 MVAR 765kV bus reactor and 2x125 MVAR 400kV bus reactor. **Future provision (space for):**	• 765/400 kV, 1500 MVA ICT – 3 Nos. (10x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 3 Nos.

	➢ 765/400 kV, 1500MVA ICT along with bays- 3 Nos. (on Sec-II) ➢ 765 kV line bays along with switchable line reactors – 10 Nos. (4 Nos. on Sec-I & 6 Nos. on Sec-II) ➢ 765 kV, 330MVAr Bus Reactor along with bay: 2 Nos. (on Sec-II) ➢ 765 kV Sectionaliser bay: 1 -set ➢ 400 kV Sectionaliser bay: 1- set ➢ 400/220 kV, 500MVA ICT along with bays - 7 Nos. (2 on Sec-I & 5 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 10 Nos. *(4 on Sec-I & 6 on Sec-II)* ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (on Sec-II) ➢ 220 kV Sectionaliser bay: 1- set ➢ 220kV BC & TBC – 1 No. each ➢ 220 kV line bays: 2 No. on Sec-I & 8 Nos. on Section-II	• 765 kV ICT bays – 3 Nos. • 400 kV ICT bays –6 Nos. • 220kV ICT bays – 3 Nos. • 765 kV Line bays – 2 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactor) • 765 kV Bus reactor bay – 2 Nos. • 220kV BC– 1 No. • 220kV TBC – 1 No. • 125 MVAr, 420 kV reactor- 2 Nos. • 400 kV Reactor bay- 2 Nos. • 400 kV line bays - 2 Nos. • 220 kV line bays - 6 Nos. (for MSETCL 220kV lines: Adwadi 220kV D/c, Nasik GCR 220kV D/c & Nasik OCR 220kV D/c)
2.	South Olpad (GIS) – Nasik 765kV D/c line (240km.)	• 240 km (480 ckm)
3.	2 Nos. 765 kV line bays at South Olpad (GIS) S/s (Sec-II) for South Olpad – Nasik 765kV D/c line	• 765 kV line bays – 2 Nos. (GIS) (Sec-II) along with 1 Set of 765kV sectionaliser so as to establish 765kV Sec-II.
4.	765kV, 240MVAr Switchable line reactors on each circuit at both ends of South Olpad – Nasik 765kV D/c line	• 240 MVAr, 765 kV switchable line reactor- 4 Nos. (2 for South Olpad end and 2 for Nasik end) • 765 kV switchable Line Reactor Bay - 4 Nos. (2 for South Olpad end and 2 for Nasik end) • 80MVAr spare single-phase reactor at Nasik for above 240MVAr switchable LR. • 80MVAr spare single-phase reactor at South Olpad S/s is already available and same shall be used for subject switchable LR.
5.	Nasik – Pimpalgaon (MSETCL) 400kV D/c line (Quad ACSR/AAAC/AL59 moose equivalent) *(Line to be routed from near Sinner TPP / Raymond i.e. from eastern side of Nasik).*	80km. (160ckm)
6.	2 Nos. 400 kV line bays at Pimpalgaon S/s for Nasik – Pimpalgaon (MSETCL) 400kV D/c line (Quad ACSR/AAAC/AL59 moose equivalent)	400 kV line bays – 2 Nos.

Note:

a) Bay(s) required for completion of diameter (GIS) in one-and-half breaker scheme shall also be executed by the TSP.

b) TSP of South Olpad(GIS) to provide space for above scope of work (Free of cost)

c) MSETCL to provide space for above scope of work at Pimpalgaon S/s (Free of cost)

d) MSETCL to implement 220kV downstream system from Nasik S/s in matching time-frame.

7. Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-C

Tentative implementation timeframe: 36 Months

BPC: Power Finance Corporation Limited (PFC)

Sl. No.	*Scope of the Transmission Scheme*	*Capacity /km*
1.	Establishment of 765/400 kV, 2x1500MVA & 400/220kV, 3x500MVA Alephata S/s with 2x330 MVAR 765kV bus reactor and 2x125 MVAR 400kV bus reactor. [765kV & 400kV Bus sectionalisers to be kept normally closed. May be opened based on Grid conditions] **Future provision (space for):** ➢ 765/400 kV, 1500MVA ICT along with bays- 4 Nos. (2 on Sec-I & 2 on Sec-II) ➢ 765 kV line bays along with switchable line reactors – 6 Nos. (2 Nos. on Sec-I & 4 Nos. on Sec-II) ➢ 765 kV, 330MVAr Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 400/220 kV, 500MVA ICT along with bays - 7 Nos. (2 on Sec-I & 5 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 10 Nos. *(4 on Sec-I & 6 on Sec-II) + 4 nos. 400kV bays (2 nos. on each section) for HVDC Interconnection* ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 220 kV Sectionaliser bay: 1- set ➢ 220kV BC & TBC – 1 No. each ➢ 220 kV line bays: 4 No. on Sec-I & 8 Nos. on Section-II ➢ Establishment of 6000 MW, ± 800 kV Alephata (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard & all associated equipment (incl. filters)/bus extension, etc. (2x1500MW poles on each 400kV section)	• 765/400 kV, 1500 MVA ICT – 2 Nos. (7x500 MVA single phase units including one spare ICT Unit) (1 on Sec-I & 1 on Sec-II) • 400/220 kV ICTs - 3 Nos. (on Sec-I) • 765 kV ICT bays – 2 Nos. • 400 kV ICT bays –5 Nos. • 220kV ICT bays – 3 Nos. • 765 kV Line bays – 6 Nos. (4 on Sec-I: Nasik D/c, Pune (Shikrapur) & Padghe S/c & 2 on Sec-II: Pune (Shikrapur) & Aurangabad) • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 220kV BC– 1 No. • 220kV TBC – 1 No. • 125 MVAr, 420 kV reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Reactor bay- 2 Nos. • 400 kV line bays - 2 Nos. (on Sec-I) • 220 kV line bays - 4 Nos. (for MSETCL 220kV lines: Alephata(M) 220kV D/c & Bridgestone 220kV D/c) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set
2.	Alephata – Lonikand-I 400kV D/c line (Quad ACSR/AAAC/AL59 moose equivalent) (~70km.)	70 km (140 ckm)
3.	2 Nos. 400 kV line bays at Lonikand-I (MSETCL) S/s for Alephata – Lonikand-I 400kV D/c line	400 kV line bays – 2 Nos.
4.	LILO of Aurangabad – Pune (Shikrapur) (GIS) 765kV S/c line and Padghe (GIS) – Pune (Shikrapur) (GIS) 765kV S/c line at Alephata S/s (LILO route length ~ 20km.)	LILO route length – 20 km. (80ckm)
5.	Nasik – Alephata 765kV D/c line (~100km.)	100 km (200 ckm)
6.	2 Nos. 765kV bays at Nasik for Nasik – Alephata 765kV D/c line	765 kV Line bays – 2 Nos.

Note-1:

a) TSP of Nasik S/s to provide space for above scope of work as Sl. 6 (Free of cost)

b) MSETCL to provide space for above scope of work as Sl. 3 (Free of cost)

c) MSETCL to implement 220kV downstream system from Alephata S/s in matching time-frame.

Note-2:

a) 240MVAr line reactor at Pune(GIS) end of Pune(GIS) – Aurangabad 765kV line is already switchable. Since length of the line will reduce after the LILO at Alephata (Pune(GIS) – Alephata), NGR Bypassing along with Inter tripping scheme would need to be implemented to avoid parallel resonance phenomena due to overcompensation on the short line. NGR bypassing also helps in utilization of switchable LR as Bus Reactor when line is out of service. As confirmed by POWERGRID vide e-mail dated 02.12.2024, NGR bypass arrangement in 240MVAr line reactor at Pune(GIS) end of 765kV Pune(GIS) – Aurangabad line is available. Hence, only Inter tripping scheme to trip switchable LR along with main line breaker would need to be enabled after implementation of LILO, which shall be ensured by TSP in coordination with POWERGRID.

After the LILO, Alephata – Aurangabad line length is expected to be ~190-200km, Alephata – Padghe: ~140km. & Alephata – Pune(GIS): ~70km. The lengths are tentative and subject to change.

b) Alephata – Pune(West) 765kV D/c line has been proposed by MSETCL it its master plan for 2030. Same may be implemented by MSETCL along with associated bays at both ends as per requirement. Line shall be terminated at 765kV Sec-II of Alephata S/s.

c) After implementation of Alephata – Lonikand-I 400kV D/c line by TSP under subject scheme and Pune(East)(Karjat-II) S/s – Lonikand-II 400kV D/c line by MSETCL under In-STS scheme, 400kV interconnector between Lonikand-I and Lonikand-II may be kept normally open (for fault level control) and may be closed based on requirement of Grid Operation. TSP to sensitize MSETCL after completion of above lines.

8. The appointment of the Bid Process Coordinator is subject to the conditions laid down in the Guidelines issued by Ministry of Power in this regard, amended from time to time.

9. BPCs shall ensure RoW optimization as per the CEA's Committee report dated 24.09.2024 for calculation of reduction of Right of Way (RoW) Width through Technological Options.

10. Monopole tower structures, insulated cross arms and other RoW corridor optimization measures to be adopted in urban/ semi-urban /forest areas.

11. Monopole tower structures to be used where RoW issues are anticipated, while lattice towers shall be used in other sections.

12. Further, the route must be finalised after validation on PM Gati Shakti portal and physical survey.

[F. No. 34-15/3/2026-Trans]

NAOREM INDRAKUMAR SINGH. Under Secy. (Transmission)

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भारत का राजपत्र
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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, 19 जून, 2026

का.आ. 3256(अ).— केंद्र सरकार ने विद्युत अधिनियम, 2003 (2003 का 36) की धारा 63 के अंतर्गत परिचालित दिशानिर्देशों के पैरा 3 के उप-पैरा 3.2 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए नीचे उल्लिखित राजपत्र अधिसूचना के माध्यम से, टीबीसीबी मोड के अंतर्गत कार्यान्वयन हेतु निम्नलिखित स्कीम अधिसूचित की थी:

क्र. सं.	स्कीम का नाम	योजना को अधिसूचित किए जाने संबंधी राजपत्र अधिसूचना
1.	गुजरात-चरण II (7500 मेगावाट) के लकड़िया आरईजेड में आरई परियोजनाओं से विद्युत के एकीकरण के लिए पारेषण प्रणाली	का.आ. 725(अ) दिनांक 12.02.2026 [फा. सं. 34-15/3/2026-ट्रांस]

2. अब, केंद्र सरकार ने 41वीं राष्ट्रीय पारेषण समिति की बैठक की सिफारिशों पर ऊपर उल्लिखित स्कीम के कार्यक्षेत्र को संशोधित करने का निर्णय लिया है। इस प्रकार, उपर्युक्त स्कीम के क्रमांक संख्या 1 और 3 पर उल्लिखित कार्यक्षेत्र को

संशोधित किया जाता है और क्रमांक 3क और 3ख को नीचे दिए गए अनुसार जोड़ा जाता है; पारेषण स्कीम और बोली प्रक्रिया समन्वयक के अन्य कार्यक्षेत्र यथावत् रहेंगे:

स्कीम का नाम	स्कीम के कार्यक्षेत्र/कार्यान्वयन की समय सीमा में संशोधन		
	क्र. सं.	पारेषण स्कीम का कार्यक्षेत्र	क्षमता/किमी
गुजरात-चरण II (7500 मेगावाट) के लकड़िया आरईजेड में आरई परियोजनाओं से विद्युत के एकीकरण के लिए पारेषण प्रणाली	1.	2x330 एमवीएआर 765 केवी बस रिएक्टर और 2x125 एमवीएआर 400 केवी बस रिएक्टर के साथ 765/400 केवी, 6x1500 एमवीए और 10x500 एमवीए, 400/220 केवी लकड़िया-II (चितरोड़ के निकट) की स्थापना । [सेक्शनलाइज़र व्यवस्था के साथ दो खंडों में 765 केवी, 400 केवी और 220 केवी स्तर स्थापित किए जाएंगे। 220 केवी सेक्शनलाइज़र को सामान्य रूप से खुला रखा जाएगा और आकस्मिक स्थिति के तहत बंद किया जा सकता है। 400 केवी और 765 केवी सेक्शनलाइजर को सामान्य रूप से बंद रखा जाएगा। ग्रिड ऑपरेटर की आवश्यकता के अनुसार प्रस्तावित एचवीडीसी कार्यान्वयन के बाद बस प्रचालन की समीक्षा की जा सकती है। (3x1500 एमवीए, 765/400 केवी आईसीटी, 5x500 एमवीए, 400/220 केवी आईसीटी, 1x330 एमवीएआर, 765 केवी बीआर तथा 1x125 एमवीएआर, 420 केवी बीआर सेक्शन-I में होंगे तथा 3x1500 एमवीए, 765/400 केवी आईसीटी, 5x500 एमवीए, 400/220 केवी आईसीटी, 1x330 एमवीएआर, 765 केवी बीआर तथा 1x125 एमवीएआर, 420 केवी बीआर सेक्शन-II में होंगे।)] **भावी प्रावधान (स्थान के लिए):** ➢ 765 केवी लाइन बे के साथ	• 765/400 केवी, 1500 एमवीए आईसीटी - 6 (एक अतिरिक्त आईसीटी यूनिट सहित 19x500 एमवीए सिंगल फेज यूनिट) • 400/220 केवी आईसीटी - 10 (सेक्शन-I पर 5 और सेक्शन-II पर 5) • 765 केवी आईसीटी बे - 6 • 400 केवी आईसीटी बे - 16 • 220केवी आईसीटी बे - 10 • 1x330 एमवीएआर, 765 केवी बस रिएक्टर- 2 (7x110 एमवीएआर सिंगल फेज रिएक्टर जिसमें बस/लाइन रिएक्टर के लिए एक अतिरिक्त यूनिट शामिल है) (सेक्शन-I पर 1 और सेक्शन-II पर 1) • 765 केवी बस रिएक्टर बे - 2 • 765केवी लाइन बे: 6 (सेक्शन-I पर 4 (हलवद डी/सी के लिए 2 और अहमदाबाद डी/सी के लिए 2) और सेक्शन-II पर 2 (वटामन के लिए)) • 765 केवी सेक्शनलाइज़र बे: 1-सेट • 400 केवी सेक्शनलाइज़र बे: 1- सेट • 220 केवी सेक्शनलाइज़र बे: 1- सेट • 220केवी बीसी- 2 • 220केवी टीबीसी - 2 • 1x125 एमवीएआर, 420 केवी बस रिएक्टर- 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) • 400 केवी बस रिएक्टर बे- 2 • 400 केवी लाइन बे - 3 (आरई परियोजनाओं के इंटरकनेक्शन के लिए सेक्शन-I पर 2 और सेक्शन-II पर 1) • 220 केवी लाइन बे - 15 (आरई

		स्विचेबल लाइन रिएक्टर - 8 (सेक्शन-I पर 2 और सेक्शन-II पर 6) ➢ बे के साथ 765 केवी बस रिएक्टर: 2 (सेक्शन-I पर 1 और सेक्शन-II पर 1) ➢ 400 केवी लाइन बे के साथ स्विचेबल लाइन रिएक्टर - 7 (सेक्शन-I पर 3 और सेक्शन-II पर 4) ➢ बे के साथ 420 केवी, 125 एमवीएआर बस रिएक्टर : 2 (सेक्शन -I पर 1 और सेक्शन-II पर 1) ➢ 220 केवी लाइन बे: सेक्शन -I पर 1 और सेक्शन-II पर 1 ➢ 400 केवी बे के साथ सिंक्रोनस कंडेनसर (+300/-200 एमवीएआर) - 2 (सेक्शन -I पर 1 और सेक्शन-II पर 1)	परियोजनाओं के इंटरकनेक्शन के लिए सेक्शन-I पर 7 और सेक्शन-II पर 8)
	3.	लकडिया-II - हलवद 765 केवी डी/सी लाइन	140 किमी (280 सीकेएम)
	3क.	लकडिया-II - हलवद 765 केवी डी/सी लाइन के लिए हलवद एस/एस पर 2 765केवी लाइन बे	765 केवी लाइन बे– 2 (एआईएस)
	3ख.	• लकड़िया-II – हलवद 765 केवी डी/सी लाइन के लकड़िया-II छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर।	• 240 एमवीएआर, 765 केवी स्विचेबल लाइन रिएक्टर – 2 (लकड़िया-II छोर के लिए 2) • 765 केवी स्विचेबल लाइन रिएक्टर बे – 2 (लकड़िया-II छोर के लिए 2)। • उपर्युक्त 240 एमवीएआर स्विचेबल लाइन रिएक्टर हेतु क्रम संख्या 9 के अंतर्गत प्रस्तावित लकड़िया-II स्थित 80 एमवीएआर स्पेयर सिंगल-फेज रिएक्टर का उपयोग किया जाएगा।

[फा. सं. 15/3/2018-ट्रांस-भाग(4)]

नाओरेम इंद्रकुमार सिंह, अवर सचिव (पारेषण)

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 19th June, 2026

S.O. 3256(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 scheme, for implementation under TBCB mode, vide Gazette Notification mentioned below:

Sl. No.	Name of the Scheme	Gazette Notification by which Scheme was notified
1.	Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)	S.O. 725(E) dated 12.02.2026 [F. No. 34-15/3/2026-Trans]

2. Now, the Central Government, on the recommendations of 41st National Committee on Transmission has decided to modify the scope of above mentioned scheme. As such, the scope mentioned at Sl. No.1 and 3 of above scheme is hereby modified and Sl No. 3a and 3b are added as mentioned below; other scopes of the Transmission Scheme and Bid Process Co-ordinator shall remain unchanged:

Name of the Scheme	Modification in scope/ implementation timeframe of the scheme		
	Sl. No.	Scope of the Transmission Scheme	Capacity/km
Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)	1.	Establishment of 765/400 kV, 6x1500MVA & 10x500MVA, 400/220kV Lakadia-II (Near Chitrod) with 2x330 MVAR 765kV Bus reactor and 2x125 MVAR 400kV Bus reactor. [765kV, 400kV & 220kV levels to be established in two sections with Sectionaliser arrangement. The 220kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400kV and 765kV Sectionaliser shall be kept normally closed. The bus operation may be reviewed after proposed HVDC implementation as per requirement of Grid operator. (3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVAr 765kV BR & 1x125MVAr 420kV BR shall be on Sec-I & 3x1500MVA 765/400kV ICTs, 5x500MVA 400/220kV ICTs, 1x330MVAr 765kV BR & 1x125MVAr 420kV BR shall be on Sec-II)] **Future provision (space for):** ➢ 765 kV line bays along with	• 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 765kV line bays: 6 nos. (4 Nos. on Sec-I (2 for Halvad D/c & 2 for Ahmedabad D/c) and 2 Nos. on Sec-II (for Vataman)) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220kV BC– 2 Nos. • 220kV TBC – 2 Nos. • 1x125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Bus reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects)

		switchable line reactors – 8 Nos. (2 Nos. on Sec-I & 6 Nos. on Sec-II) ➢ 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II) ➢ 420 kV, 125MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) ➢ 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II ➢ Synchronous Condenser (+300/-200MVAr) along with 400kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)	• 220 kV line bays - 15 Nos. (7 nos. on Sec-I & 8 nos. on Sec-II for interconnection of RE Projects)
	3.	Lakadia-II – Halvad 765kV D/c line	140 km. (280ckm)
	3a.	2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765kV D/c line	765 kV line bays – 2 Nos. (AIS)
	3b.	• 765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of Lakadia-II – Halvad 765 kV D/c line	• 240 MVAr, 765 kV Switchable Line Reactor- 2 Nos. (2 for Lakadia-II end) • 765 kV Switchable Line Reactor bay - 2 Nos. for Lakadia-II end • 80 MVAr spare single-phase reactor at Lakadia-II as proposed under Sl. 9 for above 240 MVAr Switchable Line Reactor shall be utilized.

[F. No. 15/3/2018-Trans-Part(4)]

NAOREM INDRAKUMAR SINGH, Under Secy.(Transmission)

अधिसूचना

नई दिल्ली, 19 जून, 2026

का.आ. 3257(अ).— विद्युत अधिनियम, 2003 (2003 का 36) की धारा 63 के अंतर्गत परिचालित दिशानिर्देशों के पैरा 3 के उप-पैरा 3.2 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केंद्र सरकार ने 41वीं राष्ट्रीय पारेषण समिति की बैठक की सिफारिशों पर, संबंधित बोली-प्रक्रिया समन्वयक (बीपीसी) के विवरण सहित टीबीसीबी मोड के तहत निम्नलिखित पारेषण स्कीमों को एतद् द्वारा अधिसूचित करती है: -

1. राजस्थान आरईजेड चरण-IV (भाग-6: 6 गीगावाट) (बीकानेर परिसर) (बीकानेर-V: 6 गीगावाट) के अंतर्गत विद्युत निकासी हेतु पारेषण योजना- भाग-क

कार्यान्वयन अवधि: 36 माह

बीपीसी: आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड (आरईसीपीडीसीएल)

कार्य-क्षेत्र:

क्र.सं.	पारेषण तत्त्व का ब्यौरा	कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)
1	बीकानेर के निकट उपयुक्त स्थान पर 2 × 240 एमवीएआर (765 केवी) तथा 2 × 125 एमवीएआर (420 केवी) बस रिएक्टर के साथ-साथ 765/400 केवी, 6 × 1500 एमवीए तथा 400/220 केवी, 10 × 500 एमवीए क्षमता के बीकानेर-V पूलिंग स्टेशन की स्थापना। **भविष्य के प्रावधान (वर्तमान स्कीम के कार्य-क्षेत्र को छोड़कर):** ➢ स्विचेबल लाइन रिएक्टर सहित 765 केवी लाइन बे – 4 ➢ स्विचेबल लाइन रिएक्टर सहित 400 केवी लाइन बे – 4 ➢ 400 केवी लाइन बे – 4 ➢ बे सहित 765 केवी बस रिएक्टर – 1 ➢ बे सहित 400 केवी बस रिएक्टर – 1 ➢ बे सहित 400/220 केवी आईसीटी - 2 ➢ 400 केवी सेक्शनलाइजेशन बे – 1 ➢ आरई अनुप्रयोगों की कनेक्टिविटी हेतु 220 केवी लाइन बे – 4 ➢ 220 केवी सेक्शनलाइजेशन बे – 2 सेट। ➢ 220 केवी बीसी (2) तथा टीबीसी (2) ➢ एक 400 केवी बे सहित 400 केवी स्तर पर 1 सिंक्रोनस कंडेंसर यूनिट*। **1 सिनकॉन यूनिट में +300 एमवीएआर/-200 एमवीएआर (न्यूनतम) का डायनेमिक सपोर्ट और पीसीसी पर 1200 एमवीए (न्यूनतम) का शॉर्ट सर्किट योगदान शामिल है (ज़ड़त्व का मान (मेगावाट-सेकंड) आरएफपी दस्तावेज़ में प्रदान किया जाएगा)।*	**बिकानेर-V पीएस - एआईएस** • 765/400 केवी, 1500 एमवीए आईसीटी- 6 संख्या (एक स्पेयर यूनिट सहित कुल 19 × 500 एमवीए)। • 400/220 केवी, 500 एमवीए आईसीटी-10 • 765 केवी लाइन बे - 4 (पल्लू उपकेंद्र के साथ 765 केवी इंटरकनेक्शन हेतु)। • 400 केवी लाइन बे -4 (400 केवी बीकानेर-II पीएस– खेतड़ी 2 × डी/सी लाइन के एक डबल सर्किट के एलआईएलओ के माध्यम से 400 केवी इंटरकनेक्शन हेतु।) • 765 केवी आईसीटी बे-6 • 400 केवी आईसीटी बे-16 • 220 केवी आईसीटी बे-10 • 240 एमवीएआर बस रिएक्टर-2 (एक स्पेयर यूनिट सहित कुल 7 × 80 एमवीएआर) • 765 केवी बस रिएक्टर बे- 2 • 125 एमवीएआर बस रिएक्टर-2 • 400 केवी बस रिएक्टर बे- 2 • 400 केवी लाइन बे-3 (आरई इंटरकनेक्शन हेतु)। • 220 केवी लाइन बे- 10 (आरई इंटरकनेक्शन हेतु)। • 220 केवी सेक्शनलाइजेशन बे – 1 सेट। • 220 केवी बीसी (2) तथा टीबीसी (2) • 400 केवी सेक्शनलाइज़र बे – 1 सेट।
2	बीकानेर- V पीएस पर एमएससी (4x125 एमवीएआर)	• एमएससी (4x125 एमवीएआर) और

	और एमएसआर (2x125 एमवीएआर) के साथ-साथ स्टेटकॉम (2x+300 एमवीएआर)।	एमएसआर (2x125 एमवीएआर) के साथ-साथ स्टेटकॉम (2x+300 एमवीएआर) • 400 केवी बे: 2 (स्टेटकॉम हेतु)
3	400 केवी बीकानेर-V – खेतड़ी खंड के बीकानेर-V पीएस छोर पर प्रत्येक परिपथ के लिए 50 एमवीएआर स्विचेबल लाइन रिएक्टर सहित बीकानेर-V पूलिंग स्टेशन पर 400 केवी बीकानेर-II पूलिंग स्टेशन– खेतड़ी (ट्विन एचटीएलएस) 2× डी/सी लाइन के एक डबल सर्किट का एलआईएलओ।	लाइन की लंबाई - 28 कि.मी. (क्वाड), (एलआईएलओ लंबाई) • बीकानेर-V उपकेंद्र छोर पर 420 केवी, 50 एमवीएआर स्विचेबल लाइन रिएक्टर – 2 • बीकानेर-V उपकेंद्र छोर पर 420 केवी, 50 एमवीएआर स्विचेबल लाइन रिएक्टर हेतु स्विचिंग उपकरण – 2
4	हनुमानगढ़ जिले के पल्लू के निकट उपयुक्त स्थान पर 2 × 240 एमवीएआर (765 केवी) तथा 2 × 125 एमवीएआर (420 केवी) बस रिएक्टर सहित 765/400 केवी, 2 × 1500 एमवीए उपकेंद्र की स्थापना। **<u>भविष्य के प्रावधान (वर्तमान स्कीम के कार्य-क्षेत्र को छोड़कर):</u>** ➢ स्विचेबल लाइन रिएक्टर सहित 765 केवी लाइन बे – 2 ➢ 765/400 केवी, 1500 एमवीए आईसीटी- 2 ➢ स्विचेबल लाइन रिएक्टर सहित 400 केवी लाइन बे – 4 ➢ 400 केवी लाइन बे – 4 ➢ बे सहित 765 केवी बस रिएक्टर – 1 ➢ बे सहित 400 केवी बस रिएक्टर – 1 ➢ 400 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ बे सहित 400/220 केवी आईसीटी- 5 ➢ 220 केवी लाइन बे – 8 ➢ 220 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ 220 केवी बीसी (2) तथा टीबीसी (2) ➢ दो 220 केवी बे सहित 220 केवी स्तर पर 2 सिंक्रोनस यूनिट *1 **1 सिनकॉन यूनिट में +300एमवीएआर/-200एमवीएआर (न्यूनतम) का डायनेमिक सपोर्ट और*	**पल्लू उपकेंद्र – एआईएस** • 765/400 केवी, 1500 एमवीए आईसीटी- 2 (एक स्पेयर यूनिट सहित कुल 7 × 500 एमवीए)। • 765 केवी लाइन बे-12 (बीकानेर-V पूलिंग स्टेशन तथा पानीपत उपकेंद्र के साथ 765 केवी 2× डी/सी इंटर-कनेक्शन तथा 765 केवी बीकानेर–मोगा डी/सी लाइन के दोनों सर्किट के एलआईएलओ हेतु)। • 400 केवी लाइन बे – 2 (हनुमानगढ़ उपकेंद्र के साथ 400 केवी इंटर-कनेक्शन हेतु)। • 765 केवी आईसीटी बे – 2 • 400 केवी आईसीटी बे - 2 • 240 एमवीएआर बस रिएक्टर– 2 (एक स्पेयर यूनिट सहित कुल 7 × 80 एमवीएआर)। • 765 केवी बस रिएक्टर बे – 2 • 125 एमवीएआर बस रिएक्टर – 2 • 400 केवी बस रिएक्टर बे- 2

	पीसीसी पर 1200 एमवीए (न्यूनतम) का शॉर्ट सर्किट योगदान शामिल है (जड़त्व का मान (मेगावाट-सेकंड) आरएफपी दस्तावेज़ में प्रदान किया जाएगा)।	
5	765 केवी बीकानेर-V पीएस – पल्लू 2× डी/सी लाईन।	लाईन की लम्बाई-135 किमी
6	765 केवी पल्लू–मोगा डी/सी लाइन के पल्लू उपकेंद्र छोर पर प्रत्येक सर्किट के लिए 240 एमवीएआर स्विचेबल लाइन रिएक्टर के साथ-साथ पल्लू उपकेंद्र पर 765 केवी बीकानेर–मोगा डी/सी लाइन के दोनों सर्किटों का एलआईएलओ।	लाइन की लंबाई – 10 किमी *(लीलो की लंबाई)*। • पल्लू उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर- 2 • पल्लू उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण- 2
7	400 केवी पल्लू – हनुमानगढ़ (आरवीपीएन) डी/सी (क्वाड) लाइन।	लाइन की लंबाई- 92 किमी • 400 केवी लाइन बे- 2 (हनुमानगढ़ (आरवीपीएन) उपकेंद्र पर)।

2. राजस्थान आरईजेड चरण-IV (भाग-6: 6 गीगावाट) (बीकानेर परिसर) (बीकानेर-V: 6 गीगावाट) के अंतर्गत विद्युत निकासी हेतु पारेषण योजना – भाग- ख

कार्यान्वयन अवधि: 36 माह

बीपीसी: आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड (आरईसीपीडीसीएल)

कार्य-क्षेत्र:

क्र.सं.	**पारेषण तत्त्व का ब्यौरा**	**कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)**
1	पानीपत जिले के निकट उपयुक्त स्थान पर 2 × 240 एमवीएआर (765 केवी) तथा 2 × 125 एमवीएआर (420 केवी) बस रिएक्टर सहित 765/400 केवी, 3 × 1500 एमवीए उपकेंद्र की स्थापना। **भविष्य के प्रावधान (वर्तमान स्कीम के कार्य-क्षेत्र को छोड़कर):** ➢ स्विचेबल लाइन रिएक्टर सहित 765 केवी लाइन बे – 4 ➢ 765/400 केवी, 1500 एमवीए आईसीटी- 3	**पानीपत उपकेंद्र - जीआईएस** • 765/400 केवी, 1500 एमवीए आईसीटी- 3 (एक स्पेयर यूनिट सहित कुल 10 × 500 एमवीए) • 765 केवी लाइन बे – 8 (पल्लू उपकेंद्र तथा बुलंदशहर उपकेंद्र के साथ 765 केवी 2×डी/सी इंटर-कनेक्शन हेतु)। • 400 केवी लाइन बे – 4 (मोहाली तथा मंडोला उपकेंद्रों के साथ 400 केवी इंटर-कनेक्शन हेतु)।

	➢ स्विचेबल लाइन रिएक्टर सहित 400 केवी लाइन बे – 4 ➢ 400 केवी लाइन बे – 4 ➢ बे सहित 765 केवी बस रिएक्टर – 1 ➢ बे सहित 400 केवी बस रिएक्टर – 1 ➢ 400 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ बे सहित 400/220 केवी आईसीटी- 5 ➢ 220 केवी लाइन बे – 8 ➢ 220 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ 220 केवी बीसी – 2 ➢ 400 केवी बे (2) सहित एमएससी (4x125 एमवीएआर) और एमएसआर (2x125 एमवीएआर) के साथ-साथ स्टेटकॉम (2x±300 एमवीएआर)।	• 765 केवी आईसीटी बे – 3 • 400 केवी आईसीटी बे – 3 • 240 एमवीएआर बस रिएक्टर – 2 (एक स्पेयर यूनिट सहित कुल 7 × 80 एमवीएआर) • 765 केवी बस रिएक्टर बे – 2 • 125 एमवीएआर बस रिएक्टर – 2 • 400 केवी बस रिएक्टर बे – 2
2	प्रत्येक सर्किट के लिए दोनों छोरों पर 240 एमवीएआर क्षमता के स्विचेबल लाइन रिएक्टर सहित 765 केवी पल्लू–पानीपत 2 × डी/सी लाइन।	लंबाई – 260 किमी • पल्लू उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर – 4 • पानीपत उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर – 4 • पल्लू उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण – 4 • पानीपत उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण – 4
3	मोहाली जिले के निकट उपयुक्त स्थान पर 2 × 125 एमवीएआर (420 केवी) बस रिएक्टर सहित 400/220 केवी, 4 × 500 एमवीए उपकेंद्र की स्थापना। **भविष्य के प्रावधान (वर्तमान स्कीम के कार्य-क्षेत्र को छोड़कर):** ➢ स्विचेबल लाइन रिएक्टर सहित 400 केवी लाइन बे – 4 ➢ 400 केवी लाइन बे – 2	**मोहाली उपकेंद्र - जीआईएस** • 400 केवी लाइन बे – 4 (पानीपत उपकेंद्र के साथ 400 केवी इंटर-कनेक्शन तथा 400 केवी पटियाला–पंचकुला डी/सी लाइन के एक सर्किट के एलआईएलओ हेतु)। • 400/220 केवी आईसीटी- 4 • 400 केवी आईसीटी बे – 4 • 220 केवी आईसीटी बे – 4

	➢ बे सहित 400 केवी बस रिएक्टर – 1 ➢ बे सहित 400/220 केवी आईसीट- 1 ➢ 400 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ 220 केवी लाइन बे – 4 ➢ 220 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ 220 केवी बीसी- 1 ➢ 400 केवी बे (2) सहित एमएससी (4x125 एमवीएआर) और एमएसआर (2x125 एमवीएआर) के साथ-साथ स्टेटकॉम (2x±300 एमवीएआर)।	• 125 एमवीएआर बस रिएक्टर – 2 • 400 केवी बस रिएक्टर बे – 2 • 220 केवी लाइन बे – 6 • 220 केवी बस कपलर बे – 1 ***400/220 केवी आईसीटी तथा 220 केवी लाइन बे, पीएसटीसीएल की विद्युत निकासी आवश्यकता को पूरा करने हेतु कार्यान्वित किए जा रहे हैं।***
4	**मोहाली उपकेंद्र पर 400 केवी पटियाला–पंचकुला डी/सी लाइन के एक सर्किट का एलआईएलओ कार्य (ट्विन एचटीएलएस*)।** ****प्रत्येक परिपथ की वहन क्षमता नाममात्र वोल्टेज पर न्यूनतम 2100 एमवीए होगी।***	लम्बाई-20 किमी (लीलो की लम्बाई) (ट्विन एचटीएलएस)
5	मोहाली छोर पर प्रत्येक परिपथ हेतु 80 एमवीएआर (420 केवी) स्विचेबल लाइन रिएक्टर सहित 400 केवी पानीपत उपकेंद्र – मोहाली डबल सर्किट (क्वाड मूस) लाइन।	लाइन की लंबाई- 160 किमी (क्वाड) • मोहाली उपकेंद्र छोर पर 420 केवी, 80 एमवीएआर स्विचेबल लाइन रिएक्टर – 2 • मोहाली उपकेंद्र छोर पर 420 केवी, 80 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण – 2
6	400 केवी पानीपत उपकेंद्र – मंडोला डबल सर्किट (क्वाड) पारेषण लाइन।	लाइन की लंबाई- 70 किमी (क्वाड) • मंडोला उपकेंद्र पर 400 केवी लाइन बे – 2

3. राजस्थान आरईजेड चरण-IV (भाग-6: 6 गीगावाट) (बीकानेर परिसर) (बीकानेर-V: 6 गीगावाट) के अंतर्गत विद्युत निकासी हेतु पारेषण योजना – भाग- ग

कार्यान्वयन अवधि: 36 माह

बीपीसी: आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड (आरईसीपीडीसीएल)

कार्य-क्षेत्र:

क्र.सं.	पारेषण तत्त्व का ब्यौरा	कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)
1	बुलंदशहर जिले के निकट उपयुक्त स्थान पर 2 × 330 एमवीएआर (765 केवी) बस रिएक्टर सहित 765 केवी उपकेंद्र की स्थापना। **<u>भविष्य के प्रावधान (वर्तमान स्कीम के कार्य-क्षेत्र को छोड़कर):</u>** ➢ स्विचेबल लाइन रिएक्टर सहित 765 केवी लाइन बे – 4 ➢ 765/400 केवी, 1500 एमवीए आईसीटी – 4 ➢ स्विचेबल लाइन रिएक्टर सहित 400 केवी लाइन बे – 4 ➢ 400 केवी लाइन बे – 4 ➢ बे सहित 765 केवी बस रिएक्टर – 1 ➢ बे सहित 400 केवी बस रिएक्टर – 1 ➢ 400 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ बे सहित 400/220 केवी आईसीटी – 5 ➢ 220 केवी लाइन बे – 8 ➢ 220 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ 220 केवी बीसी (2) तथा टीबीसी (2) ➢ 400 केवी बे (2) सहित एमएससी (4x125 एमवीएआर) और एमएसआर (2x125 एमवीएआर) के साथ-साथ स्टेटकॉम (2x±300 एमवीएआर)।	**बुलंदशहर उपकेंद्र -एआईएस** • 765 केवी लाइन बे – 10 (पानीपत उपकेंद्र के साथ 765 केवी 2×डी/सी इंटर-कनेक्शन,लखनऊ-II उपकेंद्र तथा नोएडा सेक्टर-148 (यूपीपीटीसीएल) उपकेंद्र के साथ 765 केवी डी/सी इंटर-कनेक्शन, तथा 765 केवी अलीगढ़–ग्रेटर नोएडा लाइन के एलआईएलओ हेतु)। • 330 एमवीएआर बस रिएक्टर – 2 (एक स्पेयर यूनिट सहित कुल 7 × 110 एमवीएआर)। • 765 केवी बस रिएक्टर बे – 2
2	बुलंदशहर छोर पर प्रत्येक सर्किट हेतु 240 एमवीएआर स्विचेबल लाइन रिएक्टर के साथ-साथ 765 केवी पानीपत–बुलंदशहर 2× डी/सी लाइन।	लाइन की लंबाई – 155 कि.मी. • बुलंदशहर उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टर – 4 • बुलंदशहर उपकेंद्र छोर पर 765 केवी, 240 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण – 4 • 765 केवी स्तर पर 1 × 80 एमवीएआर रिएक्टर स्पेयर यूनिट – 1

क्र.सं.	पारेषण तत्त्व का ब्यौरा	कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)
3	बुलंदशहर उपकेंद्र पर 765 केवी अलीगढ़– ग्रेटर नोएडा पारेषण लाइन का एलआईएलओ।	**लाइन की लंबाई – 35 किमी** ***(एलआईएलओ की लंबाई)***।
4	765 केवी बुलंदशहर – नोएडा सेक्टर-148 (यूपीपीटीसीएल) डी/सी लाइन।	लाइन की लम्बाई- 65 किमी **• नोएडा सेक्टर-148 उपकेंद्र (यूपीपीटीसीएल) पर 765 केवी लाइन बे (जीआईएस) – 4** (*व्यास पूर्णता हेतु 2 बे सहित)*
5	लखनऊ के निकट उपयुक्त स्थान पर 2 × 330 एमवीएआर (765 केवी) तथा 2 × 125 एमवीएआर (420 केवी) बस रिएक्टर सहित 765/400 केवी, 2 × 1500 एमवीए लखनऊ-II उपकेंद्र की स्थापना। **<u>भविष्य के प्रावधान (वर्तमान स्कीम के कार्य-क्षेत्र को छोड़कर):</u>** ➢ स्विचेबल लाइन रिएक्टर सहित 765 केवी लाइन बे – 8 ➢ 765/400 केवी, 1500 एमवीए आईसीटी – 4 ➢ स्विचेबल लाइन रिएक्टर सहित 400 केवी लाइन बे – 4 ➢ 400 केवी लाइन बे – 4 ➢ बे सहित 765 केवी बस रिएक्टर – 1 ➢ बे सहित 400 केवी बस रिएक्टर – 1 ➢ 400 केवी सेक्शनलाइजेशन बे – 1 सेट ➢ बे सहित 400/220 केवी आईसीटी – 5 ➢ 220 केवी लाइन बे – 8 ➢ 220 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ 220 केवी बीसी (2) तथा टीबीसी (2) ➢ दो 400 केवी बे सहित 400 केवी स्तर पर 2 सिंक्रोनस कंडेंसर यूनिट* । **1 सिनकॉन यूनिट में +300एमवीएआर/-200 एमवीएआर (न्यूनतम) का डायनेमिक सपोर्ट और पीसीसी पर 1200 एमवीए (न्यूनतम) का शॉर्ट सर्किट योगदान शामिल है (जड़त्व का मान (मेगावाट-सेकंड) आरएफपी दस्तावेज़ में प्रदान किया जाएगा)।*	**लखनऊ-II उपकेंद्र – एआईएस** • 765/400 केवी, 1500 एमवीए आईसीटी– 2 (एक स्पेयर यूनिट सहित कुल 7 × 500 एमवीए)। • 765 केवी लाइन बे– 4 (आसना तथा बुलंदशहर उपकेंद्रों के साथ 765 केवी डबल सर्किट इंटर-कनेक्शन हेतु)। • 400 केवी लाइन बे – 2 (गोंडा (यूपीपीटीसीएल) उपकेंद्र के साथ 400 केवी इंटर-कनेक्शन हेतु)। • 765 केवी आईसीटी बे – 2 • 400 केवी आईसीटी बे – 2 • 330 एमवीएआर बस रिएक्टर – 2 (एक स्पेयर यूनिट सहित कुल 7 × 110 एमवीएआर)। • 765 केवी बस रिएक्टर बे - 2 • 125 एमवीएआर बस रिएक्टर- 2 • 400 केवी बस रिएक्टर बे - 2
6	सहित 765 केवी बुलंदशहर–लखनऊ-II डी/सी लाइन के साथ-साथ प्रत्येक सर्किट के दोनों छोरों पर 330 एमवीएआर स्विचेबल लाइन रिएक्टर।	लाइन की लंबाई – 330 किमी

क्र.सं.	पारेषण तत्त्व का ब्यौरा	कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)
		• बुलंदशहर उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर– 2 • बुलंदशहर उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण – 2 • लखनऊ-II उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर – 2 • लखनऊ-II उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण- 2

4. राजस्थान आरईजेड चरण-IV (भाग-6: 6 गीगावाट) (बीकानेर परिसर) (बीकानेर-V: 6 गीगावाट) के अंतर्गत विद्युत निकासी हेतु पारेषण योजना – भाग-घ

कार्यान्वयन अवधि: 36 माह

बीपीसी: आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड (आरईसीपीडीसीएल)

कार्य-क्षेत्र:

क्र.सं.	पारेषण तत्त्व का ब्यौरा	कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)
1	400 केवी लखनऊ-II – गोंडा डी/सी (क्वाड मूस) लाइन।	लाइन की लंबाई – 150 कि.मी. • गोंडा उपकेंद्र (एआईएस) (यूपीपीटीसीएल) पर 400 केवी लाइन बे-2
2	चंदौली जिले के आसना गांव के निकट उपयुक्त स्थान पर 2 × 330 एमवीएआर (765 केवी) तथा 2 × 125 एमवीएआर (420 केवी) बस रिएक्टर सहित 765/400 केवी, 2 × 1500 एमवीए उपकेंद्र की स्थापना।	आसना (चंदौली) उपकेंद्र – एआईएस

क्र.सं.	पारेषण तत्त्व का ब्यौरा	कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)
	भविष्य के प्रावधान (वर्तमान स्कीम के कार्य-क्षेत्र को छोड़कर): ➢ स्विचेबल लाइन रिएक्टर सहित 765 केवी लाइन बे – 6 ➢ 765/400 केवी, 1500 एमवीए आईसीटी – 4 ➢ स्विचेबल लाइन रिएक्टर सहित 400 केवी लाइन बे – 4 ➢ 400 केवी लाइन बे – 4 ➢ बे सहित 765 केवी बस रिएक्टर – 1 ➢ बे सहित 400 केवी बस रिएक्टर – 1 ➢ 400 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ बे सहित 400/220 केवी आईसीटी – 5 ➢ 220 केवी लाइन बे – 8 ➢ 220 केवी सेक्शनलाइजेशन बे – 1 सेट। ➢ 220 केवी बीसी (2) तथा टीबीसी (2) ➢ दो 400 केवी बे सहित 400 केवी स्तर पर 2 सिंक्रोनस कंडेंसर यूनिट*। **1 सिनकॉन यूनिट में +300एमवीएआर/-200 एमवीएआर (न्यूनतम) का डायनेमिक सपोर्ट और पीसीसी पर 1200 एमवीए (न्यूनतम) का शॉर्ट सर्किट योगदान शामिल है (जड़त्व का मान (मेगावाट-सेकंड) आरएफपी दस्तावेज़ में प्रदान किया जाएगा)।*	• 765/400 केवी, 1500 एमवीए आईसीटी – 2 (एक स्पेयर यूनिट सहित कुल 7 × 500 एमवीए) • 765 केवी लाइन बे – 4 (लखनऊ-II एवं नवादा उपकेंद्रों के साथ 765 केवी डी/सी इंटर-कनेक्शन हेतु)। • 400 केवी लाइन बे – 4 (400 केवी वाराणसी–बिहारशरीफ डबल सर्किट लाइन के दोनों सर्किटों के लीलो हेतु)। • 765 केवी आईसीटी बे – 2 • 400 केवी आईसीटी बे – 2 • 330 एमवीएआर बस रिएक्टर – 2 (एक स्पेयर यूनिट सहित कुल 7 × 110 एमवीएआर)। • 765 केवी बस रिएक्टर बे - 2 • 125 एमवीएआर बस रिएक्टर-2 • 400 केवी बस रिएक्टर बे -2
3	765 केवी लखनऊ-II–आसना डी/सी लाइन के साथ-साथ प्रत्येक सर्किट के दोनों छोरों पर 330 एमवीएआर स्विचेबल लाइन रिएक्टर।	लाइन की लंबाई - 350 किमी • आसना उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर - 2 • आसना उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण – 2

क्र.सं.	पारेषण तत्त्व का ब्यौरा	कार्य-क्षेत्र (उपकेंद्र के प्रकार/चालक क्षमता/किलोमीटर/बे की संख्या आदि)
		• लखनऊ-II उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर - 2 • लखनऊ-II उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण- 2
4	400 केवी आसना–बिहारशरीफ सेक्शन के अंतर्गत आसना छोर पर प्रत्येक सर्किट हेतु 80 एमवीएआर स्विचेबल लाइन रिएक्टर सहित आसना उपकेंद्र पर 400 केवी वाराणसी–बिहारशरीफ डी/सी लाइन के दोनों सर्किटों का लीलो।	लाइन की लंबाई – 35 कि.मी. (एलआईएलओ की लंबाई) • आसना उपकेंद्र छोर पर 420 केवी, 80 एमवीएआर स्विचेबल लाइन रिएक्टर- 2 • आसना उपकेंद्र छोर पर 420 केवी, 80 एमवीएआर स्विचेबल लाइन रिएक्टरों हेतु स्विचिंग उपकरण - 2
5	आसना छोर पर प्रत्येक सर्किट हेतु 330 एमवीएआर स्विचेबल लाइन रिएक्टर सहित आसना– नवादा 765 केवी डी/सी लाइन।	लाइन की लंबाई – 215 कि.मी. • नवादा उपकेंद्र (एआईएस) पर 765 केवी लाइन बे – 2 • आसना उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर– 2 • आसना उपकेंद्र छोर पर 765 केवी, 330 एमवीएआर स्विचेबल लाइन रिएक्टर हेतु स्विचिंग उपकरण – 2

5. बोली प्रक्रिया समन्वयक की नियुक्ति, विद्युत मंत्रालय द्वारा इस संबंध में जारी और समय-समय पर संशोधित दिशानिर्देशों में निर्धारित शर्तों के अध्यधीन होगी।

6. बीपीसी तकनीकी विकल्पों के माध्यम से मार्ग के अधिकार (आरओडब्ल्यू) की चौड़ाई में कमी की गणना के लिए सीईए की समिति की रिपोर्ट दिनांक 24.09.2024 के अनुसार आरओडब्ल्यू अनुकूलन सुनिश्चित करेगी।

7. शहरी/अर्ध-शहरी क्षेत्रों में मोनोपोल टॉवर संरचनाएं, इंसुलेटेड क्रॉस आर्म्स और आरओडब्ल्यू कॉरिडोर को अनुकूल बनाने के अन्य उपाय अपनाए जाएंगे।

8. जहां आरओडब्ल्यू की संभावना है, वहां मोनोपोल टॉवर संरचनाओं का उपयोग किया जाएगा, जबकि लैटिस टावरों का उपयोग अन्य सेक्शन में किया जाएगा।

9. वन एवं पर्वतीय भू-भाग वाले क्षेत्रों में, मोनोपोल संरचना के उपयोग के अतिरिक्त अन्य आरओडब्ल्यू अनुकूलन उपायों को भी अपनाया जाएगा।

10. इसके अलावा, मार्ग को पीएम गति शक्ति पोर्टल पर सत्यापन और भौतिक सर्वेक्षण के बाद ही अंतिम रूप दिया जाना चाहिए।

[फा. सं. 34-15/3/2026- ट्रांस]

नोओरेम इंद्रकुमार सिंह, अवर सचिव (पारेषण)

NOTIFICATION

New Delhi, the 19th June, 2026

S.O. 3257(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 on the recommendations of 41st meeting of National Committee on Transmission, hereby notifies the following transmission schemes under TBCB mode, with details of respective Bid-Process Coordinator (BPC): -

1. Transmission scheme for evacuation of power as part of Rajasthan REZ Ph-IV (Part-6: 6GW) (Bikaner Complex) (Bikaner V: 6GW)- Part A

Implementation timeframe: 36 Months

BPC: REC Power Development and Consultancy Limited (RECPDCL)

Scope:

Sl. No.	Description of Transmission Element	Scope of work (Type of Substation/Conductor capacity/km/no. of bays etc.)
1	Establishment of 765/400 kV, 6x1500 MVA & 400/220 kV, 10x500 MVA Bikaner-V Pooling Station along with 2x240 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors at a suitable location near Bikaner **Future provisions (excl. scope of present scheme):** ➢ 765 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays –4 Nos. ➢ 765 kV Bus Reactor along with bays: 1 No ➢ 400 kV Bus Reactor along with bays: 1 No. ➢ 400/220 kV ICT along with bays-2 Nos. ➢ 400 kV Sectionalization bays: 1 set ➢ 220 kV line bays for connectivity RE Applications -4 Nos.	**Bikaner-V PS - AIS** • 765/400 kV 1500 MVA ICTs- 6 Nos. (19x500 MVA including one spare unit) • 400/220 kV 500 MVA ICTs- 10 Nos. • 765kV line bays – 4 nos. (for 765kV interconnection with Pallu S/s) • 400kV line bays – 4 nos. (for 400kV interconnection with LILO of one D/c of 400kV Bikaner II PS-Khetri 2xD/c line) • 765kV ICT bays – 6 nos. • 400 kV ICT bays- 16 Nos. • 220 kV ICT bays - 10 Nos. • 240 MVAr Bus Reactor-2 Nos.

	➢ 220kV Sectionalization bay: 2 sets ➢ 220 kV BC (2 Nos.) & TBC (2 Nos.) ➢ 1 No. of Syncon units* at 400kV level along with 1 nos. of 400kV bay **1 No. of SynCon unit comprises dynamic support of +300MVAr/-200MVAr (Minimum) & Short circuit contribution at PCC of 1200MVA (Minimum)) (Value of inertia (MW-secs) shall be provided in RfP document)*	(7x80 MVAr, including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 125 MVAr Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos. • 400kV line bays– 3 Nos. (for RE interconnection) • 220kV line bays – 10 Nos. (for RE interconnection) • 220kV Sectionalization bay: 1 set • 220 kV BC (2 Nos.) & TBC (2 Nos.) • 400kV sectionaliser bay- 1 Set
2	STATCOM (2x±300MVAr) along with MSC (4x125 MVAr) & MSR (2x125 MVAr) at Bikaner-V PS	• STATCOM (2x+300MVAr) along with MSC (4x125 MVAr) & MSR (2x125 MVAr) • 400 kV bays: 2 Nos. (for STATCOM)
3	LILO of one double ckt of 400kV Bikaner II PS- Khetri (Twin HTLS) 2xD/c line at Bikaner-V PS along with 50 MVAr switchable line reactor for each circuit at Bikaner-V PS end of 400kV Bikaner-V-Khetri section	Length-28km (Quad) (LILO length) • 420 kV, 50 MVAr switchable line reactors at Bikaner-V PS end – 2 Nos. • Switching equipment for 420kV, 50MVAr switchable line reactors at Bikaner-V PS end – 2 Nos.
4	Establishment of 765/400 kV, 2x1500 MVA S/s at suitable location near Pallu (Distt. Hanumangarh) along with 2x240 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors **Future provisions (excl. scope of present scheme):** ➢ 765 kV line bays along with switchable line reactor –2 nos. ➢ 765/400 kV 1500 MVA ICTs- 2 Nos. ➢ 400 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays –4 Nos. ➢ 765 kV Bus Reactor along with bays: 1 No ➢ 400 kV Bus Reactor along with bays: 1 No. ➢ 400 kV Sectionalization bays: 1 set ➢ 400/220 kV ICT along with bays-5 Nos. ➢ 220 kV line bays -8 Nos. ➢ 220kV Sectionalization bay: 1 set ➢ 220 kV BC (2 Nos.) & TBC (2 Nos.) ➢ 2 No. of Syncon units* at 220kV level along	**Pallu S/s - AIS** • 765/400 kV 1500 MVA ICTs- 2 Nos. (7x500 MVA including one spare unit) • 765kV line bays – 12 nos. (for 765kV 2xD/c interconnection each with Bikaner-V PS, Panipat S/s and LILO of both ckts of 765kV Bikaner – Moga D/c line) • 400kV line bays – 2 nos. (for 400kV interconnection with Hanumangarh S/s) • 765kV ICT bays – 2 nos. • 400 kV ICT bays- 2 Nos. • 240 MVAr Bus Reactor-2 Nos. (7x80 MVAr, including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 125 MVAr Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos.

	with 2 nos. of 220kV bay **1 No. of SynCon unit comprises dynamic support of +300MVAr/-200MVAr (Minimum) & Short circuit contribution at PCC of 1200MVA (Minimum)) (Value of inertia (MW-secs) shall be provided in RfP document)*	
5	765 kV Bikaner-V PS – Pallu 2xD/c line	Line Length -135 km
6	LILO of both ckts of 765kV Bikaner – Moga D/c line at Pallu S/s along with 240MVAr switchable line reactor for each circuit at Pallu S/s end of 765kV Pallu-Moga D/c line	Length-10 km (LILO length) • 765 kV, 240 MVAr switchable line reactors at Pallu S/s end– 2 Nos. • Switching equipment for 765kV, 240MVAr switchable line reactors at Pallu S/s end – 2 Nos.
7	400 kV Pallu – Hanumangarh (RVPN) D/c (Quad) line	Line Length -92 km • 400kV line bays – 2 nos. (at Hanumangarh (RVPN) S/s)

2. Transmission scheme for evacuation of power as part of Rajasthan REZ Ph-IV (Part-6: 6GW) (Bikaner Complex) (Bikaner V: 6GW)- Part B

Implementation timeframe: 36 Months

BPC: REC Power Development and Consultancy Limited (RECPDCL)

Scope:

Sl. No.	**Description of Transmission Element**	**Scope of work (Type of Substation/Conductor capacity/km/no. of bays etc.)**
1	Establishment of 765/400 kV, 3x1500 MVA S/s at suitable location near Panipat (Distt. Panipat) along with 2x240 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors **Future provisions (excl. scope of present scheme):** ➢ 765 kV line bays along with switchable line reactor –4 nos. ➢ 765/400 kV 1500 MVA ICTs- 3 Nos. ➢ 400 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays –4 Nos. ➢ 765 kV Bus Reactor along with bays: 1 No ➢ 400 kV Bus Reactor along with bays: 1 No. ➢ 400 kV Sectionalization bays: 1 set ➢ 400/220 kV ICT along with bays-5 Nos. ➢ 220 kV line bays -8 Nos. ➢ 220kV Sectionalization bay: 1 set ➢ 220 kV BC (2 Nos.) ➢ STATCOM (2x±300MVAr) along with	**Panipat S/s - GIS** • 765/400 kV 1500 MVA ICTs- 3 Nos. (10x500 MVA including one spare unit) • 765kV line bays –8 nos. (for 765kV 2xD/c interconnection each with Pallu S/s and Bulandshahr S/s) • 400kV line bays – 4 nos. (for 400kV interconnection with Mohali and Mandola S/s) • 765kV ICT bays – 3 nos. • 400 kV ICT bays- 3 Nos. • 240 MVAr Bus Reactor-2 Nos. (7x80 MVAr, including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 125 MVAr Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos.

	MSC (4x125 MVAr) & MSR (2x125 MVAr) along with 400kv bays (2nos.)	
2	765 kV Pallu-Panipat 2xD/c line along with 240 MVAr switchable line reactor for each circuit at each end	Length-260 km • 765 kV, 240 MVAr switchable line reactors at Pallu S/s end– 4 Nos. • 765 kV, 240 MVAr switchable line reactors at Panipat S/s end– 4 Nos. • Switching equipment for 765kV, 240MVAr switchable line reactors at Pallu S/s end – 4 Nos. • Switching equipment for 765kV, 240MVAr switchable line reactors at Panipat S/s end – 4 Nos.
3	Establishment of 400/220kV, 4x500 MVA S/s at suitable location near Mohali (Distt. Mohali district) along with 2x125 MVAr (420kV) Bus Reactors **Future provisions (excl. scope of present scheme):** ➢ 400 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays –2 Nos. ➢ 400 kV Bus Reactor along with bays: 1 No. ➢ 400/220 kV ICT along with bays-1 Nos. ➢ 400 kV Sectionalization bays: 1 set ➢ 220 kV line bays -4 Nos. ➢ 220kV Sectionalization bay: 1 set ➢ 220 kV BC (1 Nos.) ➢ STATCOM (2x±300MVAr) along with MSC (4x125 MVAr) & MSR (2x125 MVAr) along with 400kv bays (2nos.)	**Mohali S/s - GIS** • 400kV line bays – 4 nos. (for 400kV interconnection with Panipat S/s & LILO of one circuit of 400kV Patiala-Panchkula D/c line) • 400/220kV ICTs – 4 nos. • 400kV ICT bays – 4 nos. • 220 kV ICT bays- 4 Nos. • 125 MVAr Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos. • 220 kV line bays -6 Nos. • 220kV Bus Coupler bay-1 No. ***400/220 ICTs and 220kV line bays are implemented to meet PSTCL drawl requirement***
4	LILO of one circuit of 400kV Patiala-Panchkula D/c line at Mohali (Twin HTLS*) *** with minimum capacity of 2100 MVA on each circuit at Nominal voltage***	Length-20 km (LILO length) (Twin HTLS)
5	400 kV Panipat S/s – Mohali D/c (Quad Moose) line along with 80 MVAr (420kV) switchable line reactor for each circuit at Mohali end	Line Length-160km (Quad) • 420 kV, 80 MVAr switchable line reactors at Mohali S/s end– 2 Nos. • Switching equipment for 420kV, 80MVAr switchable line reactors at Mohali S/s end – 2 Nos.

6	400 kV Panipat S/s – Mandola D/c (Quad) line	Line Length-70km (Quad) • 400kV line bays at Mandola S/s – 2 nos.

3. Transmission scheme for evacuation of power as part of Rajasthan REZ Ph-IV (Part-6: 6GW) (Bikaner Complex) (Bikaner V: 6GW)- Part C

Implementation timeframe: 36 Months

BPC: REC Power Development and Consultancy Limited (RECPDCL)

Scope:

Sl. No.	Description of Transmission Element	Scope of work (Type of Substation/Conductor capacity/km/no. of bays etc.)
1	Establishment of 765 kV S/s at suitable location near Bulandshahr (Distt. Bulandshahr) along with 2x330 MVAr (765kV) Bus Reactors **Future provisions (excl. scope of present scheme):** ➢ 765 kV line bays along with switchable line reactor –4 nos. ➢ 765/400 kV 1500 MVA ICTs- 4 Nos. ➢ 400 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays –4 Nos. ➢ 765 kV Bus Reactor along with bays: 1 No ➢ 400 kV Bus Reactor along with bays: 1 No. ➢ 400 kV Sectionalization bays: 1 set ➢ 400/220 kV ICT along with bays-5 Nos. ➢ 220 kV line bays -8 Nos. ➢ 220kV Sectionalization bay: 1 set ➢ 220 kV BC (2 Nos.) & TBC (2 nos.) ➢ STATCOM (2x±300MVAr) along with MSC (4x125 MVAr) & MSR (2x125 MVAr) along with 400kv bays (2nos.)	**Bulandshahr S/s – AIS** • 765kV line bays –10 nos. (for 765kV 2xD/c interconnection with Panipat S/s, 765kV D/c interconnection with Lucknow-II S/s & Noida sec-148 (UPPTCL) S/s and LILO of 765kV Aligarh – Gr. Noida line) • 330 MVAr Bus Reactor-2 Nos. (7x110 MVAr, including one spare unit) • 765 kV Bus reactor bays-2 Nos.
2	765 kV Panipat- Bulandshahr 2xD/c line along with 240 MVAr switchable line reactor for each circuit at Bulandshahr end	Line Length-155 km • 765 kV, 240 MVAr switchable line reactors at Bulandshahr S/s end– 4 Nos. • Switching equipment for 765kV, 240MVAr switchable line reactors at Bulandshahr S/s end – 4 Nos. • 1x80 MVAr, 765kv reactor spare unit
3	LILO of 765kV Aligarh – Gr. Noida line at Bulandshahr S/s	Length-35 km (LILO length)

Sl. No.	Description of Transmission Element	Scope of work (Type of Substation/Conductor capacity/km/no. of bays etc.)
4	765kV Bulandshahr - Noida sec-148 (UPPTCL) D/c line	Line Length- 65 km • 765kV line bays (GIS) at Noida sec-148 S/s(UPPTCL) – 4 nos. (incl. 2 bays for dia completion).
5	Establishment of 765/400 kV, 2x1500 MVA Lucknow-II S/s at suitable location near Lucknow along with 2x330 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors **Future provisions (excl. scope of present scheme):** ➢ 765 kV line bays along with switchable line reactor –8 nos. ➢ 765/400 kV 1500 MVA ICTs- 4 Nos. ➢ 400 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays –4 Nos. ➢ 765 kV Bus Reactor along with bays: 1 No ➢ 400 kV Bus Reactor along with bays: 1 No. ➢ 400 kV Sectionalization bays: 1 set ➢ 400/220 kV ICT along with bays-5 Nos. ➢ 220 kV line bays -8 Nos. ➢ 220kV Sectionalization bay: 1 set ➢ 220 kV BC (2 Nos.) & TBC (2 nos.) ➢ 2 No. of Syncon units* at 400kV level along with 2 nos. of 400kV bays *1 No. of *SynCon* unit comprises dynamic support of +300MVAr/-200MVAr (Minimum) & Short circuit contribution at PCC of 1200MVA (Minimum)) (Value of inertia (MW-secs) shall be provided in RfP document)	Lucknow-II S/s – AIS • 765/400 kV 1500 MVA ICTs- 2 Nos. (7x500 MVA including one spare unit) • 765kV line bays –4 nos. (for 765kV D/c interconnection each with Asana & Bulandshahr S/s) • 400kV line bays – 2 nos. (for 400kV interconnection with Gonda (UPPTCL) S/s) • 765kV ICT bays – 2 nos. • 400 kV ICT bays- 2 Nos. • 330 MVAr Bus Reactor-2 Nos. (7x110 MVAr, including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 125 MVAr Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos.
6	765 kV Bulandshahr – Lucknow-II D/c line along with 330 MVAr switchable line reactor for each circuit at each end	Line Length- 330km • 765 kV, 330 MVAr switchable line reactors at Bulandshahr S/s end– 2 Nos. • Switching equipment for 765kV, 330MVAr switchable line reactors at Bulandshahr S/s end – 2 Nos. • 765 kV, 330 MVAr switchable line reactors at Lucknow-II S/s end– 2 Nos. • Switching equipment for 765kV, 330MVAr switchable line reactors

Sl. No.	Description of Transmission Element	Scope of work (Type of Substation/Conductor capacity/km/no. of bays etc.)
		at Lucknow-II S/s end – 2 Nos.

4. Transmission scheme for evacuation of power as part of Rajasthan REZ Ph-IV (Part-6: 6GW) (Bikaner Complex) (Bikaner V: 6GW)- Part D

Implementation timeframe: 36 Months

BPC: REC Power Development and Consultancy Limited (RECPDCL)

Scope:

Sl. No.	Description of Transmission Element	Scope of work (Type of Substation/Conductor capacity/km/no. of bays etc.)
1	400 kV Lucknow-II – Gonda D/c (Quad Moose) line	Line Length- 150km • 400kV line bays at Gonda S/s (AIS) (UPPTCL) – 2 nos.
2	Establishment of 765/400 kV, 2x1500 MVA S/s at suitable location near Asana Village (Chandauli District) along with 2x330 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors **Future provisions (excl. scope of present scheme):** ➢ 765 kV line bays along with switchable line reactor –6 nos. ➢ 765/400 kV 1500 MVA ICTs- 4 Nos. ➢ 400 kV line bays along with switchable line reactor –4 nos. ➢ 400 kV line bays –4 Nos. ➢ 765 kV Bus Reactor along with bays: 1 No ➢ 400 kV Bus Reactor along with bays: 1 No. ➢ 400 kV Sectionalization bays: 1 set ➢ 400/220 kV ICT along with bays-5 Nos. ➢ 220 kV line bays -8 Nos. ➢ 220kV Sectionalization bay: 1 set ➢ 220 kV BC (2 Nos.) & TBC (2 nos.) ➢ 2 No. of Syncon units* at 400kV level along with 2 nos. of 400kV bays **1 No. of SynCon unit comprises* dynamic *support of +300MVAr/-200MVAr (Minimum) & Short circuit contribution at PCC of 1200MVA (Minimum)) (Value of inertia (MW-secs) shall be provided in RfP document)*	**Asana (Chandauli) S/s – AIS** • 765/400 kV 1500 MVA ICTs- 2 Nos. (7x500 MVA including one spare unit) • 765kV line bays –4 nos. (for 765kV D/c interconnection each with Lucknow-II S/s & Nawada) • 400kV line bays – 4 nos. (for LILO of both ckts of 400kV Varanasi – Biharsharif D/c line) • 765kV ICT bays – 2 nos. • 400 kV ICT bays- 2 Nos. • 330 MVAr Bus Reactor-2 Nos. (7x110 MVAr, including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 125 MVAr Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos.
3	765 kV Lucknow-II-Asana D/c line along with 330 MVAr switchable line reactor for each circuit at each end	Line Length- 350km • 765 kV, 330 MVAr switchable line reactors at Asana S/s end– 2 Nos. • Switching equipment for 765kV, 330MVAr switchable line reactors at

Sl. No.	Description of Transmission Element	Scope of work (Type of Substation/Conductor capacity/km/no. of bays etc.)
		Asana S/s end – 2 Nos. • 765 kV, 330 MVAr switchable line reactors at Lucknow-II S/s end– 2 Nos. • Switching equipment for 765kV, 330MVAr switchable line reactors at Lucknow-II S/s end – 2 Nos.
4	LILO of both ckts of 400kV Varanasi – Biharsharif D/c line at Asana S/s along with 80 MVAr switchable line reactor for each circuit at Asana end of 400kV Asana- Biharsharif section	Length-35km (LILO length) • 420 kV, 80 MVAr switchable line reactors at Asana S/s end– 2 Nos. • Switching equipment for 420kV, 80MVAr switchable line reactors at Asana S/s end – 2 Nos.
5	Asana – Nawada 765kV D/c line along with 330MVAr switchable line reactors in each circuits at Asana end	Line Length - 215km • 765KV line bays at Nawada S/s (AIS) – 2 nos. • 765 kV, 330 MVAr switchable line reactors at Asana S/s end– 2 Nos. • Switching equipment for 765kV, 330MVAr switchable line reactors at Asana S/s end – 2 Nos.

5. The appointment of the Bid Process Coordinator is subject to the conditions laid down in the Guidelines issued by Ministry of Power in this regard, amended from time to time.

6. BPCs shall ensure RoW optimization as per the CEA's Committee report dated 24.09.2024 for calculation of reduction of Right of Way (RoW) Width through Technological Options.

7. Monopole tower structures, insulated cross arms and other RoW corridor optimization measures to be adopted in urban/ semi-urban areas.

8. Monopole tower structures to be used where RoW issues are anticipated, while lattice towers shall be used in other sections.

9. Other RoW optimization measures to be taken in forest/ hilly-terrain areas other than use of monopole.

10. Further, the route must be finalised after validation on PM Gati Shakti portal and physical survey.

[F. No. 34-15/3/2026-Trans]

NAOREM INDRAKUMAR SINGH, Under Secy.(Transmission)

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KUMER CHAND MEENA
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and is the sole survivor of the incident. According to reports, the four children had gone to bathe in a pond located about one kilometre from their village at around 3 PM.

Locals said Ansh (10), Ayush (9), and Pravendra (9) ventured into deeper waters of the pond, and

rried them to a nearby hospital, where doctors declared all three children dead.

Police from Meerganj reached the scene soon after being informed and have initiated necessary legal proceedings, said DSP Ajay Kumar.

HTC

Jawaharlal Nehru Medical College of Aligarh Muslim University, where he died during treatment on Saturday.Police initially registered a case under Section 109(1) (attempt to murder) of the BNS. Following the child's death, Section 103(1) for murder was added to the FIR.

HTC

7-foot barricades planned around Kedarnath temple

HT Correspondent

letters@hindustantimes.com

MUSSOORIE: The Badrinath Kedarnath Temple Committee (BKTC) plans to erect seven-foot-high barricades around the Kedarnath Temple premises to handle surging pilgrim crowds and restrict unauthorised video filming, officials said.

The initiative follows a sharp rise in devotees during the ongoing Char Dham Yatra, putting pressure on authorities to control crowds and preserve order in the temple complex.

Sohan Singh Rangar, BKTC chief executive officer, said the committee has submitted a formal proposal to the Garhwal commissioner for approval. "In response to the rising footfall, we are planning to install seven-foot-high barricades around the temple premises. The objective is to streamline the movement of devotees and maintain the religious sanctity of the shrine," he said. Rangar noted the barricades would regulate access to the core area, prevent loitering and curb congestion. "These barriers will ensure that only those coming for prayers are allowed into the main complex through designated routes. This will also help reduce congestion and improve overall crowd management," he said.

The measures also target content creators filming videos, reels and social media clips inside the premises.

जयपुर जिला दुग्ध उत्पादक सहकारी संघ लि.

गांधी नगर रेल्वे स्टेशन के पास, जयपुर-302015. Tele Fax: 0141-2711075

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ई-निविदा/निविदा सूचना

NIB – CDF2627A0135 जयपुर दुग्ध संघ में **5 लेयर पॉलिथीन फिल्म फॉर पैकिंग मिल्क/छाछ/लस्सी, प्लास्टिक पैलेट्स, ई.टी.पी. कैमिकल्स, एल्युमिनियम फॉइल फॉर 200/400 ग्राम वक्षि कप इत्यादि** की आपूर्ति हेतु निविदा/ई-निविदायें (**https://eproc.rajasthan.gov.in** पर आमंत्रित की जाती हैं। विस्तृत शर्तें/महत्वपूर्ण दिनांक इत्यादि संघ की वेबसाईट **www.jaipurdairy.com** एवं **sppp.rajasthan.gov.in/** पर भी देखी जा सकती हैं।

प्रबन्ध संचालक

लोहन में भरे रस, तमाम रोगों

REC POWER DEVELOPMENT AND CONSULTANCY LIMITED

(A wholly owned subsidiary of REC Ltd.)

GLOBAL INVITATION (Through e-bidding Only)

FOR SELECTION OF TRANSMISSION SERVICE PROVIDER THROUGH TARIFF BASED COMPETITIVE BIDDING (TBCB) PROCESS ON BUILD, OWN, OPERATE AND TRANSFER (BOOT) BASIS FOR 02 (Two) INTER – STATE TRANSMISSION PROJECTS

REC Power Development and Consultancy Limited, New Delhi, India (a wholly owned subsidiary of REC Limited, a Maharatna Central Public Sector Undertaking) invites proposal for setting up of the below mentioned transmission projects through TBCB process on Build, Own, Operate and Transfer (BOOT) basis following single stage two envelope process of "Request for Proposal (RFP)". Interested bidders may refer to the Request for Proposal (RFP) notifications and RFP documents available on our websites www.recpdcl.in & www.recindia.nic.in w.e.f. 04.05.2026.

The bidders may obtain the RFP documents on all working days between 10:30 hours (IST) to 16:00 hours (IST) from 04.05.2026 to one day prior to bid submission date on payment of non-refundable fee of Rs. 5,00,000/- (Rupees Five Lakh Only) or US$ 7000 (US Dollars Seven Thousand Only) + 18% GST for each transmission projects as per details provided in the RFP document available on the websites www.recpdcl.in & www.recindia.nic.in.

The Request for Proposal (RFP) documents can also be downloaded from our websites www.recpdcl.in & www.recindia.nic.in, however, in such cases interested parties can submit Response to RFP only on submission of non-refundable fee of Rs. 5,00,000/- (Rupees Five Lakh Only) or US$ 7000 (US Dollars Seven Thousand Only) + 18% GST for each transmission projects as per details provided in the RFP document. The survey report & clarifications to RFP document shall be issued to those bidders, who have obtained/purchased RFP documents by paying requisite fee. The important timelines in this regard are as follows:

Sr. No.	Name of Project	Last Date for seeking clarifications	Last Date for submission of Response to RFP	Details of Opening of Response to RFP
1.	Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)	25.05.2026	06.07.2026 up to 1500 Hrs (IST)	06.07.2026 at 1530 Hrs (IST)
2.	Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-B	25.05.2026	06.07.2026 up to 1600 Hrs (IST)	06.07.2026 at 1630 Hrs (IST)

All corrigenda, addenda, amendments, time extensions, etc. to the RFP will be hosted on our websites www.recpdcl.in & www.recindia.nic.in. Bidders should regularly visit our websites to keep themselves updated.

Note: RECPDCL reserves the right to cancel or modify the process without assigning any reason and without any liability. This is not an offer.

Chief Executive Officer
REC Power Development and Consultancy Ltd.
Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003, India

Bid Process Coordinator: REC Power Development and Consultancy Limited

An Initiative of: Ministry of Power, Government of India

Initiative Partner: Central Electricity Authority

ELEPHANT KILLS THREE IN KUMAON FOREST RANGE

HT Correspondent

letters@hindustantimes.com

RUDRAPUR: A one-tusked elephant has become a deadly menace to residents along the Tanda forest range in Kumaon, trampling three people to death—including an elderly woman—in just three days, forest officials said.

The animal also attacked a tempo loaded with wheat sacks on Saturday, forcing the occupants to flee.

No injuries were reported, but the elephant damaged the consignment.

"We are monitoring the movement of the elephant round-the-clock to prevent human-animal conflict. Patrolling has been intensified and teams are using public address systems to warn people against venturing into forest areas," said Roop Narayan Gautam, ranger of Tanda forest range under the Terai Central Forest Division.

The Tanda forest range spans parts of Udham Singh Nagar and Nainital districts, where elephant presence is significant. Officials said the one-tusked elephant has repeatedly appeared near forest fringes, alarming locals.

MEERUT: A road accident Muzaffarnagar district on Saturday claimed the lives of three members of a family—a father, mother, and son—sparking massive protests and a road blockade by enraged villagers demanding compensation and swift action against the accused driver.

The incident occurred on the Phalavda–Khatauli road under Khatauli police station limits when the victims were traveling from their village Chhachharpur to Khatauli on a motorcycle. According to police, the rider attempted to avoid an oncoming

Census 20 populatio

HT Correspondent

letters@hindustantimes.com

LUCKNOW: Census 2027 will be conducted in two phases – house-listing and housing census (HLO) from May 22 to June 20 and population enumeration in February 2027, said Sheetal Verma, director of Census Operations, Uttar Pradesh, here on Saturday.

Caste enumeration will be done along with census operations in the second phase. The last comprehensive caste-based count was done between 1881 and 1931. Caste was excluded from all census operations conducted since Independence.

Addressing a press conference, Verma said the Census will be conducted digitally for the first time in the country, with an optional 15-day self-enumeration period from May 7-21, 2026, during which individuals can enter their information on the portal -se.census.gov.in. Self-enumeration is optional, not mandatory.

Verma said enumerators will visit each house between May 22 and June 20, recording information using a mobile app based on 33 questions notified by the central government. These questions relate to the condition of the houses, the facilities available to the families, and their assets.

The Census is conducted under the provisions of the Census Act, 1948, and the Census Rules, 1990. According to these provisions, all personal information collected during the census is kept strictly confidential and is not shared with anyone. The information cannot be used for tax, police, or other investigations. It cannot be used as evidence in any matter. The data is

मक पीएफआरडीए ने नियमों को और स्पष्ट किया, नए संशोधन एक जुलाई से लागू होंगे

एनपीएस खातों पर शुल्क लगेगा



अभी कितना शुल्क

1. सरकारी, निजी क्षेत्र के सदस्यों के लिए 18 से 40 रुपये तक।
2. सरकारी कर्मियों के लिए 100 रुपये। निजी क्षेत्र के लिए कोष में जमा रकम के आधार पर तय होता है। यह दो लाख तक 100 रुपये है। 10 लाख तक 150 रुपये, 25 लाख तक 300 रुपये और 50 लाख से अधिक पर 500 रुपये है।

इन खातों पर राहत मिली

- एनपीएस लाइट और अटल पेंशन योजना से जुड़े उन लोगों को भी राहत मिली है, जिनके खातों में बैलेंस जीरो है। ऐसे खातों पर कोई रखरखाव शुल्क नहीं लिया जाएगा।
- अब प्रान नंबर खोलने का शुल्क सिर्फ पहली बार एनपीएस खाता खोलते समय ही देना होगा।
- इसके बाद अगर कोई व्यक्ति उसी प्रान के तहत नया टियर-1 या टियर-2 खाता शुरू करता है, तो अलग से कोई शुल्क नहीं लगेगा।

शुल्क की गणना इन तरीकों से होगी

1. अब एनपीएस में रखरखाव शुल्क की गणना हर तिमाही के आखिर में खाते में मौजूद कुल रकम के आधार पर होगी।
2. सेंट्रल रिकॉर्ड कीपिंग एजेंसियां हर तिमाही के अंत में इन शुल्कों की वसूली दो तरीकों से करेंगी।
3. पहला, अगर नियोक्ता कंपनी खर्च उठाती है तो उससे शुल्क वसूली की जाएगी।
4. अन्य मामलों में, निवेशकों के खाते से सीधे यूनिट काटकर शुल्क वसूल लिया जाएगा।
5. निवेशकों को ध्यान रखना होगा कि अगर वे तिमाही खत्म होने के आसपास खाते में पैसा जमा करते हैं या निकालते हैं, तो इसका असर शुल्क पर पड़ सकता है।

हर खाते के लिए चुकाना होगा अलग शुल्क

पीएफआरडीए ने यह भी साफ किया है कि अब एक ही प्रान नंबर के अंदर मौजूद हर पेंशन योजना को अलग खाता माना जाएगा। यानी निवेशक ने अपनी रकम इक्विटी, कॉर्पोरेट बॉन्ड और सरकारी सिक्योरिटी जैसी अलग-अलग योजनाओं में लगाई है तो हर योजना पर अलग से सालाना शुल्क लगेगा। इसका मतलब है कि एनपीएस सदस्य का कुल निवेश भले ही वही रहे, लेकिन कई योजनाओं में रकम बांटने की वजह से उसकी कुल शुल्क लागत बढ़ सकती है।

हालांकि, छोटे निवेशकों को थोड़ी राहत देते हुए यह प्रावधान किया गया है कि यदि टियर-2 खाते में शेष राशि 1,000 रुपये से कम है, तो एनपीएस सदस्य से शुल्क नहीं वसूला जाएगा। इस खाते को निवेशक बचत के अन्य विकल्प के तौर पर इस्तेमाल करते हैं।

खाता निष्क्रिय होगा : यदि किसी एनपीएस खाते में लगातार एक साल यानी चार तिमाहियों तक कोई अंशदान नहीं दिया जाता है तो उस खाते को निष्क्रिय कर दिया जाएगा।

सेज्यादा वेतन बना भारत

जूनियर स्तर के कर्मचारियों को मिल रहा अधिक लाभ

सीनियर अधिकारियों की तुलना में जूनियर्स को ज्यादा प्रतिशत में हाइक मिल रहा है। जूनियर लेवल पर कर्मचारियों को रोकना कंपनियों के लिए सस्ता पड़ता है। उन्हें रिप्लेस करने (नया व्यक्ति रखने) का खर्च बहुत ज्यादा होता है।

ऐसे तय होगी भूमिका

विशेषज्ञों के अनुसार, यदि बढ़ोत्तरी आठ से 10% के बीच है तो नौकरी सुरक्षित मानी जाती है। 12% से ज्यादा है तो आप अधिक मांग वाली भूमिका में है।

ांकड़ा एक औसत अनुमान है जो 400 से अधिक कंपनियों के डाटा पर धारित है। रिपोर्ट बताती है, इस साल ल एस्टेट, इंफ्रास्ट्रक्चर और बीएफएसी जैसे क्षेत्रों में सबसे ज्यादा ाल देखने को मिला।

गलत बीमा बेचने पर सख्ती बढ़ेगी

नई दिल्ली। ग्राहकों को गलत तरीके से बीमा पॉलिसी बेचने वाली कंपनियों और बैंकों पर सख्ती बढ़ सकती है। इसके लिए बीमा नियामक इरडा नियमों में बड़े बदलाव करने की तैयारी में है। इसके तहत बीमा पॉलिसी बेचने के तरीके में बदलाव, बैंकों पर सख्त निगरानी और वितरण व्यवस्था में सुधार जैसे कदम उठाए जाएंगे।

इस संबंध में जल्द ही एक चर्चा पत्र जारी किया जा सकता है। एक अधिकारी के अनुसार, नियामक की चिंता तीन प्रमुख मुद्दों को लेकर है- गलत बिक्री, ऊंची लागत और कम बीमा कवरेज। इरडा का मानना है कि अब बीमा सुधार का अगला चरण केवल नियमों में ढील देने पर नहीं, बल्कि सिस्टम की खामियों को दूर करने पर केंद्रित होगा। वर्तमान में बीमा क्षेत्र में लागत ज्यादा है, कवरेज कम है और कई जगह ग्राहकों के साथ सही व्यवहार नहीं हो रहा, जिसे ठीक करना जरूरी है।

mint

आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड
(आरईसी लिमिटेड के पूर्ण स्वामित्व की सहायक कंपनी)
वैश्विक आमंत्रण (इलेक्ट्रॉनिक बोली के माध्यम से)
टीएसपी के तहत प्रतिस्पर्धात्मक बोली (टीबीसीबी) प्रक्रिया के माध्यम से 02 (दो) अंतर-राज्यीय पारेषण परियोजनाओं के निर्माण, स्वामित्व, प्रचालन और हस्तांतरण (बीओओटी) आधारित पारेषण सेवा प्रदाता के चयन के लिए
आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड, नई दिल्ली, भारत (आरईसी लिमिटेड के पूर्ण स्वामित्व की सहायक कंपनी - एक महारत्न केंद्रीय सार्वजनिक उपक्रम) नीचे उल्लिखित पारेषण परियोजनाओं की स्थापना हेतु टी. बी. सी. बी. के अंतर्गत निर्माण, स्वामित्व, प्रचालन और स्थानांतरण (बूट) के आधार पर प्रस्ताव हेतु अनुरोध (आरएफपी) एक चरण दो लिफाफे वाली प्रक्रिया के तहत प्रस्ताव आमंत्रित करता है। इच्छुक बोलीदाता कृपया हमारी वेबसाइट्स www.recindia.nic.in तथा www.recpdcl.in पर 04.05.2026 से उपलब्ध "प्रस्ताव हेतु अनुरोध" (आरएफपी) अधिसूचना तथा आरएफपी दस्तावेज का अवलोकन करें।
बोलीदाता, आरएफपी दस्तावेज सभी कार्य दिवसों में 10.30 बजे (भा.मा.स) से 16.00 बजे (भा.मा.स) के बीच (04.05.2026 से प्रस्ताव जमा करने की तिथि से एक दिन पहले तक) हमारी वेबसाइट्स www.recindia.nic.in और www.recpdcl.in पर उपलब्ध सम्बंधित परियोजनाओं के आरएफपी दस्तावेज में दिए गए विवरण के अनुसार प्रत्येक पारेषण परियोजनाओं के लिए अप्रतिदेय गैर-वापसी योग्य शुल्क (₹5,00,000/- (पांच लाख रुपए केवल) या $7000 (यूएस डालर सात हजार केवल) + 18% जीएसटी) के भुगतान पर प्राप्त कर सकते है।
आरएफपी दस्तावेज हमारी वेबसाइट्स www.recindia.nic.in तथा www.recpdcl.in से भी डाउनलोड किया जा सकता है। तथापि, ऐसे मामले में इच्छुक पार्टी सम्बंधित आरएफपी दस्तावेज में दिए गए विवरण के अनुसार प्रत्येक पारेषण परियोजनाओं के लिए अप्रतिदेय गैर-वापसी योग्य शुल्क (₹5,00,000/- (पांच लाख रुपए केवल) या $7000 (यूएस डालर सात हजार केवल) + 18% जीएसटी) का अलग से भुगतान करने पर ही आरएफपी के उत्तर में प्रस्ताव जमा कर सकते हैं। सभी रिपोर्ट एवं आरएफपी दस्तावेजों के स्पष्टीकरण उन्हीं बोलीदाताओं को जारी किया जाएगा, जिन्होंने अपेक्षित शुल्क का भुगतान करके आरएफपी दस्तावेज प्राप्त किया या खरीदा है। इस सन्दर्भ में महत्वपूर्ण समय-सीमा इस प्रकार है:

क्रम सं.	परियोजना का नाम	स्पष्टीकरण मंगवाने की अंतिम तिथि	आरएफपी के उत्तर में प्रस्ताव जमा की अंतिम तिथि	आरएफपी प्रस्ताव खोलने का विवरण
1.	गुजरात में लकड़िया आरईजेड में आरई परियोजनाओं से विद्युत के एकीकरण के लिए पारेषण प्रणाली II-चरण (7500 मेगावाट)	25.05.2026	06.07.2026, 1500 बजे तक (भा.मा.स)	06.07.2026 को 1530 (भा.मा.स)
2.	लकाडिया (चरण-2: 7.5 गीगावाट), जाम खंभालिया (चरण-2: 5.5 गीगावाट) और जामनगर (चरण-1: 1 गीगावाट) से विद्युत निकासी के लिए सामान्य पारेषण प्रणाली भाग-ख	25.05.2026	06.07.2026, 1600 बजे तक (भा.मा.स)	06.07.2026 को 1630 (भा.मा.स)

बोली में सभी शुद्धिपत्र, अनुशेष, संशोधन, समय बढ़ाना आदि हमारी वेबसाइट्स www.recindia.nic.in तथा www.recpdcl.in पर होस्ट किए जाएंगे। नवीनतम जानकारी के लिए हमारी वेबसाइट का नियमित रूप से अवलोकन करते रहें।
नोट: आरईसीपीडीसीएल के पास बिना कोई कारण बताए तथा बिना किसी बाध्यता के बोली प्रक्रिया को रद्द या संशोधित करने का अधिकार सुरक्षित है। यह कोई पेशकश नहीं है।
मुख्य कार्यपालक अधिकारी
आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड
कोर - 4, स्कोप कॉम्प्लेक्स, लोधी रोड, नई दिल्ली - 110003, भारत
बोली प्रक्रिया समन्वयक: REC Power Development — आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड
पहलकर्ता: विद्युत मंत्रालय, भारत सरकार
पहलकर्ता भागीदार: केंद्रीय विद्युत प्राधिकरण



निशांत कुमार का स्वागत करते जदयू कार्यकर्ता।

कहा
ग्र के
पर ले

कांटी
भजीत

कुमार के नेतृत्व में सैंकड़ों की संख्या में कार्यकर्ताओं और पार्टी पदाधिकारियों ने उनसे मुलाकात कर जिले में भी कार्यक्रम करने का अनुरोध किया।

कार्यक्रम में निशांत कुमार के साथ प्रदेश अध्यक्ष उमेश सिंह कुशवाहा और जदयू विधायक दल के नेता श्रवण कुमार मौजूद रहे। मीनापुर विधायक अजय कुशवाहा, सकरा विधायक आदित्य कुमार, गायघाट विधायक कोमल सिंह, रुन्नीसैदपुर विधायक पंकज मिश्रा, जिलाध्यक्ष अनुपम कुमार, हरिओम कुशवाहा, गणेश भारती, नरेंद्र पटेल, गोपाल शाही, अमरनाथ चंद्रवंशी आदि मौजूद रहे।

इधर, गौरौल में जदयू जिलाध्यक्ष सुभाष चंद्र सिंह के नेतृत्व में निशांत कुमार पर पुष्प की वर्षा की गई। विधायक सिद्धार्थ पटेल ने कहा कि निशांत कुमार युवाओं के प्रेरणास्रोत हैं।

ं एमबीए के छात्र ने र की आत्महत्या

ना क्षेत्र
ी शाम
नगाकर
उसके
ार्टम के
है। छात्र
क्षेत्र के
ध्यापाय
के रूप में
च में प्रेम
का जताई

स्थित एक कॉलेज का छात्र था। वह कृष्णा टोली में किराए पर कमरा लेकर रहता था। पुलिस की पूछताछ में आसपास के लोगों ने बताया कि मनीष के कमरे का दरवाजा काफी देर से बंद था। काफी आवाज देने के बाद भी कमरे का दरवाजा नहीं खुला तो शक होने पर दरवाजा तोड़ा गया। अंदर वह फंदे से लटका था। मनीष दो भाइयों में बड़ा था। यहां पर चाचा और अन्य दोस्तों के साथ रहकर पढ़ाई कर रहा था। इधर, थानेदार बिपिन कुमार ने बताया कि परिजनों के बयान के आधार पर आगे की कार्रवाई की जाएगी।

लीची के पेड़ से लटका मिला किशोर का शव

मुजफ्फरपुर। अहियापुर थाना क्षेत्र के कोल्हुआ पैगंबरपुर के लक्ष्मी नगर में रविवार की सुबह लीची बागान में एक युवक का शव पेड़ से लटकता मिला। मृतक किशन पटेल (17) कोल्हुआ चौक स्थित आजाद ट्रांसपोर्ट के समीप रहने वाले मुकुल पटेल का पुत्र था। उसने अपने ही शर्ट का फंदा बनाकर लीची के पेड़ की टहनी में लगा लिया था। मौके पर भीड़ जुट गई। परिजन भी पहुंचे। फिलहाल आत्महत्या के कारणों का पता नहीं चल पाया है। सूचना पर अहियापुर थानेदार शरत कुमार दलबल के साथ मौके पर पहुंचे और जांच शुरू कर दी।

आयोजित मंडल स्तरीय 70वां रेल सेवा पुरस्कार समारोह का आयोजन किया गया को किया गया। मुजफ्फरपुर को 'बेस्ट आरपीएफ पोस्ट और बेस्ट कमर्शियल यूनिट' का अवार्ड मिला है। नारायणपुर अनंत के तत्कालीन स्टेशन अधीक्षक (वर्तमान में मुजफ्फरपुर स्टेशन प्रबंधक) शिवदास, स्टेशन मास्टर कृष्णा कुमार को रेल सेवा पदक से वर्ष 2025 में बेहतर सेवा के लिए पुरस्कृत किया गया है।

आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड

वैश्विक आमंत्रण (इलेक्ट्रॉनिक बोली के माध्यम से)

टैरिफ के जरिए प्रतियोगिता बोली (टीबीसीबी) प्रक्रिया के माध्यम से 02 (दो) अंतर-राज्यीय पारेषण परियोजनाओं के निर्माण, स्वामित्व, प्रचालन और स्थानांतरण (बीओओटी) आधारित पारेषण सेवा प्रदाता के चयन के लिए

आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड, नई दिल्ली, भारत (आरईसी लिमिटेड के पूर्ण स्वामित्व की सहायक कंपनी - एक महारत्न केंद्रीय सार्वजनिक उपक्रम) नीचे उल्लिखित पारेषण परियोजनाओं की स्थापना हेतु टी. बी. सी. बी. के अंतर्गत निर्माण, स्वामित्व, प्रचालन और स्थानांतरण (बूट) के आधार पर प्रस्ताव हेतु अनुरोध (आरएफपी) एक चरण दो लिफाफे वाली प्रक्रिया के तहत प्रस्ताव आमंत्रित करता है। इच्छुक बोलीदाता कृपया हमारी वेबसाइट्स www.recindia.nic.in तथा www.recpdcl.in पर 04.05.2026 से उपलब्ध "प्रस्ताव हेतु अनुरोध" (आरएफपी) अधिसूचना तथा आरएफपी दस्तावेज का अवलोकन करें।

बोलीदाता, आरएफपी दस्तावेज सभी कार्य दिवसों में 10.30 बजे (भा.मा.स) से 16.00 बजे (भा.मा.स) के बीच (04.05.2026 से प्रस्ताव जमा करने की तिथि से एक दिन पहले तक) हमारी वेबसाइट्स www.recindia.nic.in और www.recpdcl.in पर उपलब्ध सम्बंधित परियोजनाओं के आरएफपी दस्तावेज में दिए गए विवरण के अनुसार प्रत्येक पारेषण परियोजनाओं के लिए अप्रतिदेय गैर-वापसी योग्य शुल्क (₹5,00,000/- (पांच लाख रुपए केवल) या $7000 (यूएस डालर सात हजार केवल) + 18% जीएसटी) के भुगतान पर प्राप्त कर सकते है।

आरएफपी दस्तावेज हमारी वेबसाइट्स www.recindia.nic.in तथा www.recpdcl.in से भी डाउनलोड किया जा सकता है। तथापि, ऐसे मामले में इच्छुक पार्टी सम्बंधित आरएफपी दस्तावेज में दिए गए विवरण के अनुसार प्रत्येक पारेषण परियोजनाओं के लिए अप्रतिदेय गैर-वापसी योग्य शुल्क (₹5,00,000/- (पांच लाख रुपए केवल) या $7000 (यूएस डालर सात हजार केवल) + 18% जीएसटी) का अलग से भुगतान करने पर ही आरएफपी के उत्तर में प्रस्ताव जमा कर सकते हैं। सर्वे रिपोर्ट एवं आरएफपी दस्तावेजों के स्पष्टीकरण उन्हीं बोलीदाताओं को जारी किया जाएगा, जिन्होंने अपेक्षित शुल्क का भुगतान करके आरएफपी दस्तावेज प्राप्त किया या खरीदा है। इस सन्दर्भ में महत्वपूर्ण समय-सीमा इस प्रकार है:

क्रम. सं.	परियोजना का नाम	स्पष्टीकरण मंगवाने की अंतिम तिथि	आरएफपी के उत्तर में प्रस्ताव जमा की अंतिम तिथि	आरएफपी प्रस्ताव खोलने का विवरण
1.	गुजरात में लकड़िया आईजेड में आरई परियोजनाओं से विद्युत के एकीकरण के लिए पारेषण प्रणाली II-चरण (7500 मेगावाट)	25.05.2026	06.07.2026, 1500 बजे तक (भा.मा.स)	06.07.2026 को 1530 (भा.मा.स)
2.	लकाडिया (चरण-2: 7.5 गीगावाट), जाम खंभालिया (चरण-2: 5.5 गीगावाट) और जामनगर (चरण-1: 1 गीगावाट) से विद्युत निकासी के लिए सामान्य पारेषण प्रणाली भाग - ख	25.05.2026	06.07.2026, 1600 बजे तक (भा.मा.स)	06.07.2026 को 1630 (भा.मा.स)

बोली में सभी शुद्धिपत्र, अनुशेष, संशोधन, समय बढ़ाना आदि हमारी वेबसाइट्स www.recindia.nic.in तथा www.recpdcl.in पर होस्ट किए जाएंगे। नवीनतम जानकारी के लिए हमारी वेबसाइट का नियमित रूप से अवलोकन करते रहें।

नोट: आरईसीपीडीसीएल के पास बिना कोई कारण बताए तथा बिना किसी बाध्यता के बोली प्रक्रिया को रद्द या संशोधित करने का अधिकार सुरक्षित है। यह कोई पेशकश नहीं है।

मुख्य कार्यपालक अधिकारी
आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड
कोर - 4, स्कोप कॉम्प्लेक्स, लोधी रोड, नई दिल्ली - 110003, भारत

बोली प्रक्रिया समन्वयक: REC Power Development — आरईसी पावर डेवलपमेंट एंड कंसल्टेंसी लिमिटेड
पहलकर्ता: विद्युत मंत्रालय भारत सरकार
पहलकर्ता भागीदार: केंद्रीय विद्युत प्राधिकरण



OpenAI.

The valuation of DeepSeek has increased significantly from $20bn when it started the fundraising talks only weeks ago, as investors strive to bet on the lab's potential despite its lack of focus on commercialisation.

Liang Wenfeng, the billionaire founder of the Hangzhou-based start-up, could also invest personally in this round, two of the people said. He controls 89.5 per cent of DeepSeek through personal holdings and affiliated groups, according to company filings.

Backing from China's most strategic government fund in semiconductors would reinforce DeepSeek's position as value of $52bn.

Liang initially wanted to raise a nominal sum to assign a value to DeepSeek's options in an attempt to stop his researchers being poached by competitors offering bumper pay packages, the FT reported last month.

Stock options typically make up most of an AI researcher's remuneration.

Now that DeepSeek's valuation has risen significantly, Liang might consider raising more money to boost a war chest for future investment in computing capacity, the person said.

DeepSeek, the Big Fund and Tencent did not respond for comment.

ing from Lewy body dementia and he had largely withdrawn from public life in recent years.

He was best known for launching CNN in 1980, disrupting the television ecosystem and ushering in a faster, more dramatic rhythm to US news.

He belonged to a generation of larger-than-life media entrepreneurs, including Rupert Murdoch, who helped shape the modern entertainment and news landscape.

Mark Thompson, CNN's chief executive, said yesterday: "Ted is the giant on whose shoulders we stand," praising Turner as "intrepid, fearless and

REC POWER DEVELOPMENT AND CONSULTANCY LIMITED

(A wholly owned subsidiary of REC Ltd.)

GLOBAL INVITATION (Through e-bidding Only)

FOR SELECTION OF TRANSMISSION SERVICE PROVIDER THROUGH TARIFF BASED COMPETITIVE BIDDING (TBCB) PROCESS ON BUILD, OWN, OPERATE AND TRANSFER (BOOT) BASIS FOR 02 (Two) INTER – STATE TRANSMISSION PROJECTS

REC Power Development and Consultancy Limited, New Delhi, India (a wholly owned subsidiary of REC Limited, a Maharatna Central Public Sector Undertaking) invites proposal for setting up of the below mentioned transmission projects through TBCB process on Build, Own, Operate and Transfer (BOOT) basis following single stage two envelope process of "Request for Proposal (RFP)". Interested bidders may refer to the Request for Proposal (RFP) notifications and RFP documents available on our websites www.recpdcl.in & www.recindia.nic.in w.e.f. 04.05.2026.

The bidders may obtain the RFP documents on all working days between 10:30 hours (IST) to 16:00 hours (IST) from 04.05.2026 to one day prior to bid submission date on payment of non-refundable fee of Rs. 5,00,000/- (Rupees Five Lakh Only) or US$ 7000 (US Dollars Seven Thousand Only) + 18% GST for each transmission projects as per details provided in the RFP document available on the websites www.recpdcl.in & www.recindia.nic.in.

The Request for Proposal (RFP) documents can also be downloaded from our websites www.recpdcl.in & www.recindia.nic.in, however, in such cases interested parties can submit Response to RFP only on submission of non-refundable fee of Rs. 5,00,000/- (Rupees Five Lakh Only) or US$ 7000 (US Dollars Seven Thousand Only) + 18% GST for each transmission projects as per details provided in the RFP document. The survey report & clarifications to RFP document shall be issued to those bidders, who have obtained/ purchased RFP documents by paying requisite fee. The important timelines in this regard are as follows:

Sr. No.	Name of Project	Last Date for seeking clarifications	Last Date for submission of Response to RFP	Details of Opening of Response to RFP
1.	Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)	25.05.2026	06.07.2026 up to 1500 Hrs (IST)	06.07.2026 at 1530 Hrs (IST)
2.	Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-B	25.05.2026	06.07.2026 up to 1600 Hrs (IST)	06.07.2026 at 1630 Hrs (IST)

All corrigenda, addenda, amendments, time extensions, etc. to the RFP will be hosted on our websites www.recpdcl.in & www.recindia.nic.in. Bidders should regularly visit our websites to keep themselves updated.

Note: RECPDCL reserves the right to cancel or modify the process without assigning any reason and without any liability. This is not an offer.

Chief Executive Officer
REC Power Development and Consultancy Ltd.
Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003, India

Bid Process Coordinator
REC Power Development
REC Power Development and Consultancy Limited

An Initiative of
Ministry of Power
Government of India

Initiative Partner
Central Electricity Authority

ऊर्जा ही जीवन है, इसे बचाएं।

Give a missed call on toll free number 18002003004 to get our Apps

NOTICE OF UCC ARTICLE 9 PUBLIC SALE BY SECURED PARTY

On May 19th, 2026, at 12:00 p.m. Eastern Time, via videoconference, a public sale (the "Public Sale") will be conducted of substantially all assets constituting the collateral (the "Sale Assets"), in accordance with Section 9-610 of the New York Uniform Commercial Code and other applicable law. Access details will be provided to qualified bidders.

The subject ("Borrower") is a B2B cloud software business serving in-house marketing organizations at consumer-facing enterprises. The platform unifies customer information from across the organization's operating systems and supports the planning, execution, and measurement of customer engagement programs across multiple direct channels. Capabilities span audience development, lifecycle and behavioral program execution, content personalization, and campaign measurement, with machine learning and generative AI features assisting with routine setup, content variation, and program optimization. The business operates as a component of its customers' modern customer-engagement and growth marketing infrastructure, driving measurable improvements in conversion, retention, and customer lifetime value. Borrower's parent holding company ("Holdings," and together with Borrower, the "Debtors") is also a debtor under the Loan Documents. Borrower and Holdings are each Delaware corporations.

The Public Sale is being conducted by RUNWAY GROWTH FINANCE CORP., as administrative agent and collateral agent ("Agent"), to enforce its rights in the collateral under that certain Loan and Security Agreement, dated as of December 19, 2023, by and among Borrower, Holdings, the lenders party thereto and Agent (as modified from time to time, the "Loan Agreement," and together with the related loan documents, the "Loan Documents"). Debtors granted Agent a security interest in the Sale Assets to secure the obligations under the Loan Documents. The secured obligations outstanding as of the Public Sale date will be not less than $35,000,000.

The Sale Assets consist primarily of (i) substantially all assets used in Borrower's software business, including intellectual property, software and related technology, source code, object code, documentation, trade names, trademarks, domain names, websites, accounts, contracts, books and records, deposit accounts, equipment and general intangibles, and (ii) substantially all assets of Holdings, including Holdings' equity interests in Borrower. Additional information will be made available upon request, subject to customary non-disclosure agreements and bid procedures.

The Sale Assets may be sold in one or more lots, on an "AS IS, WHERE IS" basis, with all faults and without recourse or any representation or warranty, express or implied, including as to title, value, condition, merchantability or fitness, except as expressly set forth in the form of asset purchase agreement available upon request. Agent intends to sell the Sale Assets to the highest or otherwise best qualified bidder at the Public Sale. The Public Sale will be for cash, credit against outstanding indebtedness under the Loan Documents, or other consideration approved by Agent, and subject to commercially reasonable bid procedures and other requirements, which will be available upon request. Interested parties must submit a bid, proposed asset purchase agreement, and proof of ability to fund no later than May 15th, 2026, at 5:00 p.m. Eastern Time (the "Bid Deadline"). Qualified bidders will receive the access details for the Public Sale. Agent reserves the right to credit bid on behalf of the Lenders for some or all of the Sale Assets and to modify the terms, conditions, or procedures for the Public Sale, withdraw all or any portion of the Sale Assets, or continue the Public Sale to a future date for any reason.

Any inquiries regarding the Public Sale or the Sale Assets should be directed to hlipton@rockcreekfa.com by the Bid Deadline.

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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 INTEGRATION OF POWER FROM RE PROJECTS IN LAKADIA REZ IN GUJARAT-PHASE II (7500MW)

ISSUED BY

REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited)

Registered Office:
Core-4, SCOPE Complex,
7, Lodhi Road, New Delhi – 110 003
Email: vijay.kulkarni@recpdcl.in & tbcb@recpdcl.in

04.05.2026

REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited)
Core-4, SCOPE Complex,
7, Lodhi Road, New Delhi – 110 003

Request for Proposal Document for selection of Bidder as Transmission Service Provider through tariff based competitive bidding process to establish Inter-State Transmission system i.e., "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" is issued by REC Power Development and Consultancy Limited.

This RFP document is issued to -

M/s. _____

_____

_____

_____

_____

Chief Executive Officer,
REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited)

Email: …….

Place: ……

Date: ……

Signature: ……

REQUEST FOR PROPOSAL NOTIFICATION

REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited)
Core-4, SCOPE Complex,
7, Lodhi Road, New Delhi – 110 003

1. Ministry of Power, Government of India vide its Gazette Notification no. CG-DL-E-19022026-270309 dated 12.02.2026 has notified REC Power Development and Consultancy Limited (RECPDCL) to be the Bid Process Coordinator (BPC) for the purpose of Selection of Bidder as Transmission Service Provider to establish Inter-State Transmission system i.e., **"Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)"** through tariff based competitive bidding process.

2. REC Power Development and Consultancy Limited (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 i.e., "**Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)"** (hereinafter referred to as 'Project') on build, own, operate & transfer basis and to provide transmission service:

Sl. No.	Scope of the Transmission Scheme	Scheduled COD in months from Effective Date
1.	**Establishment of 765/400 kV, 6x1500 MVA & 10x500 MVA, 400/220 kV Lakadia-II (Near Chitrod)** with 2x330 MVAr 765 kV Bus reactor and 2x125 MVAr 400 kV Bus reactor. *[765 kV, 400 kV & 220 kV levels to be established in two sections with Sectionaliser arrangement.* ***The 220 kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400 kV and 765 kV Sectionaliser shall be kept normally closed****.* ***The bus operation may be reviewed after proposed HVDC implementation as per requirement of Grid operator.*** *(3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-I & 3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-II)]* • 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA	36 months

Sl. No.	Scope of the Transmission Scheme	Scheduled COD in months from Effective Date
	single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220 kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAr single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 765 kV line bays: 8 Nos. (4 Nos. on Sec-I (2 for Halvad D/C & 2 for Ahmedabad D/C) and 4 Nos. on Sec-II (2 for Kandla D/C and 2 for Vataman)) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220 kV BC– 2 Nos. • 220 kV TBC – 2 Nos. • 1x125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Bus reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 Nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 Nos. on Sec-I & 8 Nos. on Sec-II for interconnection of RE Projects) **Future provision (space for):** • 765 kV line bays along with switchable line reactors – 6 Nos. (2 Nos. on Sec-I & 4 Nos. on Sec-II) • 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II) + 4 Nos. 400 kV bays (2 nos. on each section) for HVDC Interconnection • 420 kV, 125 MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II • Establishment of 6000 MW, ± 800 kV Lakadia-II (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC	

Sl. No.	Scope of the Transmission Scheme	Scheduled COD in months from Effective Date
	Switchyard & all associated equipment (incl. filters)/bus extension, etc. (2x1500MW poles on each 400 kV section) • Synchronous Condenser (+300/-200 MVAr) along with 400 kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)	
2.	Installation of Synchronous Condenser (+300/-200 MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW-s • Synchronous Condenser along with associated 400 kV bay-2 Nos. (one each on Sec-I & II)	
3.	LILO of Halvad – Kandla 765 kV D/C line at Lakadia-II	
4.	Lakadia-II – Ahmedabad 765 kV D/C line	
5.	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765 kV D/C line • 765 kV line bays – 2 Nos. (AIS)	
6.	765 kV, 330 MVAr Switchable line reactors on each circuit at Lakadia-II end of Lakadia-II – Ahmedabad 765 kV D/C line • 330 MVAr, 765 kV Switchable Line Reactor- 2 Nos. • 765 kV Switchable Line Reactor bay - 2 Nos. • 110 MVAr spare single phase reactor at Lakadia-II S/s is already provided in scope of work above and same shall be used for subject Switchable Line Reactor.	
7.	Lakadia-II – Vataman 765 kV D/C line	
8.	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765 kV D/C line	
9.	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765 kV D/C line • 240 MVAr, 765 kV Switchable Line Reactor- 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV Switchable Line Reactor bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end)	

Sl. No.	Scope of the Transmission Scheme	Scheduled COD in months from Effective Date
	• 80 MVAr spare single-phase reactor at Lakadia-II for above 240 MVAr Switchable Line Reactor. • 80 MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Switchable Line Reactor.	

Note:

i. TSPs of Ahmedabad S/s & Vataman S/s shall provide space for the above scope of work in their respective substations (free of cost).

ii. The above synchronous condenser (at Sl. No. 2) shall be considered as 'transmission asset', similar to STATCOM & SVC, for the purpose of tariff determination.

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 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 14/14A/14B 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 bidders 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 …… (Insert the name of SPV) 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 …… (Insert the name of SPV) 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 Chief Executive Officer, vijay.kulkarni@recpdcl.in & tbcb@recpdcl.in at the address given in para 12 below with a non-refundable fee of Rs. 5,00,000/- (Rupees Five Lakh Only) or US$ 7,000 (US Dollars Seven Thousand Only) plus GST @18%, to be paid latest by 03.07.2026 via electronic transfer to the following Bank Account:

Bank Name, Address & Branch	ICICI Bank 9A, Phelps Building, Inner Circle, Connaught Place, New Delhi-110001
Bank Account Name	REC Power Development & Consultancy Limited
Bank Account No	000705041275
Bank IFSC Code No	ICIC0000007

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 04.05.2026 to 03.07.2026 between 1030 hours (IST) to 1600 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 1500 hours (IST) on 06.07.2026. Technical Bid will be opened by the Bid Opening Committee on the same day at 1530 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 14/14A/14B 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 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.

12. **Nodal person for enquiries and clarifications**

All correspondence and clarification in respect of RFP document shall be addressed to:

Chief Executive Officer,
REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001
Email: vijay.kulkarni@recpdcl.in & tbcb@recpdcl.in

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 Annexure, 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.

Written clarifications on the RFP and other RFP Project Documents as per Clause 2.3 and 2.4 may be sought from:

Chief Executive Officer,
REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001
Email: vijay.kulkarni@recpdcl.in & tbcb@recpdcl.in

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 …… (Insert the name of SPV) from REC Power Development and Consultancy Limited, who shall sell to the Selected Bidder, the equity shareholding of …… (Insert the name of SPV), along with all its related assets and liabilities;

Stamp duties payable on purchase of one hundred percent (100%) of the equity shareholding of …… (Insert the name of SPV), 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 …… (Insert the name of SPV), 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 …… (Insert the name of SPV), 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 REC Power Development and Consultancy Limited is willing to sell the entire equity shareholding of …… (Insert the name of SPV), 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,

REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited, a 'Maharatna CPSE'
under Ministry of Power, Govt. of India)

REC Power Development

Ref.:RECPDCL/TBCB/Lakadia_Phase_II &Lakadia_Part_B/2026-27/537 दिनांक: 07.05.2026

सेक्रेटरी,
केन्द्रीय विद्युत विनियामक आयोग,
6वीं, 7वीं और 8वीं मंजिल, टावर-बी, वर्ल्ड ट्रेड सेंटर
नौरोजी नगर, तीसरा नई दिल्ली – 110029

Subject: Global Invitation for selection of Transmission Service Provider to establish Transmission system for the projects namely "Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-B" & "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" **-Copy of RFP documents.**

महोदय,

Kind reference is invited to the Gazette Notification No.CG-DL-E-19022026-270309 dated 12.02.2026, issued by Ministry of Power, Government of India wherein REC Power Development and Consultancy Limited has been appointed as Bid Process Coordinator (BPC) for selection of bidder as Transmission Service Provider to establish Inter-State transmission projects on Build, Own, Operate & Transfer (BOOT) basis.

In this regard, we would like to intimate that the RFP process for the subject cited projects have been initiated by way of Global Invitation in National/International newspapers i.e. Hindustan Times Package on 04.05.2026 & Financial Times Package on 07.05.2026. The important timelines in this regard are as below. :-

Sr. No.	Name of the Project	Last date of RFP Purchase	Last date for submission of response to RFP
1.	Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-B	03.07.2026	06.07.2026 up to 1500 Hrs (IST)
2.	Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)	03.07.2026	06.07.2026 up to 1600 Hrs (IST)

The RfP notification and RfP document for the above projects have also been uploaded on our websites www.recindia.nic.in and www.recpdcl.in.

In this regard, copy of Request for Proposal (RfP), Transmission Service Agreement (TSA) and Share Purchase Agreement (SPA) along with copies of newspaper notification of the subject projects are enclosed herewith for your kind information and reference please.

धन्यवाद,

भवदीय,

(विजय कुलकर्णी)
वरिष्ठ महाप्रबंधक एवं विभागाध्यक्ष (टी & डी)

संलग्न: जैसा कि ऊपर बताया गया है

D-Block, REC World Headquarter, Plot No. I-4, Sector-29, Gurugram, (Haryana) - 122001.
E-mail: co@recpdcl.in | Tel.: 0124-4441300 | www.recpdcl.in | CIN No. RECPDCL-U40101DL2007GOI165779 GST No. 06AADCR7399K1ZP

REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited, a 'Maharatna CPSE'
under Ministry of Power, Govt. of India)

Ref.:RECPDCL/TBCB/Lakadia_Phase_II &Lakadia_Part_B/2026-27/538

REC Power Development
दिनांक: 07.05.2026

निदेशक (ट्रांसडेस्क)

ऊर्जा मंत्रालय,

श्रमशक्ति भवन, रफी मार्ग, नई दिल्ली-110001

Subject: Global Invitation for selection of Transmission Service Provider to establish Transmission system for the projects namely "Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-B" & "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" **-Copy of RFP documents.**

महोदय,

Kind reference is invited to the Gazette Notification No.CG-DL-E-19022026-270309 dated 12.02.2026, issued by Ministry of Power, Government of India wherein REC Power Development and Consultancy Limited has been appointed as Bid Process Coordinator (BPC) for selection of bidder as Transmission Service Provider to establish Inter-State transmission projects on Build, Own, Operate & Transfer (BOOT) basis.

In this regard, we would like to intimate that the RFP process for the subject cited projects have been initiated by way of Global Invitation in National/International newspapers i.e. Hindustan Times Package on 04.05.2026 & Financial Times Package on 07.05.2026. The important timelines in this regard are as below. :-

Sr. No.	Name of the Project	Last date of RFP Purchase	Last date for submission of response to RFP
1.	Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW) - Part-B	03.07.2026	06.07.2026 up to 1500 Hrs (IST)
2.	Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)	03.07.2026	06.07.2026 up to 1600 Hrs (IST)

The RfP notification and RfP document for the above projects have also been uploaded on our websites www.recindia.nic.in and www.recpdcl.in.

In line with provision of clause 9 of Tariff Based Competitive Bidding Guidelines for Transmission service', the RFP notifications are also required to be published on MoP website. Accordingly, we are attaching herewith Global Invitation (in English & Hindi) with a request to arrange to uploading of the same on the Ministry's website.

In this regard, copy of Request for Proposal (RfP), Transmission Service Agreement (TSA) and Share Purchase Agreement (SPA) along with copies of newspaper notification of the subject projects are enclosed herewith for your kind information and reference please.

धन्यवाद,

भवदीय,

(विजय कुलकर्णी)

वरिष्ठ महाप्रबंधक एवं विभागाध्यक्ष (टी & डी)

संलग्न: जैसा कि ऊपर बताया गया है

D-Block, REC World Headquarter, Plot No. I-4, Sector-29, Gurugram, (Haryana) - 122001.
E-mail: co@recpdcl.in | Tel.: 0124-4441300 | www.recpdcl.in | CIN No. RECPDCL-U40101DL2007GOI165779 GST No. 06AADCR7399K1ZP

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 LAKADIA II POWER TRANSMISSION LIMITED is incorporated on this NINETH day of MAY TWO THOUSAND TWENTY SIX under the Companies Act, 2013 (18 of 2013) and that the company is Company limited by shares

The Corporate Identity Number of the company is **U42202DL2026GOI466344**

The Permanent Account Number (PAN) of the company is **AAGCL8816Q***

The Tax Deduction and Collection Account Number (TAN) of the company is **DELL14548C***

Given under my hand at Manesar this NINETH day of MAY TWO THOUSAND TWENTY SIX

Signature Not Verified
Digitally signed by
DS MINISTRY OF CORPORATE AFFAIRS , CRC MANESAR 2
Date: 2026.05.09 12:31:43 IST

Mani Kumar

Assistant Registrar of Companies/ Deputy Registrar of Companies/ 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 mca.gov.in

Mailing Address as per record available in Registrar of Companies office:

LAKADIA II POWER TRANSMISSION LIMITED

CORE-4, SCOPE COMPLEX, 7, LODHI ROAD, Lodi Road, New Delhi, South Delhi- 110003, Delhi

*as issued by Income tax Department

No. 25-17/118/2026-POWER GRID(MoP)
संख्या 25-17/118/2026-पावर ग्रिड(एमओपी)

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
***

Shram Shakti Bhawan, Rafi Marg
New Delhi, Dated 8th September 2026

To,

Shri Arun Kumar Chaturvedi, Director,
M/s Lakadia II Power Transmission Limited,
Core-4, SCOPE Complex,
7 Lodhi Road, New Delhi – 110003.

Subject: Prior approval of the Government of India under Section 68 (1) of the Electricity Act, 2003, to M/s Lakadia II Power Transmission Limited for installation of the overhead transmission lines under the transmission scheme "Transmission system for integration of power from RE projects in Lakadia REZ in Gujarat-Phase II (7500 MW)"- regarding.

Sir,

I am directed to refer to REC Power Development Consultancy Limited's online application ID SW4493741278-M029_D002_A003-1782735957739 dated 29.06.2026 received through NSWS portal, seeking prior approval of Government of India under Section 68(1) of the Electricity Act, 2003, in favour of M/s Lakadia II Power Transmission Limited (a wholly owned subsidiary of REC Power Development Consultancy Limited) for installation of the following overhead transmission lines under the transmission scheme "Transmission system for integration of power from RE projects in Lakadia REZ in Gujarat-Phase II (7500 MW)":

- Lakadia II – Halvad 765 kV D/c line.
- Lakadia II – Ahmedabad 765 kV D/c line.
- Lakadia II – Vataman 765 kV D/c line.

2. Ministry of Power vide Gazette no. CG-DL-E-19022026-270309 (No.687) dated 12.02.2026 has appointed REC Power Development Consultancy Limited (RECPDCL) as Bid Process Coordinator for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish the transmission scheme "Transmission system for integration of power from RE projects in Lakadia REZ in Gujarat-Phase II (7500 MW)" to be implemented through Tariff Based Competitive Bidding (TBCB) route. REC Power Development Consultancy Limited (RECPDCL), the Bid Process Coordinator, has incorporated the SPV, M/s Lakadia II Power Transmission Limited, for implementation of the above mentioned transmission scheme. Further, the scope of the above mentioned transmission scheme has been revised and notified by Ministry of Power vide Gazette no. CG-DL-E-24062026-273789 (No.3132) dated 19.06.2026.

3. M/s Lakadia II Power Transmission Limited has submitted an Undertaking dated 21.08.2026 stating that the route of above-mentioned overhead line is outside the Revised GIB Priority Area of Gujarat as referred in judgment of Hon'ble Supreme Court of India dated 19.12.2025 in Writ Petition (Civil) No. 838 of 2019. Also, Lakadia II Power Transmission Limited would comply with the directions of Hon'ble Supreme Court of India in its order dated 19.12.2025 in Writ Petition (Civil) No. 838 of 2019, including the optimization of route of the ISTS line.

contd/...

4. Ministry of Power, Government of India on the basis of the recommendation of Central Electricity Authority (CEA), conveys the prior approval under Section 68 (1) of the Electricity Act, 2003 to the SPV, M/s Lakadia II Power Transmission Limited" for installation of the following overhead transmission lines under the transmission scheme "Transmission system for integration of power from RE projects in Lakadia REZ in Gujarat-Phase II (7500 MW)":

- Lakadia II – Halvad 765 kV D/c line *(line length is 140 km approx.)*
- Lakadia II – Ahmedabad 765 kV D/c line *(line length is 190 km approx.)*
- Lakadia II – Vataman 765 kV D/c line *(line length is 220 km approx.)*

5. The approval would be subject to compliance of:

(i) The relevant provisions of the Electricity Act, 2003, as amended from time to time and the rules and regulations made there under, and

(ii) CEA (Measures relating to Safety and Electric Supply) Regulations, 2023, and any subsequent amendments made thereto.

(iii) The directions of Hon'ble Supreme Court of India in its order dated 19.12.2025 in Writ Petition (Civil) No. 838 of 2019, including the optimization of route of the overhead lines and any other directions given by competent authorities in pursuance of the above order by the Hon'ble Supreme Court.

6. The approval would also be subject to the following conditions:

(i) The implementing agency will commence construction of the project within three years of grant of approval, unless this term is extended by Ministry of Power.

(ii) Ministry of Power may withdraw the approval before the expiry of the period of three years after giving a one-month notice.

(iii) The implementing agencies shall abide by the provisions of Works of Licensees Rules, 2006, notified by the Govt. of India, Ministry of Power in the Gazette of India, extra-ordinary Part-II, Section 3(i) dated 18-04-2006 (vide GSR 217 (E) dated 18-04-2006).

Yours faithfully,

M V N Vara Prasad

(M.V.N. Vara Prasad/ एम.वी.एन. वरा प्रसाद)
Under Secretary to the Government of India
Tele: 011-23730264

Copy to:

The Chairperson
Central Electricity Authority
Sewa Bhawan, R.K. Puram, New Delhi 110066.

***

Date: 01.09.2026

CERTIFICATE BY BID EVALUATION COMMITTEE

Subject: **Selection of Successful Bidder as Transmission Service Provider through Tariff Based Competitive Bidding Process to establish "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)"**

It is certified that:

a. 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 as amended from time to time.

b. M/s Power Grid Corporation of India Limited, with the lowest annual transmission charges of Rs. 11,524.88 million, emerged as the successful bidder after the conclusion of electronic reverse auction.

c. The transmission charges of Rs. 11,524.88 million discovered after electronic reverse auction is acceptable.

(Amit Jog)
General Manager, SBI,
CCGRO-II, Chairman, BEC

(A.B. Rathod)
CE (SLDC), GETCO,
Member, BEC

(S.R. Parmar)
I/c CE (P&C), GETCO,
Member, BEC

(Ganeswara Rao Jada)
Director, PSPA-I Division,
CEA,
Member, BEC

(Kavita Jha)
Director, PSETD Division,
CEA
Member, BEC

(Rajkumar Sonkar)
Chairman – (SPV)
Convener – Member, BEC

REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited, a 'Maharatna CPSE'
under Ministry of Power, Govt. of India)

REC Power Development

संदर्भ संख्या: RECPDCL/TBCB/Lakadia-II/26-27/1449 दिनांक: 30.06.2026

मेसर्स पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
'सौदामिनी', प्लॉट नं. 2, सेक्टर - 29,
गुड़गांव - 122001 (हरियाणा)

सादरध्यानाकर्षण: श्री पंकज पांडे, कार्यकारी निदेशक

विषय: Selection of Bidder as Transmission service Provider for "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" - **Issuance of Tentative Acquisition Price regarding.**

महोदय,

This has reference to the RFP dated 04.05.2026 for selection of Transmission service Provider for "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" through tariff based competitive bidding process.

As per the requirement of Clause 1.5 of RFP, we would like to intimate you that the Tentative Acquisition Price payable by the Selected Bidder to the BPC for the acquisition of one hundred percent (100%) of the equity shareholding of "LAKADIA II POWER TRANSMISSION LIMITED" along with all its related assets and liabilities is **Rs.1843.30 Lakhs (Rupees Eighteen Crore Forty-Three Lakhs Thirty Thousand Only)**. This Acquisition Price shall be subject to adjustment based on the audited accounts of "LAKADIA II POWER TRANSMISSION LIMITED" as on the date of execution of the Share Purchase Agreement.

It may please be noted that as on date, there are no contractual obligations undertaken by BPC on behalf of "LAKADIA II POWER TRANSMISSION LIMITED" which are to be fulfilled by the TSP.

All other terms and conditions of the RFP remain the same.

धन्यवाद,

भवदीय,

30/06/26

for **महाप्रबंधक (इंजीनियरिंग)**

REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited, a 'Maharatna CPSE'
under Ministry of Power, Govt. of India)

Ref No.: REC PDCL/FIN/LIIPTL/2026-27/213

Dated: 28.09.2026

To,

M/s. Power Grid Corporation of India Limited
'Saudamini', Plot No.-2, Sector-29
Gurgaon-122001 (Haryana)

Kind Attention: Sh. Pankaj Pandey, Executive Director

Subject: Payment of Acquisition Price towards handing over of M/s. LAKADIA II POWER TRANSMISSION LIMITED.

Sir,

This is to inform that the acquisition price of M/s. Lakadia II Power Transmission Limited is **Rs 18,42,62,593/- (Rupees Eighteen Crore Forty-Two Lakh Sixty-Two Thousand Five Hundred Ninety-Three Only)** as per the breakup given below:

S No	Particulars	Amount (INR)
1	Professional Fee of BPC #	17,70,00,000
2	Reimbursement of cost incurred by BPC #	67,62,593
3	Share Capital of Lakadia II Power Transmission Limited	5,00,000
Acquisition Value/ Net Amount Payable by Bidder		**18,42,62,593**

including GST

Kindly credit the above total amount i.e., **Rs. 18,42,62,593/-** in the below mentioned Bank Account of REC Power Development and Consultancy Limited. TDS will be deposited by RECPDCL on behalf and under TAN of Lakadia II Power Transmission Limited.

D-Block, REC World Headquarter, Plot No. I-4, Sector-29, Gurugram, (Haryana) - 122001.
E-mail: co@recpdcl.in | Tel.: 0124-4441300 | www.recpdcl.in | CIN No. RECPDCL-U40101DL2007GOI165779 GST No. 06AADCR7399K1ZP

The acquisition price may be credited to our account through RTGS as per the following:

Bank Name, Address & Branch	**IDFC First Bank Limited** Gurgaon Golf Course Road Branch, Ground Floor Unit no. CG-01A and 01B, Gurgaon - 122003
Bank Account Name	**REC Power Development and Consultancy Ltd**
Bank Account No	**10171707713**
Bank IFSC Code No	**IDFB0021001**

Thanking You,

Yours faithfully

(Sumit Mehra)
DGM (E&A), RECPDCL

संदर्भ संख्या: आरईसीपीडीसीएल/टीबीसीबी/Lakadia Phase II/2026-27/3372 **दिनांक**: 10.10.2026

M/s Power Grid Corporation of India Limited
'Saudamini', Plot no.2, Sector-29,
Gurgaon-122001 (Haryana)

Kind Attention: Shri Pankaj Pandey, Executive Director

विषय: Establishment of "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" through tariff based competitive bidding process – Extension of LoI- regarding

संदर्भ: Letter of Intent (LOI) No. RECPDCL/TBCB/Lakadia Phase II/2026-27/2647, dated 02.09.2026

महोदय,

This is in reference to above referred Letter of Intent dated 02nd September, 2026 issued to M/s Power Grid Corporation of India Limited for "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)".

In this regard, in accordance with clause 2.15.2 of RFP, the validity of LoI is extended till 12.10.2026.

Further, as per clause 2.15.4 of RFP, the TSP shall apply to the Commission for grant of Transmission License and make an application to the Commission for adoption of Transmission Charges, as required under Section – 63 of the Electricity Act 2003, within 5 working days from the date of acquisition of SPV.

धन्यवाद।

भवदीय,

10/10/26

अनिल कुमार पेराला
उप महाप्रबंधक (अभियांत्रिकी)

Ref No.: RECPDCL/TBCB/Lakadia Phase II/2026-27/2647 Date: 02.09.2026

ORIGINAL

M/s Power Grid Corporation of India Limited
'Saudamini', Plot no. 2, Sector – 29,
Gurgaon – 122001 (Haryana)

Kind Attention: Sh. Pankaj Pandey, Executive Director

Subject: Establishment of "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" through Tariff Based Competitive Bidding Process (TBCB) – **Letter of Intent**

Sir,

We refer to:

1. The Request for Proposal (RfP) dated 04.05.2026 comprising RfP, Draft Transmission Service Agreement, Share Purchase Agreement and Survey Reports dated 26.05.2026 & 06.07.2026 issued to M/s Power Grid Corporation of India Limited, as regards participation in the Global Invitation for Bids for establishment of "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" through Tariff Based Competitive Bidding process including all correspondence/clarifications /amendments/errata/corrigendum issued by REC Power Development and Consultancy Limited in regard thereto (hereinafter collectively referred to as the 'Final RFP') till the submission Bid Deadline and as listed below:

   (i) Amendment-I dated 14.05.2026,
   (ii) Amendment-II dated 02.06.2026,
   (iii) Amendment-III dated 22.06.2026,
   (iv) Amendment-IV dated 25.06.2026,
   (v) Clarifications dated 01.07.2026,
   (vi) Amendment-V & Additional Clarifications dated 03.07.2026,
   (vii) Amendment-VI dated 06.07.2026,
   (viii) Amendment-VII & Additional Clarifications dated 06.07.2026,
   (ix) Additional Clarifications dated 16.07.2026,
   (x) Amendment-VIII dated 20.07.2026,
   (xi) Amendment-IX dated 28.07.2026,
   (xii) Amendment-X dated 28.07.2026,

2. The offer of M/s Power Grid Corporation of India Limited by way of a Technical Bid pursuant to (1) above submitted on 05.08.2026 in response to the Final RFP.

3. The Initial Price Offer of M/s Power Grid Corporation of India Limited as submitted on 05.08.2026 in response to the Final RFP.

4. The final offer of M/s Power Grid Corporation of India Limited, discovered during e-Reverse Auction, concluded on 28.08.2026 in response to the Final RFP.

5. The Technical Bid as in (2) above, the Initial Price Offer as in (3) above and the Final Offer as in (4) above hereinafter collectively referred to as the 'Bid'.

We are pleased to inform you that your proposal and offer received by way of the 'Bid' has been accepted and M/s Power Grid Corporation of India Limited is here by declared as 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 in 2 copies, One original plus One copy.

REC Power Development and Consultancy Limited Gurugram

This LoI is based on the Final RFP and is further contingent upon you satisfying the following conditions:

(a) Acknowledging its issuance and unconditionally accepting its contents and recording 'Accepted unconditionally' under the signature and stamp of your authorized signatory on each page of the duplicate copy of this letter attached herewith and returning the same to REC Power Development and Consultancy Limited within 7 (Seven) days from the date of issuance of LoI.

(b) Completion of various activities as stipulated in the 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.

(c) Provide the Contract Performance Guarantee of Rs. 244.50 Crore (Rupees Two Hundred Forty-Four Crore Fifty Lakh Only) within 10 (Ten) days from issue of this LoI, in favour of the Central Transmission Utility of India Limited, as per the provisions of Clause 2.12.

It may be noted that REC Power Development and Consultancy Limited has the rights available to them under the Final RFP, including rights under clause 2.15.5 and 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 transmission elements as agreed by you in your Bid, as per Annexure 21 and Format-1 of Annexure-8 respectively of the Final RFP is enclosed herewith as Schedule-A and incorporated herein by way of reference.

Further, please note that relationship of M/s Power Grid Corporation of India Limited with the REC Power Development and Consultancy Limited & Central Transmission Utility of India Limited will be governed solely on the basis of the Final RFP.

You are requested to unconditionally accept the LoI, and record on one copy of the LoI, 'Accepted unconditionally', under the signature of the authorized signatory of your Company and return such copy to us within 7 (Seven) days of issue of LoI.

Yours faithfully,



(Ratnesh Kumar)
General Manager (Engg)

Enclosures:

1. Schedule A: Quoted Transmission Charges and the scheduled COD of transmission element submitted in your Bid, as per Annexure 21 and Format-1 of Annexure-8 respectively of the Final RfP.

Copy for kind information to:

1. **The Secretary,** Central Electricity Regulatory Commission, 6th Floor, Tower B, World Trade Centre, Nauroji Nagar, New Delhi-110029
2. **The Joint Secretary (Transmission),** Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi- 110 004
3. **The Director (Transmission),** Ministry of Power, Govt, of India, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001
4. **The Chairperson,** Central Electricity Authority, Sewa Bhawan, R K Puram, New Delhi-110086
5. **The Chief Operating Officer,** Central Transmission Utility of India Limited, 5th to 10th Floor, Ircon International Tower, Tower No.-1, Plot No. 16, Sector 32, Gurugram, Haryana – 122003
6. **The Chief Engineer (PSP & A - I),** Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi – 110066

ANNEXURE 21 - FORMAT FOR FINANCIAL BID

Quoted Annual Transmission Charges: Rs. 11,524.88 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.



UNDERTAKING AND DETAILS OF EQUITY INVESTMENT

Format 1: Bidders' Undertakings

Date: 04/08/2026

To,
Chief Executive Officer,
REC Power Development and Consultancy Limited
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001
Dear Sir,

Sub: Bidders' Undertakings in respect of Bid for selection of Bidder as TSP to establish Inter StateTransmission system for "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)".

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 **04.05.2026** 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. [NOT APPLICABLE].

REC Power Development and Consultancy Limited Gurugram

POWER GRID CORPORATION OF INDIA LTD.

विकास कुमार / VIKAS KUMAR
मुख्य प्रबंधक (टी.बी.सी.बी.) / Chief Manager (TBCB)
पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
Power Grid Corporation of India Ltd.
Plot No. 2, Sector-29, Gurugram-122 001 (Haryana)

8. We confirm that our Bid meets the Scheduled COD of each transmission Element and the Project as specified below:

Sr. 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.	Establishment of 765/400 kV, 6x1500 MVA & 10x500 MVA, 400/220 kV Lakadia-II (Near Chitrod) with 2x330 MVAr 765 kV Bus reactor and 2x125 MVAr 400 kV Bus reactor. *[765 kV, 400 kV & 220 kV levels to be established in two sections with Sectionaliser arrangement. The 220 kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400 kV and 765 kV Sectionaliser shall be kept normally closed. (3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-I & 3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec- II)]*	36 months	22.54%	All Elements are required to be commissioned simultaneously as their utilization is dependent on commissioning of each other.
2.	Installation of Synchronous Condenser (+300/-200 MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW-s		15.09%	
3.	Lakadia-II – Halvad 765 kV D/C line		12.70%	
3a.	2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765kV D/c line		0.66%	
3b.	765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of Lakadia-II – Halvad 765 kV D/c line		1.64%	
4.	Lakadia-II – Ahmedabad 765 kV D/C line		17.18%	

REC Power Development and Consultancy Limited Gurugram

Vikas Kumar

विकास कुमार / VIKAS KUMAR
मुख्य प्रबंधक (टी.बी.सी.बी.) / Chief Manager (TBCB)
पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
Power Grid Corporation of India Ltd.
(भारत सरकार का उद्यम)/(A Govt. of India Enterprise)
Plot No.-2, Sector-29, Gurgaon- 122 001 (Haryana)

POWER GRID CORPORATION OF INDIA LTD.

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5.	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765 kV D/C line		0.66%	
6.	765 kV, 330 MVAr Switchable line reactors on each circuit at Lakadia-II end of Lakadia-II – Ahmedabad 765 kV D/C line		1.82%	
7.	Lakadia-II – Vataman 765 kV D/C line		23.62%	
8.	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765 kV D/C line		0.66%	
9.	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765 kV D/C line		3.43%	

Note: Effective date as per TSA of present scheme shall be matched with the Effective date of "Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5 GW), Jam Khambhaliya (Phase-II: 5.5 GW) and Jamnagar (Phase-I: 1 GW)" Parts A, B & C.

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: 36 months from the date of SPV Transfer.

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 **Lakadia II Power Transmission Limited,** 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.

REC Power Development and Consultancy Limited Gurugram

POWER GRID CORPORATION OF INDIA LTD.

Vikaskumar

विकास कुमार / VIKAS KUMAR
मुख्य प्रबंधक (टी.बी.सी.बी.) / Chief Manager (TBCB)
पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
Power Grid Corporation of India Ltd.
(भारत सरकार का उद्यम)/(A Govt. of India Enterprise)
Plot No.-2, Sector-29, Gurgaon- 122 001 (Haryana)

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12. Power of attorney/ Board resolution as per Clause 2.5.2 is enclosed.

.....Vikaskumar.....

(Signature)

Name: VIKAS KUMAR
Designation: Chief Manager

विकास कुमार / VIKAS KUMAR
मुख्य प्रबंधक (टी.बी.सी.बी.) / Chief Manager (TBCB)
पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
Power Grid Corporation of India Ltd.
(भारत सरकार का उद्यम)/(A Govt. of India Enterprise)
Plot No.-2, Sector-29, Gurgaon- 122 001 (Haryana)

POWER GRID CORPORATION OF INDIA LTD.

REC Power Development and Consultancy Limited
Gurugram

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फा.सं./F. No. 27-44/1/2024-REC DESK
भारत सरकार/Government of India
विद्युत मंत्रालय/Ministry of Power
***

Shram Shakti Bhawan, Rafi Marg,
New Delhi, dated 17th September, 2026

To

The CEO, RECPDCL
Plot No. I-4, Sector-29,
Gurugram (Haryana)-122001.

Subject: Approval of the Government for transfer of shares held by RECPDCL in various SPVs, incorporated for development of Inter/Intra State transmission systems to the Successful Bidder(s), selected through Tariff-Based Competitive Bidding process.

Sir,

I am directed to refer to RECPDCL's letters SEC No. 1/219/2026/2567 dated 31.08.2026, and SEC No. 1/219/2026/2651 dated 03.09.2026 on the subject mentioned above and to convey the approval of Competent Authority for divesting the shareholding of RECPDCL and its nominee in following Special Purpose Vehicles(SPVs), incorporated for carrying out bidding of various Inter/Intra-State transmission projects under Tariff Based Competitive Bidding(TBCB) mode, to the respective successful bidder(s), as indicated in below table, 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. 22(I)12009-GM dated 04.02.2010:

Sl. No.	Name of the Project	Name of SPV	Successful Bidder
1	Establishment of 400/220/132 kV AIS Sakoli (Distt. Bhandara)	Sakoli Power Transmission Limited	M/s Ashoka Buildcon Limited
2	Establishment of 765/400/220 kV AIS Balsane (Distt. Dhule)	Balsane Power Transmission Limited	M/s Resonia Limited
3	Construction of 220/132/33 kV AIS substation, Ranipur (Mau) and 220/132/33 kV AIS substation, Chunar (Mirzapur) with their associated lines	Ranipur Chunar Power Transmission Limited	M/s H G Infra Engineering Limited
4	Transmission System for Evacuation of Power Rajasthan REZ Ph-IV (Part-5: 6 GW) Barmer Complex, Barmer-II: 6 GW (Solar) (LCC Configuration)	Barmer HVDC Power Transmission Limited	M/s Power Grid Corporation of India Limited

5	Common Transmission system for evacuation of power from Lakadia (Phase-II: 7.5 GW), Jam Khambhaliya (Phase-II: 5.5 GW) and Jamnagar (Phase-I: 1GW)- Part B	Jam Khambhaliya Jamnagar Power Transmission Ltd	M/s Ceigall India Limited
6	Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (750 MW)	Lakadia II Power Transmission Limited	M/s Power Grid Corporation of India Limited

Yours faithfully,

(Nidhi Juneja)
Under Secretary to the Govt. of India
email: juneja.n13@nic.in /
sopfcrec-mop@gov.in
Tel: 011-23711302

Copy for information and necessary action to:

i. CMD, REC Ltd.

ii. US (Trans), MoP. with the request that transmission wing should also 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.

iii. Sr. PPS to Secretary (Power)/JS (Distt. &Reforms)/Dir (Distt.), Ministry of Power

SHARE PURCHASE AGREEMENT

BETWEEN

REC POWER DEVELOPMENT AND CONSULTANCY LIMITED

AND

LAKADIA II POWER TRANSMISSION LIMITED

AND

POWER GRID CORPORATION OF INDIA LIMITED

Dated: 12th October, 2026

सत्यमेव जयते

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No.	:	IN-DL18914662947191Y
Certificate Issued Date	:	08-Oct-2026 06:26 PM
Account Reference	:	SELFPRINT (PU)/ dl-self/ NEHRU/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL-SELF33387573770792Y
Purchased by	:	REC POWER DEVELOPMENT AND CONSULTANCY
Description of Document	:	Article 5 General Agreement
Property Description	:	CORE-4, SCOPE COMPLEX, 7, LODHI ROAD, NEW DELHI - 110003
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	LAKADIA II POWER TRANSMISSION LIMITED
Second Party	:	POWER GRID CORPORATION OF INDIA LIMITED
Stamp Duty Paid By	:	LAKADIA II POWER TRANSMISSION LIMITED
Stamp Duty Amount(Rs.)	:	500 (Five Hundred only)

SELF PRINTED CERTIFICATE TO BE VERIFIED BY THE RECIPIENT AT WWW.SHCILESTAMP.COM

Please write or type below this line

SHARE PURCHASE AGREEMENT

This **SHARE PURCHASE AGREEMENT** ('**Agreement**') made on the 12th day of October, 2026 at New Delhi by and between:

REC POWER DEVELOPMENT AND CONSULTANCY LIMITED, a company incorporated under the Companies Act, 1956, vide CIN-U40101DL2007GOI165779 having its registered office at Core 4, SCOPE Complex, 7, Lodhi Road, New Delhi 110 003, India (hereinafter referred to as "**REC PDCL**", which expression shall, unless it be repugnant to the context or meaning thereof, be deemed to mean and include its successors and permitted assigns) of the **FIRST PART**;

RECPDCL | Lakadia II PTL | PGCIL

Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority

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Certificate No.	:	**IN-DL18904475935951Y**
Certificate Issued Date	:	08-Oct-2026 06:15 PM
Account Reference	:	SELFPRINT (PU)/ dl-self/ NEHRU/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL-SELF33369340680164Y
Purchased by	:	REC POWER DEVELOPMENT AND CONSULTANCY
Description of Document	:	Article 5 General Agreement
Property Description	:	CORE-4, SCOPE COMPLEX, 7, LODHI ROAD, NEW DELHI - 110003
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	LAKADIA II POWER TRANSMISSION LIMITED
Second Party	:	POWER GRID CORPORATION OF INDIA LIMITED
Stamp Duty Paid By	:	LAKADIA II POWER TRANSMISSION LIMITED
Stamp Duty Amount(Rs.)	:	500 (Five Hundred only)

SELF PRINTED CERTIFICATE TO BE VERIFIED BY THE RECIPIENT AT WWW.SHCILESTAMP.COM

Please write or type below this line

AND

LAKADIA II POWER TRANSMISSION LIMITED a company incorporated under the Companies Act, 2013 vide CIN- U42202DL2026GOI466344, having its registered office at Core 4, SCOPE Complex, 7, Lodhi Road, New Delhi 110003, India (herein after referred to as "**Company**" which expression shall, unless repugnant to the context, mean and include its successors in interest) of the **SECOND PART**;

REC Power Development and Consultancy Limited ★ RECPDCL

Lakadia II Power Transmission Limited ★ New Delhi 110003 ★ Core 4, Scope Complex, Lodhi Road

POWER GRID CORPORATION OF INDIA LTD. ★ पावरग्रिड POWERGRID

RECPDCL **Lakadia II PTL** **PGCIL**

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

सत्यमेव जयते

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No.	:	**IN-DL18898403408042Y**
Certificate Issued Date	:	08-Oct-2026 06:08 PM
Account Reference	:	SELFPRINT (PU)/ dl-self/ NEHRU/ DL-DLH
Unique Doc. Reference	:	SUBIN-DLDL-SELF33359538472060Y
Purchased by	:	REC POWER DEVELOPMENT AND CONSULTANCY
Description of Document	:	Article 5 General Agreement
Property Description	:	CORE-4, SCOPE COMPLEX, 7, LODHI ROAD, NEW DELHI - 110003
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	LAKADIA II POWER TRANSMISSION LIMITED
Second Party	:	POWER GRID CORPORATION OF INDIA LIMITED
Stamp Duty Paid By	:	LAKADIA II POWER TRANSMISSION LIMITED
Stamp Duty Amount(Rs.)	:	200 (Two Hundred only)

SELF PRINTED CERTIFICATE TO BE VERIFIED BY THE RECIPIENT AT WWW.SHCILESTAMP.COM

Please write or type below this line

AND

POWER GRID CORPORATION OF INDIA LIMITED, a company incorporated under the Companies Act, 1956 vide CIN-L40101DL1989GOI038121 and having its registered office at **B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016** (hereinafter referred to as "**Selected Bidder**" which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors and permitted assigns) of the **THIRD PART.**

RECPDCL | Lakadia II PTL | PGCIL

Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

WHEREAS:

A. Ministry of Power, Government of India vide its Gazette Notification No. CG-DL-E-19022026-270309 dated 12.02.2026 has appointed REC Power Development and Consultancy Limited to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish "**Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)**" through tariff based competitive bidding process (hereinafter referred to as the "Project").

B. In accordance with the Bidding Guidelines, the BPC had initiated a competitive 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 2** of the TSA. BPC had initiated this process in accordance with and on the terms and conditions mentioned in the RFP Project Documents (as defined hereinafter).

C. BPC has incorporated the Company and has undertaken the preliminary studies, obtained certain approvals, etc. regarding the Project on behalf of the Company

D. REC PDCL along with the Nominees hold one hundred per cent (100%) of the total issued and paid up equity share capital of the Company.

E. Pursuant to the said Bid Process, Power Grid Corporation of India Limited has been identified as the Selected Bidder vide Letter of Intent dated 02nd September, 2026 issued by the BPC in favour of the Selected Bidder.

F. As envisaged in the RFP, the Shares Seller (as defined hereinafter) has agreed to sell the Sale Shares (as defined hereinafter) to the Selected Bidder and the Selected Bidder has agreed to purchase the Sale Shares from the Shares Seller, subject to and on the terms and conditions set forth in this Agreement.

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 TSA.

1.2 Additionally, the following terms shall have the meaning hereinafter respectively assigned to them herein below:

(i) **"Acquisition Price"** shall mean INR 18,42,62,593/- (Rs. Eighteen Crore Forty-Two Lakh Sixty-Two Thousand Five Hundred Ninety-Three Only) which is the aggregate consideration payable by the Selected Bidder towards purchase of the Sale Shares at par and for taking over of all 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 the Parties in writing;

(iii) **"Bid Process"** shall mean the competitive bidding process initiated by the BPC, by issuance of RFP 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 2.15.2 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) "**Encumbrance**" shall mean any mortgage, pledge, lien, charge, security assignment, hypothecation, trust, encumbrance or any other agreement having the effect of creating security interest;

(vii) "**Letter of Intent**" shall have the meaning ascribed thereto under the Bid Documents;

(viii) "**Nominees"** shall mean the Persons, who are named in Annexure A of this Agreement, holding the Sale Shares as nominees of REC PDCL;

(ix) "**Party**" shall mean REC PDCL, Company and the Selected Bidder, referred to individually, and "Parties" shall mean REC PDCL, Company and the Selected Bidder collectively referred to, as relevant;

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(x) "**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;

(xi) "**RFP Project Documents**" shall mean the following documents, referred to collectively:

a. Transmission Service Agreement; and
b. this Agreement.

(xii) "**Representations and Warranties**" shall mean the representations and warranties mentioned in Clause 4 hereto;

(xiii) "**RoC**" shall mean the Registrar of Companies;

(xiv) "**Sale Shares**" shall mean 50,000 shares, representing one hundred percent (100%) 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 REC PDCL; and

(xvii) "**Transmission Service Agreement**" or "**TSA**" means the agreement titled 'Transmission Service Agreement' to be executed between Central Transmission Utility of India Limited (CTUIL) and Lakadia II Power Transmission Limited, 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.

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.

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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 free from Encumbrances together with all assets and liabilities of the Company 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 Nominees of 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 duly stamped with requisite amount of stamp duty payable on the transfer of the Sale Shares ("**Share Transfer Forms**").

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**") executed by the Shares Seller and the Nominees, simultaneously against the Selected Bidder handing over to the Shares Seller, demand drafts drawn in favour of the Shares Seller or by confirmation of RTGS transfer 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 REC PDCL that on the Closing Date, the Selected Bidder has furnished the Contract Performance Guarantee to Central Transmission Utility of India Limited (CTUIL) and is in a position to comply with all other requirements of Clause 2.15.2 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 Share Certificates with the Company along with the names of its nominees to be appointed on the Board of the Company. The new registered office address of the Company shall be within the jurisdiction of the RoC, New Delhi-I, by following the due process as may be required, 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:

(i) Immediately on the Closing Date convene a meeting of the Board, wherein the Board shall pass the following necessary resolutions:

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(a) approving the transfer of the Shares constituting the Sale Shares from the Shares Seller and the Nominees to the name of the **Power Grid Corporation of India Limited** and its nominees and transfer of all assets and liabilities of the Company as on Closing Date;

(b) approving the **Power Grid Corporation of India Limited** and its nominees as the members of the Company and entering the name of the **Power Grid Corporation of India Limited** and its nominees in the register of members.

(c) changing the address of the registered office of the Company to the new address within 30 days as per statutory provisions as provided by the Selected Bidder as per clause 3.3 above.

(d) appointing the Directors of the Selected Bidder on the Board of the Company.

Immediately pursuant to the resignation of the existing Directors, the newly constituted Board of Directors shall continue/hold the meeting and pass the following resolution:

(e) accepting the resignations of the other existing Directors on the Board and the Chair of the meeting which was taken by one of the existing Directors shall be vacated and appointment of a new Chairman who shall be one of the newly appointed Director.

(f) 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

(g) 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 **Power Grid Corporation of India Limited** and its nominees 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 **Power Grid Corporation of India Limited** and its nominees 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 **Power Grid Corporation of India Limited** and its nominees, to the **Power Grid Corporation of India Limited** and its nominees, as the case may be or its authorized representative;

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(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) (c) to (i) (d) of Clause 3.3 (i) to the Selected Bidder.

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 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 (CTUIL) 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 (CTUIL)as the case may be.

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;

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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 is 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.

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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 a period of 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 the 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 certified mail or by recognised courier to the addresses below:

Selected Bidder: **Power Grid Corporation of India Limited,**
B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016

REC PDCL: **REC Power Development and Consultancy Limited**
Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003

Company: **Lakadia II Power Transmission Limited**
Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003

REC Power Development and Consultancy Limited ★ RECPDCL

Lakadia II Power Transmission Limited ★ New Delhi 110003

POWER GRID CORPORATION OF INDIA LTD. ★

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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 endeavor to settle such Dispute amicably. The attempt to bring about an amicable settlement shall be considered to have failed if not resolved within sixty (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 thirty (30) days after expiry of the aforesaid period, refer the Dispute to the Chief Executive Officer/Director of REC PDCL 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 thirty (30) days from the date of receipt of a written notification in this regard.

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 thirty (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.

REC Power Development and Consultancy Limited RECPDCL

RECPDCL Lakadia II PTL PGCIL

Lakadia II Power Transmission Limited New Delhi 110003

POWERGRID CORPORATION OF INDIA LTD.

6.3 AUTHORISED PERSON

For the purposes of this Agreement, the Selected Bidder is represented by Sh. Arup Kumar Samanta, General Manager, Company Secretariat, POWERGRID, pursuant to an authorization granted to Sh. Arup Kumar Samanta, General Manager, Company Secretariat, POWERGRID through necessary Board resolutions. Further, Sh. Arup Kumar Samanta, General Manager, Company Secretariat, POWERGRID 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 Sh. Arup Kumar Samanta, General Manager, Company Secretariat, POWERGRID shall be deemed to be acts done or documents executed by the Selected Bidder and shall be binding on the Selected Bidder.

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.

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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 the Central Transmission Utility of India Limited (CTUIL) in accordance with Article 3.3.2 or Article 13 of the TSA thereof, REC PDCL 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.

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 costs in respect of this Agreement and transfer of Sale Shares.

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.

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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:

(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 the Central Transmission Utility of India Limited (CTUIL)and REC PDCL 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 Shares Seller, 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 up to the Closing Date in furtherance of the Project referred to in recital A of this Agreement.

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- Further, the Selected Bidder hereby indemnifies and holds harmless at all times the Shares Seller against all past, present and future third party claims and liabilities arising out of actions or decisions taken by any of the persons or bodies referred to in Clause 6.3 up to the Closing Date 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.

6.17 SURVIVAL

The provisions of Clause 1 (Definitions and Interpretation), Clause 4 (Representations and Warranties), Clause 6.2 (Resolution of Disputes), Clause 6.7 (Termination), Clause 6.15 (Confidentiality), Clause 6.16 (Indemnification) and other representations, warranties, covenants and provisions contained herein that by their nature are intended to survive, shall survive the termination of this Agreement

6.18 FORCE MAJEURE

No party shall be liable for its inability or delay in performing any of its obligations hereunder if such delay is caused by circumstances beyond the reasonable control of the party including delay caused through flood, riot, Act of God, lighting civil commotion, storm, tempest and earthquake.

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

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SIGNED AND DELIVERED by the within named **REC POWER DEVELOPMENT AND CONSULTANCY LIMITED** by the hand of Sh. Rajkumar Sonkar, HoD (CS)

(Authorised pursuant to the resolution passed by its Board of Directors in its meeting held on 02nd September, 2026)

IN THE PRESENCE OF:

WITNESS:
(Name and address)

1. ANIL KUMAR PERALA
DGM (ENGG)
RECPDCL

(Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003)

2. RITAM BISWAS
DY. MANAGER (ENGG.)
RECPDCL

(Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003)

SIGNED AND DELIVERED by the within named **LAKADIA II POWER TRANSMISSION LIMITED** by the hand of Sh. Sumit Mehra, Director

(Authorised pursuant to the resolution passed by its Board of Directors in its meeting held on 12th October, 2026)

WITNESS:
(Name and address)

RITU MADAN ARORA
CM(CS)
REC LIMITED

(Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003)

Nishchay Goel, DM(CS)
REC Limited

(Core-4, SCOPE Complex, 7, Lodhi Road, New Delhi-110003)

SIGNED AND DELIVERED by the within named **POWER GRID CORPORATION OF INDIA LIMITED** by the hand of Sh. Arup Kumar Samanta, General Manager, Company Secretariat, POWERGRID

(Authorised pursuant to the resolution passed by its Board of Directors in its meeting held on 26th June, 2026)

WITNESS:
(Name and address)

L. Aditya Mahesh
Ch. Mgr. (TBCB)
POWERGRID

B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016

ROHIT JAIN
Ch. Mgr (TBCB)
POWERGRID

B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016

ANNEXURE A

DESCRIPTION OF THE SALE SHARES

S. NO.	NAME OF THE SHAREHOLDER(s)	NUMBER OF EQUITY SHARES HELD	PERCENTAGE OF THE TOTAL PAID UP EQUITY CAPITAL
1.	REC Power Development and Consultancy Limited	49,994	99.988
2.	Shri Jaspal Singh Kushwaha*	1	0.002
3.	Shri Mukul Agarwal*	1	0.002
4.	Shri Ratnesh Kumar*	1	0.002
5.	Smt. Navita Dubal*	1	0.002
6.	Shri Arvind Kumar*	1	0.002
7.	Shri Anil Kumar Perala*	1	0.002
.	Total	50,000	100.000

*** Held as nominee of REC PDCL.**

RECPDCL

Lakadia II PTL

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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 INTEGRATION OF POWER FROM RE PROJECTS IN LAKADIA REZ IN GUJARAT-PHASE II (7500MW)

BETWEEN THE

CENTRAL TRANSMISSION UTILITY OF INDIA LIMITED
(NODAL AGENCY)

AND

LAKADIA II POWER TRANSMISSION LIMITED

19th October ,2026

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Bond

Indian-Non Judicial Stamp
Haryana Government

Date :03/09/2026

Certificate No. G0C2026I1886

GRN No. 158212843

Stamp Duty Paid : ₹ 101
(Rs. Only)

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**

THIS TRANSMISISON SERVICE AGREEMENT (hereinafter referred to as "TSA" or "Agreement" or "the Agreement" or "this Agreement") is made on the ...19th..... [Insert day] of..October [Insert month] of Two Thousand and Twenty Six.

BETWEEN:

The CENTRAL TRANSMISSION UTILITY OF INDIA LIMITED, a company incorporated under the Companies Act, 2013, having its registered office at **Plot No.2, Sector 29, Gurugram, Haryana 122001, India** & Correspondence address at **Floor No. 5-10, Tower 1, Plot No. 16, IRCON International Tower, Institutional Area, Sector 32, Gurugram, Haryana – 122001, India**, 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

LAKADIA II POWER TRANSMISSION LIMITED, incorporated under the Companies Act, 2013, having its registered office at Core-4, Scope Complex 7, Lodhi Road Delhi, South Delhi, Delhi 110003 (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 LAKADIA II POWER 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:

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 –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024, 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, or insurance surety bond or Payment on Order Instrument 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 (for bank guarantee) or Schedule-8A (for insurance surety bond issued by any of the insurance companies authorized by Insurance Regulatory and Development Authority of India), or Schedule-8B (for Payment on Order Instrument issued by PFC/REC/IREDA) in accordance with Article 3 of this Agreement and which shall include the additional bank guarantee or insurance surety bond or Payment on Order Instrument 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;

"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 equipment not forming part of the Project;

"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;

"Payment on Order Instrument" shall mean Letter of Undertaking from Indian Renewable Energy Development Agency Limited (IREDA) or Power Finance Corporation Limited (PFC) or REC Limited (REC) [the three non- banking financial institutions under Ministry of New & Renewable Energy (MNRE)/ Ministry of Power (MoP)], to pay in case situation of default of Transmission Service Provider (TSP) in terms of tender conditions/Power Purchase Agreement (PPA) arises. Such Letter(s) will have same effect as that of a Bank Guarantee issued by any public sector bank. Such "Payment on Order instrument" would have terms and conditions similar to that of any Bank Guarantee given by any public sector bank and would promise to pay the Nodal Agency on demand within stipulated time. TSPs can seek such Letters(s) by offering due security to the above mentioned three non- banking financial institutions mentioned above (IREDA, PFC & REC). Nodal Agency shall not accept the instrument of 'Letter of Undertaking' as described above or

in any other form, from any other non-banking financial institutions or bank, except IREDA, PFC & REC.

"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 Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)**, 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 centers, 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 authorizations 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 04.05.2026 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 REC Power Development and Consultancy Limited, LAKADIA II POWER TRANSMISSION LIMITED, and the Successful Bidder for the purchase of one hundred (100%) per cent of the shareholding of the LAKADIA II POWER 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 Dispatch 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 LAKADIA II POWER 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 REC Power Development and Consultancy Limited in LAKADIA II POWER 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.

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 LAKADIA II POWER TRANSMISSION LIMITED, from REC Power Development and Consultancy Limited, who shall sell to the Selected Bidder, the equity shareholding of LAKADIA II POWER 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. 244.50 Crore **(Rupees Two Hundred Forty-Four Crore and Fifty Lakhs 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 **Rupee Twenty-Four Crore and Forty-Five Lakhs Only (Rs. 24.45 Crore)** 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. 244.50 Crore (Rupees Two Hundred Forty Four Crore and Fifty Lakhs 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.

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 Article 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;

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. A-1/2021- FSC- Part(5) dated 16.11.2021 and No.: P45021/2/2017-PP (BE-II)-Part-4 Vol.II dated 19.07.2024 issued by Ministry of Power 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

CENTRAL TRANSMISSION UTILITY OF INDIA LTD.
Lakadia II Power Transmission Limited New Delhi 110003

No. 6/18/2019-PPD, dated 24.07.2020,Office Memorandum (OM) No. F.18/37/2020-PPD dated 08.02.2021, OM No. F.12/1/2021- PPD(Pt.) dated 02.03.2021, OM No. F.7/10/2021-PPD dated 08.06.2021 and Order (Public Procurement No 4) bearing File No. F.7/10/2021- PPD dated 23.02.2023 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.

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.

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) acquisition of land for location specific substations, switching stations or HVDC terminal or inverter stations. Also, the actual location of Greenfield substations (Switching Stations or HVDC Terminal or Inverter Stations) for a generation pooling substation and for load serving substations in the scope of TSP:

- For a Generation Pooling Substation shall not be beyond 3Km radius of the location proposed by the BPC in their Survey Report.
- For load Serving Substation within the scope of TSP shall not be beyond 5Km radius of the location proposed by the BPC in their Survey Report
- For an intermediate Substation shall not be beyond 10Km radius of the location proposed by the BPC in their Survey Report.

(b) final selection of Site including its geo-technical investigation;

(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.

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 Articles 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

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.

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. 244.50 Crore (Rupees Two Hundred Forty-Four Crore and Fifty Lakhs 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.

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 –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024, 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% for AC System and 97% for Synchronous Condenser Station.

Payment of monthly Transmission charges based on actual availability will be calculated as per para 1.2 of Schedule 4 of this Agreement. In case of hybrid system, availability will be considered separately for AC System, HVDC System and Synchronous Condenser Station and monthly transmission charges based on actual availability shall be paid by categorizing the system into AC System, HVDC System or Synchronous Condenser Station (as applicable) and percentage of total transmission charges payable to the TSP for AC System, HVDC System, Synchronous Condenser Station as indicated in Schedule 5 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.

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 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 – IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 as on Bid Deadline. For the event(s) for which the Element(s) is/are deemed to be available as per Appendix –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024, 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 approonate 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;

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 AC System and 97% for Synchronous Condenser Station, 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. the TSP fails to take the possession of the land required for location specific substations, switching stations or HVDC terminal or inverter stations and / or fails to pay the requisite price to the parties and / or any State Government authority from whom the land is acquired, within twelve (12) months from the Effective Date.

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

Article15.3 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.

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.

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 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 **Rupees Sixteen Crore and Thirty Lakh only (Rs. 16.30 Crore).**

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.

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.

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 LAKADIA II POWER 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 LAKADIA II POWER 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 LAKADIA II POWER 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 LAKADIA II POWER TRANSMISSION LIMITEDshall 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 LAKADIA II POWER TRANSMISSION LIMITED then holding of Selected Bidder A in LAKADIA II POWER 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 LAKADIA II POWER TRANSMISSION LIMITED, then, for the purposes of ascertaining the minimum equity/equity lock-in requirements specified above, the effective holding of Bidder A in LAKADIA II POWER 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:

(i) **M/s Powergrid Corporation of India Limited (Selected Bidder)**

		CORORATE	BUSINESS
Address	:	Plot No 2, Saudamini, Sec-29, Gurugram, Haryana 122001	WR-II RHQ, Plot No 54, Sama-Savli Road, Vadodara, Gujarat-390024
Attention	:	ED(TBCB)	Sh. Haresh Uttamlal Patel PIC
Email	:	tbcb@powergrid.in	hpatel@powergrid.in
Fax. No.	:	–	–
Telephone No.	:	0124-2822123	9869404497

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	:	5th to 10th Floor, IRCON International Tower, Tower no-1, Plot no-16, Sector-32, Gurugram, Haryana: 122003
Attention	:	Ramachandra, Sr GM
Email	:	ramachand@powergrid.in
Fax. No.	:	
Telephone No.	:	9910378128

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.

1. For and on behalf of TSP

.....

[Signature, Name, Designation and Address]

2. For and on behalf of **Central Transmission Utility of India Limited (Nodal Agency)**

.....

[Signature, Name, Designation and Address]

KAMAL KUMAR JAIN

WITNESSES:

1. For and on behalf of

: BPC

.....

[Signature] (RITAM BISWAS)
Dy. MANAGER (ENGG.)
RBCPDCL

.....

[Insert, Name, Designation and Address of the Witness]

2. For and on behalf of

: Nodal Agency

.....

[Signature]

DEEPAK KRISHNAN

.....

[Insert Name, Designation and Address of the Witness]

SCHEDULES

Schedule: 1

Project Description and Scope of Project

Scope of the Project:

Sl. No.	Scope of the Transmission Scheme	Scheduled COD in months from Effective Date
1.	**Establishment of 765/400 kV, 6x1500 MVA & 10x500 MVA, 400/220 kV Lakadia-II (Near Chitrod)** with 2x330 MVAr 765 kV Bus reactor and 2x125 MVAr 400 kV Bus reactor. *[765 kV, 400 kV & 220 kV levels to be established in two sections with Sectionaliser arrangement. The 220 kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400 kV and 765 kV Sectionaliser shall be kept normally closed. (3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-I & 3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-II)]* • 765/400 kV, 1500 MVA ICT – 6 Nos. (18x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220 kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAr single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 765 kV line bays: 6 Nos. (4 Nos. on Sec-I (2 for Halvad D/C & 2 for Ahmedabad D/C) and 2 Nos. on Sec-II (for Vataman)) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220 kV BC– 2 Nos. • 220 kV TBC – 2 Nos.	36 Months (19.10.2029)

Sl. No.	Scope of the Transmission Scheme	Scheduled COD in months from Effective Date
	• 1x125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Bus reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 Nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 Nos. on Sec-I & 8 Nos. on Sec-II for interconnection of RE Projects) **Future provision (space for):** • 765 kV line bays along with switchable line reactors – 8 Nos. (2 Nos. on Sec-I & 6 Nos. on Sec-II) • 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II) • 420 kV, 125 MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II • Synchronous Condenser (+300/-200 MVAr) along with 400 kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)	
2.	Installation of Synchronous Condenser (+300/-200 MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW-s • Synchronous Condenser along with associated 400 kV bay-2 Nos. (one each on Sec-I & II)	
3.	Lakadia-II – Halvad 765 kV D/C line	
3a.	2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765kV D/c line. • 765 kV line bays- 2 nos. (AIS)	
3b.	765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of Lakadia-II – Halvad 765 kV D/c line • 240 MVAr, 765 kV Switchable Line Reactor- 2 Nos. (2 for Lakadia-II end) • 765 kV Switchable Line Reactor bay - 2 Nos. for Lakadia-II end	

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Sl. No.	Scope of the Transmission Scheme	Scheduled COD in months from Effective Date
	• 80 MVAr spare single-phase reactor at Lakadia-II as proposed under Sl. 9 for above 240 MVAr Switchable Line Reactor shall be utilized.	
4.	Lakadia-II – Ahmedabad 765 kV D/C line	
5.	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765 kV D/C line • 765 kV line bays – 2 Nos. (AIS)	
6.	765 kV, 330 MVAr Switchable line reactors on each circuit at Lakadia-II end of Lakadia-II – Ahmedabad 765 kV D/C line • 330 MVAr, 765 kV Switchable Line Reactor- 2 Nos. • 765 kV Switchable Line Reactor bay - 2 Nos. • 110 MVAr spare single phase reactor at Lakadia-II S/s is already provided in scope of work above and same shall be used for subject Switchable Line Reactor.	
7.	Lakadia-II – Vataman 765 kV D/C line	
8.	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765 kV D/C line	
9.	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765 kV D/C line • 240 MVAr, 765 kV Switchable Line Reactor- 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV Switchable Line Reactor bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80 MVAr spare single-phase reactor at Lakadia-II for above 240 MVAr Switchable Line Reactor. • 80 MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Switchable Line Reactor.	

Note:

i. TSPs of Ahmedabad S/s & Vataman S/s shall provide space for the above scope of work in their respective substations (free of cost)

ii. The above synchronous condenser (at Sl. No. 2) shall be considered as 'transmission asset', similar to STATCOM & SVC, for the purpose of tariff determination.

Project Description

Govt. of India has set a target for establishing 500 GW capacity from non-fossil energy sources by 2030. Applications for integration of more than 11 GW RE capacity have been received in Lakadia area. Out of this 11 GW, 3.5 GW RE capacity has been accommodated at Lakadia S/s (Existing) and for balance 7.5 GW, a new substation (Lakadia-II) was required to be planned.

In view of the above, transmission scheme for integration of power from RE Projects in Lakadia area in Gujarat for capacity of 7.5 GW namely "Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)" was taken up for deliberations in the 37th NCT meeting held on 19.01.2026 with an implementation timeframe of 36 months.

The subject Transmission scheme inter-alia includes establishment of 765/400 kV, 6x1500 MVA & 10x500 MVA, 400/220 kV Lakadia-II S/s (Near Chitrod), LILO of Halvad – Kandla 765 kV D/C line at Lakadia-II, Lakadia-II – Ahmedabad 765 kV D/C line & Lakadia-II – Vataman 765 kV D/C line. Further, for onward evacuation of power towards load centers in South Gujarat & Maharashtra, Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5GW), Jam Khambhaliya (Phase-II: 5.5GW) and Jamnagar (Phase-I: 1GW)" Parts A, B & C shall be required.

The subject Transmission system was recommended by NCT in the 37th NCT meeting held on 19.01.2026. Further, Ministry of Power vide Gazette notification dated 12.02.2026 (Copy of Gazette attached) has approved this Transmission scheme for implementation through TBCB mode and appointed RECPDCL as BPC.

The subject scheme as agreed in the 37th NCT meeting inter alia included 765 kV, 330 MVAr Switchable line reactors on each circuit at Ahmedabad end of Lakadia-II – Ahmedabad 765 kV D/C line, which was modified in the 38th meeting of NCT held on 25.02.2026 and the scope was revised to include 765 kV, 330 MVAr Switchable line reactors on each circuit at Lakadia-II end of Lakadia-II – Ahmedabad 765 kV D/C line (instead of Ahmedabad end as agreed in 37th NCT meeting).

SPECIFIC TECHNICAL REQUIREMENTS FOR TRANSMISSION LINE

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 2022, as amended from time to time. Other CEA Regulations/ guidelines as amended up to date and Ministry of Power (MoP) guidelines, as applicable, shall also be followed.

A.1.0 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.2.0 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.3.0 Towers shall be designed as per IS-802:2015, however the drag coefficient of the tower shall be as follows: -

Solidity Ratio	Drag Coefficient
Up to 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.4.0 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.5.0 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.6.0 Selection of reliability level for design of tower shall be as per CEA Regulation (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2022, as amended from time to time.

A.7.0

a) In case of construction of transmission line of Voltage level 400 kV and above, under crossing of the existing transmission line shall not be allowed. In the case where it is inevitable to under-cross the existing transmission line then TSP shall seek prior approval from Chief Electrical Inspector, CEA with detailed study ensuring that all statutory electrical clearances and Electric Field limit of 10 kV/m at 1 m and 1.8 m from ground level is not violated.

b) For power line crossing of 400 kV or above voltage level, large angle and dead

end towers (i.e. D/DD/QD) shall be used on either side of power line crossing.

c) For power line crossing of 132 kV and 220 kV (or 230 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.

d) 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.

e) For crossing of railway tracks, national highways and state highways, the rules/ regulations of appropriate authorities shall be followed.

A.8.0 The relevant conductor configuration shall be as follows: -

A. For the following 765 kV lines under the scheme:

i. **Lakadia-II – Halvad 765 kV D/C line**

ii. **Lakadia-II – Ahmedabad 765 kV D/C line**

iii. **Lakadia-II – Vataman 765 kV D/C line**

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**
765 kV D/C (Hexa Bundle) Transmission Lines	**Zebra : Stranding** 54/3.18 mm-Al + 7/3.18 mm-Steel, 428.9 mm², Aluminium area, 28.62 mm diameter Maximum DC Resistance at 20°C (Ω/km): 0.0677 Minimum UTS: 131.44 kN	**Stranding details:** 61/3.19 mm, 487.5 mm² Aluminium alloy area 28.71 mm diameter Maximum DC Resistance at 20°C (Ω/km): 0.06815 Minimum UTS: 135.6 kN	**Stranding details:** 61/3.08 mm, 454 mm² Aluminium alloy area 27.72 mm diameter 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 °C.*

A.9.0 The required phase to phase spacing and horizontal spacing for 765 kV line shall be governed by the tower design as well as minimum live metal clearances for 765 kV voltage level under different insulator swing angles. However, the phase to phase spacing for 765 kV line shall not be less than 15 m.

A.10.0 All electrical clearances including minimum live metal clearance, ground clearance and minimum mid span separation between earth wire and conductor as given below shall be considered:

I. Minimum live metal clearances for 765 kV line:

a) (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 (25°)	4.4 m
b) Swing angle (55°)	1.3 m

(iii) Minimum ground clearance for 765 kV line: 18 m

(iv) Minimum mid span separation between earth-wire and conductor for 765 kV line: 9.0 m

A.11.0 The Shielding angle shall not exceed 10 deg for 765 kV D/C transmission line.

A.12.0 The Fault current for design of line shall be 50 kA for 1 sec for 765 kV.

A.13.0 In case of 400 kV and above 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 Stranded Steel (GSS) or Aluminum Alloy Conductor Steel Reinforced (AACSR) conductor type or any other suitable conductor type depending upon span length and other technical consideration.

A.14.0 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 km distance for direct earthing of both shield wires. If site condition demands, multiple earthing or use of earthing enhancement compound shall be used.

A.15.0 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 and

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.16.0 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 transmission line. In order to optimize the route, use of GATISHAKTI platform shall also be made.

A.17.0 Wherever, transmission lines are passing through cyclone prone areas i.e., areas up to 60 km from coast following shall also be applicable:

a) Terrain category-I, with terrain roughness factor (K2) of 1.08 shall be considered for tower design for exposed open terrain with few or no obstruction, which also includes open sea coasts, open stretch of water, desert and flat treeless plains.

b) Importance factor for cyclonic region (K4) of 1.3 shall be considered for tower design.

c) The number of consecutive spans between the section points/ angle point shall not exceed 10 spans or 3 km instead of conventional practice of 15 spans or 5 km, in order to reduce the failure of such towers in coastal areas due to cascading effect. The section shall be terminated with tension tower/ angle tower and angle of deviation should be based on the site requirement.

A.18.0 Wherever, transmission lines are passing through cyclone prone areas (i.e. areas up to 60 km from coast)/ creek regions/ aggressive soil areas following shall also be applicable:

a) The fabricated tower parts and stubs shall have a minimum overall zinc coating of 900 g/m^2 of surface area except for plates and sections below 5 mm which shall have a minimum overall zinc coating of 610 g/m^2 of surface area. The average zinc coating for all sections and plates 5 mm and above shall be maintained as 127 microns and that for plates and sections below 5 mm shall be maintained as 87 microns.

b) Ready mix concrete of M30 Grade shall be used to avoid use of locally available saline water. However, design mix concrete of M30 Grade conforming to IS 456 with potable water can be used at locations where transportation of ready-mix concrete is not feasible. Minimum cement content in any case shall not be less than 330 kg/m^3.

c) The surface of the reinforced steel shall be treated with epoxy-based coating to enhance corrosion performance of foundation. Use of epoxy coated reinforcement in foundation shall be as per IS 13620. In addition, two (2) coats of bituminous painting of minimum 1.6 kg/m^2 per coat shall be applied on all exposed faces of foundation (i.e. pedestal and base slab).

d) Double coat 20 mm thick cement plaster shall be provided on all exposed concrete surface as well up to 300 mm below ground level to give protection to concrete surface from environmental and saline effect.

e) Before coping of chimney top portion, three coats of anti-corrosive paint of minimum 30-35 microns dry film thickness each shall be applied on the stub in

the 50 mm coping portion as well as up to 350 mm above CL portion.

A.19.0 The raised chimney foundation is to be provided in areas prone to flooding/water stagnation like paddy field /agricultural field and 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 High Flood Level (HFL) 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).

A.20.0 (a) Routing of transmission line through protected areas of India shall be avoided to the extent possible. In case, it is not possible to avoid protected areas, the towers of the transmission line up to 765 kV level, which are installed in protected areas, shall be designed for Multi-circuit (4-circuits) configuration of same voltage level considering the Reliability Level and Design Span as per CEA (Technical standards for construction of Electrical Plants and Electric Lines) Regulations, 2022, as amended from time to time. The top two circuits of these multi-circuit towers shall be used for stringing of the transmission line under present scope and the bottom two circuits shall be made available for stringing of any future transmission line of any transmission service providers/ State transmission utilities/Central transmission utilities passing through the same protected area. Further, the configuration and coordinates of such transmission towers shall be submitted to CEA, CTU and BPC by the TSP.

It shall be ensured that Minimum ground clearance is maintained such that statutory Electrical Clearances and Electric Field limit of 10 kV/m at 1 m and 1.8 m from ground level are not violated.

A.20.0 (b) Routing of transmission lines through all Metropolitan areas, Municipal Corporations, Municipalities, Nagar Panchayats, and all Urban Planning areas notified by State Governments and Forest areas notified by the Ministry of Environment, Forest and Climate Change (MoEFCC), shall be avoided to the extent possible. However, if it is not possible to avoid these areas, then, in order to optimize Right of Way (RoW) in all Metropolitan areas, Municipal Corporations, Municipalities, Nagar Panchayats, and all Urban Planning areas notified by State Governments, for up to 400 kV transmission lines, Double Circuit Pole Structures designed with a Reliability Level and Design Span as per CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022 as amended from time to time) (preferably with insulated cross arms) shall be implemented.

It shall also be ensured that Minimum ground clearance is maintained such that statutory Electrical Clearances and Electric Field limit of 10 kV/m at 1 m and 1.8 m from ground level are not violated.

In case of more than TWO parallel Circuits up to 400 kV, the same shall be accommodated using Pole Structures designed for so many Circuits.

A.21.0 The TSP shall abide by the Guidelines of CEA w.r.t. shifting of transmission lines for NHAI projects and other projects.

A.22.0 Safety precautions in regards to gas/oil pipelines in vicinity of Transmission lines shall be taken in coordination with gas/ petroleum authorities.

A.23.0 The stringing of the transmission line in forest area shall be carried out through drones.

A.24.0 The tower shall be designed considering the porcelain Insulators with creepage factor of 31 mm/ kV irrespective of type of insulator used.

A.25.0 RoW width and Span in different terrain shall be as per Schedule VII of CEA (Technical Standards for Construction of Electrical plants and Electric Lines) Regulations 2022, as amended from time to time.

SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION

The proposed Lakadia-II S/s shall be conventional Air Insulated Substation (AIS) type conforming to the requirements of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, as amended from time to time.

Extension of proposed Ahmedabad S/s, Vataman S/s and Halvad S/s shall be conventional AIS type conforming to the requirements of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2022, as amended from time to time.

Other CEA Regulations/guidelines as amended up to date and MoP guidelines, as applicable, shall also be followed.

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	765/400/220 kV Lakadia-II (AIS)		
		765 kV System	400 kV System	220 kV System
1.	System Operating Voltage	765 kV	400 kV	220 kV
2.	Maximum voltage of the system (rms)	800 kV	420 kV	245 kV
3.	Rated Frequency	50 Hz	50 Hz	50 Hz
4.	No. of Phases	3	3	3
5.	Rated Insulation Levels			
i)	Lightning Impulse withstand voltage for (1.2/50 micro sec.) - for Equipment other than Transformer and Reactor - for Insulator String	2100 kVp 2100 kVp	1425 kVp 1550 kVp	1050 kVp 1050 kVp
ii)	Switching Impulse withstand voltage (250/2500 micro sec.) dry and wet	1550 kVp	1050 kVp	--
iii)	One minute power frequency dry withstand voltage (rms)	830 kV	630 kV	--
iv)	One minute power frequency dry and wet withstand voltage (rms)	--	--	460 kV
6.	Corona Extinction Voltage	508 kV	320 kV	--
7.	Max. radio interference	2500	1000	1000

Sl. No.	Description of parameters	765/400/220 kV Lakadia-II (AIS)		
		765 kV System	400 kV System	220 kV System
	voltage for frequency between 0.5 MHz and 2 MHz	micro-volts at 508 kV rms	micro-volts at 266 kV rms	micro-volts at 156 kV rms
8.	Minimum creepage distance for insulator string/ longrod insulators/ outdoor bushings	24800 mm (31mm/kV)	13020 mm (31 mm/kV)	7595 mm (31 mm/kV)
9.	Minimum creepage distance for switchyard equipment	24800 mm (31mm/kV)	13020 mm (31mm/kV)	7595 mm (31mm/kV)
10.	Max. Fault Current	50 kA	63 kA	50 kA
11.	Duration of Fault	1 sec	1 sec	1 sec

Sl. No.	Description of parameters	765 kV Vataman S/s (AIS)	765 kV Ahmedabad S/s (AIS)	765 kV Halvad S/s (AIS)
		765 kV System	765 kV System	765 kV System
1.	System Operating Voltage	765 kV	765 kV	765 kV
2.	Maximum voltage of the system (rms)	800 kV	800 kV	800 kV
3.	Rated Frequency	50 Hz	50 Hz	50 Hz
4.	No. of Phases	3	3	3
5.	Rated Insulation Levels			
i)	Lightning Impulse withstand voltage for (1.2/50 micro sec.) - for Equipment other than Transformer and Reactor - for Insulator String	2100 kVp 2100 kVp	2100 kVp 2100 kVp	2100 kVp 2100 kVp
ii)	Switching Impulse withstand voltage (250/2500 micro sec.) dry and wet	1550 kVp	1550 kVp	1550 kVp
iii)	One minute power frequency dry withstand voltage (rms)	830 kV	830 kV	830 kV
6.	Corona Extinction Voltage	508 kV	508 kV	508 kV
7.	Max. radio interference voltage for frequency between 0.5 MHz and 2	2500 micro-volts at 508 kV rms	2500 micro-volts at 508 kV rms	2500 micro-volts at 508 kV rms

Sl. No.	Description of parameters	765 kV Vataman S/s (AIS)	765 kV Ahmedabad S/s (AIS)	765 kV Halvad S/s (AIS)
		765 kV System	765 kV System	765 kV System
	MHz			
8.	Minimum creepage distance for insulator string/ longrod insulators/ outdoor bushings	24800 mm (31 mm/kV)	24800 mm (31 mm/kV)	24800 mm (31 mm/kV)
9.	Minimum creepage distance for switchyard equipment	24800 mm (31 mm/kV)	20000 mm (25 mm/kV)	24800 mm (31 mm/kV)
10.	Max. Fault Current	50 kA	50 kA	50 kA
11.	Duration of Fault	1 sec	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	765 kV side	400 kV side	220 kV side
765/400/220 kV Lakadia-II (AIS)	One and Half breaker	One and Half breaker	Double Main and Transfer
765 kV Vataman S/s (AIS)	One and Half breaker	------	-----
765 kV Ahmedabad S/s (AIS)	One and Half breaker	------	-----
765 kV Halvad S/s (AIS)	One and Half breaker	------	-----

Notes: -

i) *For one and half breaker switching scheme, any double circuit line consisting of two numbers of feeders and originating from the same transmission or generating switchyard shall not be terminated in one diameter.*

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.*

iii) *A diameter in one and half breaker scheme is a set of 3 circuit breakers with associated isolators, earth switches, current transformers etc. for controlling 2 (two) numbers of feeders.*

iv) *Connection arrangement of Switchable Line reactors shall be such that it can be used as Line reactor as well as Bus reactor with suitable NGR bypass arrangement. Further, Spare 1-phase Shunt Reactor unit shall be placed and connected in such a way that the spare unit can be utilized for all the bus and switchable line reactor banks (including future reactor banks) without its physical*

movement.

v) *Space for 765 kV and 400 kV future line bays shall be kept considering provision of switchable line reactors.*

vi) ***Bus sectionalizer:***

One (1) set of bus sectionalizer for 765 kV shall comprise Two (2) Nos. of bus sectionalizer bays with associated Circuit Breakers, Isolators and Current Transformers for both buses

One (1) set of bus sectionalizer for 400 kV shall comprise Two (2) Nos. of bus sectionalizer bays with associated Circuit Breakers, Isolators and Current Transformers for both buses.

One (1) set of bus sectionalizer for 220 kV shall comprise Two (2) Nos. of bus sectionalizer bays with associated Circuit Breakers, Isolators and Current Transformers for both buses.

vii) *TSP shall plan connectivity of line and transformer feeders to bus bar in such a way that all power can be evacuated successfully without crossing thermal limit at any point of bus-bar.*

viii) *For AIS type substation, TSP shall keep space provisions for future elements such that interconnection arrangement to the corresponding future bays can be done with overhead AIS type connection without any cable/ GIS duct.*

ix) **765/400/220 kV Lakadia-II S/s:**

765 kV Bus Sectionalization shall be with the following feeder distribution:

765 kV Bus Section-1	***765 kV Bus Section-2***
a) 3 Nos. of Present 765/400 kV ICT	a) 3 Nos. of Present 765/400 kV ICT
b) 4 Nos. of Present 765 kV Lines	b) 2 Nos. of Present 765 kV Lines
c) 1 No. of Present 765 kV Bus reactor	c) 1 No. of Present 765 kV Bus reactor
d) 2 Nos. of Future 765 kV Lines	*d) 6 Nos. of Future 765 kV Lines*
e) 1 No. of Future 765 kV Bus reactor	*e) 1 No. of Future 765 kV Bus reactor*

400 kV Bus Sectionalization shall be with the following feeder distribution:

400 kV Bus Section-1	***400 kV Bus Section-2***
a) 3 Nos. of Present 765/400 kV ICT	a) 3 Nos. of Present 765/400 kV ICT
b) 5 Nos. of Present 400/220 kV ICT	b) 5 Nos. of Present 400/220 kV ICT
c) 2 No. of Present 400 kV Line	c) 1 No. of Present 400 kV Line
d) 1 No. of Present 420 kV Bus reactor	*d)* 1 No. of Present 420 kV Bus reactor
e) 1 No. of Present Synchronous Condenser	*e)* 1 No. of Present Synchronous Condenser
f) 3 Nos. of Future 400 kV Lines	*f) 4 Nos. of Future 400 kV Lines*
g) 1 No. of Future 420 kV Bus reactor	

400 kV Bus Section-1	*400 kV Bus Section-2*
h) 1 No. of Future Synchronous Condenser	*g) 1 No. of Future 420 kV Bus reactor* *h) 1 No. of Future Synchronous Condenser*

220 kV Bus Sectionalization shall be with the following feeder distribution.

220 kV Bus Section-1	*220 kV Bus Section-2*
a) 5 Nos. of Present 400/220 kV ICT b) 7 Nos. of Present 220 kV Lines c) 1 No. of Present 220 kV Bus Coupler (BC) d) 1 No. of Present 220 kV Transfer Bus Coupler (TBC) e) *2 No. Future 220 kV Line.*	*a)* 5 No. of Present 400/220 kV ICT *b)* 8 Nos. of Present 220 kV Line c) 1 No. of Present 220 kV Bus Coupler (BC) d) 1 No. of Present 220 kV Transfer Bus Coupler (TBC) *e) 1 Nos. Future 220 kV Line.*

Line bays shall be complete along with line side equipment (such as LA, CVT, Wave Trap), gantry, protection panel etc. for termination of 400 kV and 220 kV lines for interconnection of RE Generation Projects.

x) **765 kV Ahmedabad S/s:** Lakadia-II – Ahmedabad 765 kV D/C line shall be terminated in two (2) numbers of new diameters (725-726-727 and 728-729-730) for which Main and Tie bays shall be constructed under present scope.

xi) **765 kV Vataman S/s:** Lakadia-II – Vataman 765 kV D/C line shall be terminated in two (2) numbers of new diameters (727-728-729 and 730-731-732) for which Main and Tie bays shall be constructed under present scope.

xii) In one and half breaker scheme, both main bay and tie bay shall be completed for controlling a feeder. Further, all associated interconnection work shall also be in the present scope of TSP.

xiii) **765 kV Halvad S/s:** Lakadia-II – Halvad 765 kV D/C line shall be terminated in new diameters for which Main & Tie Bays shall be constructed. Further, all associated interconnection work shall also be in the present scope of TSP.

B.2.0 Substation Equipment and Facilities (Voltage level as applicable):

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	765/400/220 kV Lakadia-II			765 kV Vataman S/s	765 kV Ahmedabad S/s	765 kV Halvad S/s
		765 kV	400 kV	220 kV	765 kV	765 kV	765 kV
1.	Bus Bar	4000 A	4000 A	3000 A	As per existing	As per existing	As per existing
2.	Line bay	3150 A	3150 A	1600 A	3150 A	3150 A	3150 A

3.	ICT bay	3150 A	3150 A	1600 A	N/A	N/A	-
4.	Reactor bay	3150 A	3150 A	N/A	3150 A	3150 A	-
5.	Bus Sectionaliser bay	4000 A	4000 A	3000 A	N/A	N/A	-
6.	Bus Coupler Bay	N/A	N/A	3000 A	N/A	N/A	-
7.	Transfer Bus coupler bay	N/A	N/A	1600 A	N/A	N/A	-
8.	Synchronous condenser Bay	N/A	3150 A	N/A	N/A	N/A	-

B.2.1 (765/√3)/(400/√3)/33 kV, Single Phase Autotransformer

500 MVA, (765/√3)/ (400/√3)/ 33 kV, 1-phase Autotransformer (including arrangement for 3-phase bank formation of 1500 MVA) shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above Voltage Class)" as amended up to date available on CEA's website.

Spare 1-phase Transformer unit shall be placed and connected in such a way that the spare unit can be utilized to replace in case of fault in any unit of any of the transformer banks (including for future transformer banks) without physically moving it.

B.2.2 400/220/33 kV, 3-phase Autotransformer

500 MVA, 400/220/33 kV, 3-phase autotransformer shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above Voltage Class)" as amended up to date available on CEA's website.

B.2.3 (765/√3) kV, Single Phase Shunt Reactor

80 MVAr and 110 MVAr, 765/√3 kV, 1-Phase Reactor (including arrangement for 3-phase bank formation of 240 MVAr and 330 MVAr, respectively) shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above voltage class)" as amended up to date available on CEA's website.

Spare 1-phase Shunt Reactor unit shall be placed and connected in such a way that the spare unit can be utilized for all the bus and switchable line reactor banks (including for future reactor banks) without its physical movement.

Neutral Grounding Reactor and Surge Arrester for 765 kV Switchable Line Reactors (as applicable):

The neutral of the switchable 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 suitable bypass arrangement so that the switchable line reactor can be used as bus reactor as and when required. The neutral of bus reactor shall be solidly grounded.

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 (66 kV and above Voltage Class)", as amended up to date. Technical parameters of NGR shall be as specified in Annexure-A of above-mentioned 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 and physically located between the neutral of shunt reactor (brought out at 145 kV class bushing) and neutral grounding reactor. The surge arresters shall be of Station Medium (SM) class duty 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.

The Ohmic value of NGR for Line Reactors shall be as follows:

Sl. No.	Line Name	Substation Name	NGR value (Ohm)
1.	Lakadia-II - Ahmedabad 765 kV D/C line with 330 MVAr SLR (convertible) at Lakadia-II end.	Lakadia-II	400
2.	Lakadia-II - Vataman 765 kV D/C line with 240 MVAr SLR at both end	Lakadia-II	400
		Vataman	400
3.	765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of Lakadia-II – Halvad 765 kV D/c line	Lakadia-II	400

B.2.4 420 kV, 3- Phase Shunt Reactor

125 MVAr, 420 kV, 3-Phase Reactor shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above voltage class)" as amended up to date available on CEA website.

B.2.5 765 kV, 400 kV and 220 kV AIS Substation equipment

B.2.5.1 Circuit Breakers (AIS)

The circuit breakers and accessories shall conform to IEC: 62271-100, IEC: 62271-1 and shall be of SF_6 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 765 kV and 400 kV circuit breakers and 60 ms for 220 kV circuit breakers. The 765 kV, 400 kV and 220 kV circuit breakers shall be provided with single phase and three phase auto reclosing. Each breaker would have two sets of trip circuits, which would be connected to separate DC supplies for greater reliability. The circuit breakers controlling 765 kV lines shall be provided with either pre-insertion closing resistor of about 450 ohm maximum with 9 ms insertion time or with Controlled Switching Device. The Circuit breakers controlling 400 kV lines shall be provided with either pre insertion closing resistor of about 400 ohm with 8 ms insertion time or with Controlled Switching Device (CSD) for lines longer than 200 km length. The short line fault capacity shall be same as the rated capacity and this is proposed to be achieved without use of opening resistors. The Controlled Switching Device shall be provided in circuit breakers of switchable line reactor bay

and in Main and Tie bay circuit breakers of line with non-switchable line reactors, Bus Reactors and Transformers of 400 kV and above voltage class.

B.2.5.2 Isolators (AIS)

The Isolators shall comply with IEC 62271-102 in general. 765 kV Isolator design shall be double break or vertical break or knee-type. 400 kV and 220 kV Isolators shall be double break type. All Isolators and earth switches shall be motor operated. Earth switches shall be provided at various locations to facilitate maintenance. Isolator rated for 400 kV and 220 kV shall be of extended mechanical endurance class – M2 as per IEC-62271-102. Isolator rated for 220 kV shall be 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. The 765 kV, 400 kV and 220 kV earth switch for line isolator shall be suitable for induced current switching duty as defined for Class-B.

B.2.5.3 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 765 kV and 400 kV shall have six cores (four for protection and two for metering) and 220 kV Current Transformers shall have five cores (four for protection and one for metering). The burden and knee point voltage shall be in accordance with the requirements of the system including possible feeds for telemetry. The accuracy class for the protection core shall be PX and for the metering core it shall be 0.2S. The rated burden of cores shall be closer to the maximum burden requirement of the metering and protection system (not more than 20 VA for metering core) for better sensitivity and accuracy. The instrument security factor shall be less than five (5) for CTs up to 400 kV and less than ten (10) for CTs of 765 kV voltage class.

B.2.5.4 Capacitive 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. The accuracy class for protection cores shall be 3P and for metering core shall be 0.2. The Capacitive Voltage Transformers on lines shall be suitable for Carrier Coupling. The Capacitance of CVT for 400 kV and 220 kV shall be of 4400/8800 pF depending on PLCC requirements whereas the Capacitance of CVT for 765 kV shall be 8800 pF. The rated burden of cores shall be closer to the maximum burden requirement of metering and protection system (not more than 50 VA for metering core) for better sensitivity and accuracy.

B.2.5.5 Surge Arresters (AIS)

624 kV, 336 kV Station High (SH) duty and 216 kV Station Medium (SM) duty gapless type Surge Arresters with thermal energy (W_{th}) of minimum 13 kJ/kV, 12 kJ/kV and 7 kJ/kV conforming to IEC 60099-4 in general shall be provided for 800 kV, 420 kV and 245 kV systems respectively. Other characteristics of Surge Arrester shall be chosen in accordance with system requirements. Surge Arresters shall be provided at line entrances, near transformers and reactors 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.2.6 Protection Relaying and 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 IEC 61850 protocol with RTU/SAS/IEDs of different OEMs. All numerical relays shall have built in disturbance recording feature.

The protection circuits and relays of the 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

765 kV, 400 kV and 220 kV lines shall have Main-I numerical three zone distance protection scheme with carrier aided inter-tripping feature. 765 kV, 400 kV and 220 kV 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 and 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 30 km) having Fiber Optic Communication Link. Differential relay at remote end shall be provided by the TSP. The associated power and control cabling and integration with SAS at remote end shall be provided by respective bay owners.

In case of 220 kV line bays for RE Generators, Line Current differential relay (with back up distance protection feature) as Main-I and Main-II shall be provided. Further, in such cases, the matching line current differential relay for remote end shall be provided by the TSP as loose supply.

In case of loop in loop out of transmission lines, the existing protection scheme shall be studied and suitable up-gradation (if required) shall be carried out.

Further, all 765 kV, 400 kV and 220 kV 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 765 kV, 400 kV and 220 kV lines shall also be provided with two stage over voltage protection. The over voltage protection and distance to fault locator may be provided as in-built feature of Main-I and 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 765 kV, 400 kV and 220 kV 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) Auto Transformer Protection

These shall have the following protections:

i) Numerical Differential Protection

ii) Numerical Restricted Earth Fault Protection

iii) Numerical Back-up Over-Current and Earth Fault Protection on High Voltage (HV) and Intermediate Voltage (IV) side

iv) Numerical Over Fluxing Protection on HV and IV side

v) Numerical Overload Alarm

Further, Numerical Back-up Over-current and earth fault protection on HV and IV side of Autotransformer shall not be combined with other protective functions in the main relays and shall be independent relays. Besides these, power transformers shall also be provided with Buchholz relay, Magnetic Oil Gauge (MOG) with low oil level alarm, protection against high oil and winding temperature and pressure relief device etc.

Suitable monitoring, control (operation of associated circuit breaker and isolator) and protection for LT auxiliary transformer connected to tertiary winding of auto-transformer for the purpose of auxiliary supply shall be provided. The over current and other necessary protection shall be provided for the auxiliary transformer. These protection and control may be provided as built-in feature either in the bay controller to be provided for the auxiliary system or in the control and protection IEDs to be provided for autotransformer.

c) 765 kV and 400 kV 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, Magnetic Oil Gauge (MOG) with low oil level alarm, protection against oil and winding temperatures and pressure relief device, etc.

d) 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 765 kV, 400 kV and 220 kV buses. Duplicated bus bar protection is envisaged for 765 kV and 400 kV 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 envisaged future bays i.e. input / output modules for future bays for the bus section under present scope shall also be provided.

Bus Bar protection system for new substation shall be de-centralized (distributed) type.

In case, the bus section is provided, then each side of bus section shall have separate set of bus bar protection schemes.

Peripheral Units (PUs) shall be provided by the respective bay owners.

For existing substations, the existing bus bar protection shall be augmented as per requirement. Separate set of bus bar protection schemes including necessary modification with respect to feeder distribution shall be provided where new bus sectionaliser is being implemented.

e) Local Breaker Back up Protection

This shall be provided for each 765 kV, 400 kV and 220 kV circuit breakers and will be connected to de-energize the affected stuck breaker from both sides.

Notes:

1. *LBB and 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 and overload protection can be provided as built-in feature of differential relay.*
4. *In 765 kV and 400 kV switchyard, if spare bay of half diameter is identified as future, Tie CB relay panel shall be with Auto-reclosure feature.*

B.2.7 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 220 kV 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 the Substation Automation System.

At the new substations, the Substation Automation System (SAS) shall be suitable for the operation and monitoring of the complete substation including proposed future bays/elements.

In the existing substations with a Substation Automation System (SAS), augmentation

of existing SAS shall be done for bays under the present scope.

In the existing Substations where Substation automation is not provided, control functions shall be done through control panels.

Necessary gateway and modems (as required) shall be provided to send data to RLDC/SLDC as per their requirement and shall be provisioned with 2+2 redundancy i.e. 2 channels for Main Control Centre and 2 channels for Backup Control Centre. In order to meet this requirement, suitable redundancy at port and card level need to be ensured by the TSP to avoid any single point of failure which may lead to interruption in real-time grid operation. Accordingly, all the hardware for communication services of station as stated above shall support dual redundancy for data transmission of station to respective main and backup RLDCs. 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 Synchronization Equipment

Time Synchronization Equipment complete in all respect including antenna, cable and processing equipment required to receive time signal through GPS/NavIC or from National Physical Laboratory (NPL) through INSAT shall be provided at new substations. This equipment shall be used to synchronize SAS and IEDs etc.

B.3.0 Substation Support Facilities

Certain facilities required for the operation and maintenance of substations as described below shall be provided at the new substation. In existing substation, these facilities have already been provided and will be extended/ augmented as per requirement.

B.3.1 AC and DC power supplies

For catering the requirements of three phase and single phase AC supply and DC supply for various substation equipment (for present and future scope), the following arrangement is envisaged:

i) For LT Supply at each new Substation, two (2) Nos. of LT Transformers (minimum 800 kVA for substations with highest voltage rating as 765 kV) shall be provided which shall be fed from two independent sources as per the CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007.

Metering arrangement with Special Energy Meters (SEMs) shall be provided by TSP at 33 kV tertiary of Transformer for drawing auxiliary supply at new substation.Such SEMs shall be provided by CTU at the cost of the TSP. Accounting of such energy drawn by the TSP shall be done by RLDC/RPC as part of Regional Energy Accounting.

Additionally, Active Energy Meters may be provided at the same point in the 33 kV tertiary of Transformer by local SEB/DISCOM for energy accounting.

ii) 2 sets of 220 V battery banks for control and protection and 2 sets of 48 V battery banks for PLCC/ communication equipment shall be provided at each new Substation.

Each battery bank shall have a float-cum-boost charger.

At new substation, sizing of 220 V battery and battery charger shall be done based on the number of bays specified (including future bays) as per CEA Regulations and relevant IS. 2 sets of 48 V battery banks for PLCC and communication equipment for present and future scope shall be provided at each new Substation with at least 10-hour battery backup and extended backup, if required.

iii) Suitable AC and DC distribution boards and associated LT Switchgear shall be provided at new substation.

For new substation, following switch boards shall be considered with duplicate supply with bus coupler/ sectionalizer and duplicate outgoing feeders except for Emergency lighting distribution board which shall have only one incoming feeder:

(a) 415 V Main Switchboard – 1 No.
(b) AC distribution board – 1 No.
(c) Main lighting distribution board – 1 No.
(d) Emergency lighting distribution board – 1 No.
(e) 220 Volt DC distribution board – 2 Nos.
(f) 48 Volt DC distribution board – 2 Nos.

Sizing of LT Switchgear shall be suitable to cater the requirement for all present and future bays. AC and DC distribution boards shall have modules for all the feeders (including future as specified).

iv) At new Substation one No. of DG set (minimum 500 kVA for substations with highest voltage rating as 765 kV) shall be provided for emergency applications.

v) At new substation, sizing of battery and battery chargers shall be done based on the number of bays specified (including future bays).

vi) For substation extensions, existing facilities shall be augmented as required.

B.3.2 Fire Fighting System

Fire-fighting system for substation including Transformer and Reactor shall conform to CEA (Measures Relating to Safety and Electric Supply) Regulations, 2023 as amended from time to time.

Further, adequate water hydrants and portable fire extinguishers shall be provided in the substations. The main header of the 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 and 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.

Online Transformer Oil Drying Out System shall be provided in line with the provisions of Standard Specification and Technical Parameters for Transformers and Reactors (66 kV and above Voltage Class) as amended up to date available on CEA website.

B.3.4 Illumination

Normal and emergency AC and DC illumination shall be provided adequately in the control room and other buildings of the substation. The switchyard shall also be provided with adequate illumination.

The lighting of the entire control room building, fire-fighting pump house, other building (if any) and switchyard shall be done by LED based low power consumption luminaries.

B.3.5 Control Room

For the 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 and DC distribution boards, DC batteries and associated battery chargers, Fire Protection panels, Telecommunication panels and 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 the control room for all the future bays.

At existing substations, the adequacy of size of control room shall be ascertained and the same shall be augmented as per requirement.

B.3.6 Control Concept

All the EHV circuit breakers in substation/switching stations shall be controlled and synchronized from the switchyard control room/remote control center. All the isolators shall have control from remote/local whereas the earth switches shall have local control only.

B.3.7 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), 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. In addition to the gates of the switchyard, the cameras shall also be located around the boundaries at suitable locations. 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. The VMS data should go only to the intended personnel/facility and not to the remote server of the Camera (VMS supplier).

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 and 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.

Advisory on deployment of CCTV issued by Ministry of Electronics and Information Technology (MEITY) shall be followed.

At existing substations, the Visual Monitoring System if available shall be augmented as per existing or better specification as required.

B.4 General Facilities

a) Line Gantry/Towers are envisaged for bays under the present scope only. However, for adjacent future line bay, gantry/tower shall be designed for extension (considering Hexa conductors for 765 kV and Quad conductors for 400 kV 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 requirements/provisions mentioned above. However, interface points shall be considered keeping in view the existing design/arrangement at the substation.

c) The TSP shall design the layout of the new substation in such a manner that no overhead transmission lines passes through the identified future area of switchyard expansion.

d) TSP has to arrange for construction power and water on its own.

e) All outdoor steel structures including anchor/foundation bolts shall be fully galvanized. The weight of the zinc coating shall be at least 610 g/m^2, however, for coastal/creek regions it shall be at least 900 g/m^2. (if applicable)

f) In 765 kV and 400 kV switchyard, if spare bay of half diameter is identified as future, all the equipment for Tie and Future Bay shall be designed considering the current rating of line bay i.e. 3150 A.

g) Boundary wall shall be brick masonry wall with RCC frame or Stone masonry wall or Precast RCC wall under present scope along the property line of complete substation area including future switchyard area to prevent encroachment and unauthorized access. Minimum height of the boundary wall shall be of 1.8 m from Finished Ground Level (FGL).

h) All electrical equipment shall be installed above the Highest Flood Level (HFL) and where such equipment is not possible to be installed above Highest Flood

Level, it shall be ensured that there is no seepage or leakage or logging of water.

i) As per CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2022 and CEA Manual on Transmissions Planning criteria 2023, line approaching substation shall normally be perpendicular to the substation boundary for a stretch of 2-3 km. Accordingly, TSP shall ensure that line terminations at substations are arranged in a manner to avoid hindrance to future line terminations at the substations.

j) TSP shall finalize the substation site/layout such that the corridor for the termination of lines, including future lines at the substation, can be accommodated without any constraints. Accordingly, forests, large water bodies, or hills adjacent to the substation boundary should be avoided.

B.5 EXTENSION OF EXISTING SUBSTATION

The following drawings/details of existing substation are attached with the RfP documents for further engineering by the bidder.

	Title	No./Details	
A.	**765 kV Ahmedabad S/s**		
1.0	Single Line Diagram	SLD/Ahmedabad/00	Rev.0
2.0	General Arrangement	GA/Ahmedabad/00	Rev.0
3.0	Earthmat Layout		
4.0	Visual Monitoring System	Videonetics make software	
5.0	Bus Bar Protection	Make:Siemens, Model:7SS85	
6.0	Substation Automation System (SAS)	Siemens Make	
B.	**765 kV Vataman S/s**		
1.0	Single Line Diagram	C/ENGG/VATAMAN-SS-EXTN4/SLD	0
2.0	General Arrangement	C/ENGG/VATAMAN-SS-EXTN4/GA	0
3.0	Earthmat Layout	TB202318-1002026-SS3500-EMAT-LAYOUT	02
4.0	Visual Monitoring System		
5.0	Bus Bar Protection	Make: SIEMENS Model: 7SS85	
6.0	Substation Automation System (SAS)	Make: SIEMENS	
C.	**765 kV Halvad S/s**		
1.0	Single Line Diagram	5427PW069-HAV765-SYD-GSI-S3010- SL-0001	R1

	Title	No./Details	
2.0	General Arrangement	5427PW069-HAV765-SYD-GSI-S2020- GA-0001	R1
3.0	Earthmat Layout		
4.0	Visual Monitoring System		
5.0	Bus Bar Protection	Make: GE Model: P741, P743 (Decentralized)	
6.0	Substation Automation System (SAS)	Make: GE Model: C264	

B.5.1 The existing drawings provided above and in subsequent amendments to the RfP are as received from the developer of existing substation and provided only for reference. Bidders shall follow the RfP for scope of work. Actual site conditions may be different due to other schemes being executed or subsequent revisions by the developer. Thus, Bidders are advised to visit the substation sites and acquaint themselves for details such as:

i. Actual site conditions, Layout, Topography
ii. Infrastructure such as roads, cable trench, drainage
iii. Space availability in existing control room and LT panel room
iv. Soil Investigation
v. Fire Hydrant Layout
vi. SAS architecture and IO list
vii. Boundary
viii Design philosophy etc.

SPECIFIC TECHNICAL REQUIREMENTS FOR SYNCHRONOUS CONDENSER

1. INTRODUCTION

This technical specification for Synchronous Condenser Stations consists of Synchronous Condenser (SynCon) units alternatively referred to as Synchronous Compensator where a SynCon unit consists of one synchronous condenser along with associated step-up transformer (s), cooling systems, flywheels (if applicable), auxiliary system and all associated switchgears.

Synchronous Condenser shall provide Inertia, Short Circuit support, continuous and dynamic supply of reactive power (capacitive and inductive) support for the regulation and stabilization of the voltage of 400 kV at Point of Common Coupling (PCC) under normal and transient conditions. The station shall operate in the leading and lagging MVAr region, as required to meet the specified inertia, short circuit requirements and reactive power capability curve and dynamic performance criteria.

The SynCon primarily shall be designed for continuous operation under varying grid conditions. The SynCon shall be equipped with a digital AVR (Automatic Voltage Regulator), Under/Over Excitation Limiters (UEL/OEL), V/Hz protection, and high inertia flywheels (if applicable) to enhance transient stability and damping.

The SynCon Station may consist of multiple identical synchronous condenser units, each operating in parallel and connected to the 400 kV HV bus (PCC), as per the design and space available. The minimum size of a syncon unit shall be 100 MVAr. The design shall ensure compliance with grid code requirements, and the provision of inertia and fault current to support reliable and stable system operation.

1.1 Definitions

For the purpose of this specification, the following definitions / abbreviations are used:

PCC (Point of Common Coupling): Point of Common Coupling (herein also called as Point of Interconnection (POI) is the connection point between the Synchronous Condenser (SynCon) Station/plant (HV Side of step-up transformer) and ISTS at which performance requirements are defined.

Reference Voltage (Vref): The voltage set-point at the PCC where SynCon is expected to regulate voltage by injecting or absorbing reactive power while maintaining system stability.

MV (Medium Voltage): The voltage level at the low-voltage side of the step-up transformer, where SynCon and associated equipment are connected.

SynCon (Synchronous Condenser): SynCon is a DC-excited Synchronous machine that runs at no load and is used to control reactive power, which improves voltage stability and power factor in electrical grids

In the entire document the notion synchronous condenser refers to the synchronous machine installed in the **Synchronous Condenser unit**. The synchronous condenser shall be connected to the step-up transformer via the generator circuit breaker by an Isolated Phase Bus duct.

Following convention is used in this specification to define the reactive power output of the *Synchronous condenser unit*:

a) The notion **capacitive reactive power** (indicated as "+ MVAr") is used when the Synchronous condenser unit is injecting reactive power to the grid, i.e. when the synchronous condenser is operating in the overexcited capability range.
b) The notion **inductive reactive power** (indicated as "- MVAr") is used when the Synchronous condenser unit is absorbing reactive power from the grid, i.e. when the synchronous condenser is operating in the under excited capability range.

SynCon Unit (Synchronous Condenser Unit): In the entire document *Synchronous condenser unit* refers to the full scope of equipment working as one system at PCC. It includes but is not limited to:

(i) Synchronous Condenser and its auxiliaries.
(ii) Excitation System (Static/Brushless)
(iii) Flywheel and its auxiliaries, if option chosen
(iv) Step-up Transformers
(v) Generator Circuit Breaker (GCB)
(vi) Unit Transformer (Auxiliary Transformers)
(vii) Isolated Phase Bus Duct (IPBD) connecting Generator and Step-up Transformer
(viii) Lube Oil System
(ix) Auxiliary Power Supply (medium voltage/ low voltage)
(x) Equipment for control and protection of the equipment supplied under the specifications.
(xi) Reactive Power Oscillation Damper (RPOD)
(xii) Cooling System
(xiii) Other auxiliary systems required for power operation of the Synchronous Condenser.
(xiv) SynCon starting system (SFC/Pony motor)

AVR (Automatic Voltage Regulator): A digital control system associated with each SynCon Unit responsible for regulating the field excitation to maintain the terminal voltage or reactive power output, always fully redundant, this is channel A and B in terms of control and power circuits, with hot standby and automatic switch functionalities. AVR shall include functionalities like:

(a) UEL (Under Excitation Limiter): A protective function or control logic that prevents the SynCon from operating in unstable or under-excited regions of the capability curve, avoiding excessive reactive power absorption.
(b) OEL / OVEL (Over Excitation Limiter): A protection system that limits the field current to prevent thermal damage to the field winding during overexcited operation (i.e., high reactive power generation).

Flywheel: A rotating mechanical mass connected to the SynCon shaft to increase its inertia and provide additional damping and system strength benefits.

Step-up Transformer: A Transformer connecting the SynCon (MV side) to the ISTS (400 kV side i.e. PCC), designed to match voltage levels and system impedance

characteristics.

Capability Curve: The operational envelope of the SynCon showing the permissible limits of reactive power generation or absorption with respect to voltage at PCC and stator current.

Lagging Operation: Operation in which the SynCon absorbs capacitive reactive power (under-excited operation).

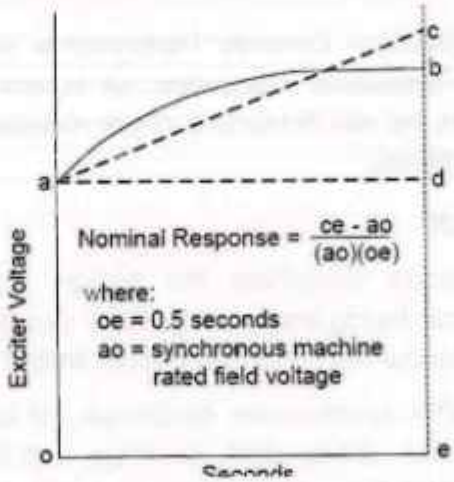
Leading Operation: Operation in which the SynCon generates capacitive reactive power (over-excited operation).

Response Time: The duration from a step change in control signal until the voltage changes by 90% of its final change, before any overshoot.

Settling Time: The duration from a step change in control signal input until the SynCon output settles to within ±5% of required control output.

Overshoot: The maximum system output minus the final settled value, divided by the actual change in system output (i.e., from its initial value to the final settled value), when the final settled value is within the defined settling band, expressed as a percentage.

Excitation response ratio: It is called the excitation system nominal response and defined as the rate of increase of the excitation system output voltage determined from the excitation system voltage response curve, divided by the rated field voltage. This rate, if maintained constant (curve ac), would develop the same voltage-time area as obtained from the response (curve ab) over the first half-second interval (unless a different time interval is specified). The RR is a measure of the speed of response for the excitation system, the higher the RR, the faster the response.



Response ratio

Reactive power oscillation damper (RPOD): A reactive power oscillation damper (RPOD) implemented through control strategy designed to damp low-frequency electromechanical oscillations (typically 0.2–2 Hz) in power systems by modulating the SynCon reactive power output (Q) in response to system oscillations. When equipped with an excitation control system and a power oscillation damping (POD) controller, it can also actively damp oscillations in the grid by modulating its reactive power.

1.2 APPLICABLE STANDARDS

Unless otherwise specified herein, the plant shall be in accordance with the latest edition and amendments of Indian Electricity Grid Code (IEGC), CEA Technical Standards, appropriate Indian Standard (IS), International Electrotechnical Commission (IEC) and Institute of Electrical and Electronics Engineers (IEEE) standards and their amendment thereof. In particular, the plant shall comply with the following Standards (as applicable):

CEA (Technical Standards for Connectivity to the Grid) and as amended time to time

IEC 60034 - Rotating Electrical Machines

IEC 60255-27 - Measuring relays and protection equipment (Product safety requirements)

IEEE C50.13 - Cylindrical-rotor 50 Hz and 60 Hz Synchronous Generators 10 MVA and Above

IEEE 115-Guides for Test Procedures for Synchronous Machines

IEEE 43 - Recommended Practice for Testing Insulation Resistance of Electrical Machinery

IEEE C37.013 - IEEE Standard for AC High-Voltage Generator Circuit Breakers Rated on a Symmetrical Current Basis

IEEE 421.5-2016 (IEEE Recommended Practice for Excitation System Models for Power System Stability Studies)

IEEE Std 1110-2019 - IEEE Guide for Synchronous Generator Modeling Practices and Parameter Verification

IEEE PES TR (2020) - Dynamic Performance and Application of Synchronous Condensers for Renewable Integration. (A technical report (not standard), but it explicitly describes the use of reactive power modulation for oscillation damping, with control block examples).

2. SCOPE OF WORK

The scope of works comprises the design, supply, factory testing, delivery, installation, commissioning and testing of the synchronous condenser unit (s), each of which comprises the key elements, but not limited to, the following:

(a) One XX MVA synchronous condenser (or as close as possible to this size) including rotor, stator, shaft, bearings, and base frame in case of cylindrical rotor or stator frame sole plates in case of salient pole solution, Excitation System & Voltage Regulating Equipment including Automatic Voltage Regulator (AVR), Power System Stabilizer (QSS) and Field Circuit Breakers for steady-state and dynamic voltage support

(b) Instrumentation, Monitoring and Control Systems including local and remote monitoring, diagnostic tools, and condition monitoring systems

(c) Slip Rings and Carbon Dust Extraction System (if static excitation system)

(d) One bank of three single phase transformer or three phase transformer XX MVA, xx / 400 kV step up transformer (size and secondary voltage to be

finalised by the supplier, in accordance with the size of the offered synchronous condenser units) along with one spare (spare can be common for all the SynCon units), with secondary winding(s), complete with bushing CTs. Spare shall be of same rating as that of the main 1-ph or 3-ph transformer.

The synchronous condensers step-up transformers are to have continuous ratings that support sustained operation at all operating points on the reactive power capability curve

(e) 400 kV side bay equipment
(f) Bus duct (isolated) between the power transformer and the synchronous condenser
(g) Medium voltage generator circuit breaker complete with disconnectors, surge arresters, earth switches and instrument transformers (voltage to be confirmed by the supplier, in accordance with the size of the synchronous condenser units)
(h) Protection Systems including differential, overcurrent, under/overvoltage, out-of-step, loss-of-excitation, and backup protections.
(i) Static frequency converter (SFC) as per requirement
(j) Pony motor (s) for start–up (if required) and associated variable frequency drives
(k) Fly wheel (s) for increased inertia (as per requirement)
(l) One station transformer for auxiliary supplies in case one independent source of Auxiliary Power is a Station Transformer (this will be in common to all SynCon units)
(m) Unit Transformer (Auxiliary Transformers)
(n) LV auxiliary supply complete with back up supply
(o) LV surge arresters
(p) Control, SCADA and protection systems housed in a dedicated room inside the synchronous condenser building
(q) Fire walls and enclosures – as required by the fire and oil/water containment, or noise mitigations
(r) Any other equipment for completion of the complete installation of the synchronous condenser
(s) SynCon Building (PEB - Pre-Engineered Building) – (Common machine hall for SynCons of all the SynCon Station is acceptable to reduce the requirement of the number of EOT Crane.)

Each equipment shall be type tested. Further, in respect of type test, CEA's 'Guidelines for the Type Tests for Major Equipment of Power Sector' shall be followed.

2.1 System Studies and Compliance

The TSP shall be responsible for conducting system studies including steady-state, transient stability, dynamic simulations, and electromagnetic transient studies to evaluate the impact of Synchronous Condenser operation on the grid.

The Grid data required for the studies shall be provided by CTU.

All study files and reports shall be documented and submitted to **CEA/CTU/GRID-INDIA** as per regulatory requirements.

SynCon unit shall be designed to operate at rated MVAr capacity upto an ambient temperature of 40° C. Beyond ambient temperature of 40° C, TSP shall provide the derating curve, however, derating rate shall not be more than 1% of rated MVAr per degree Centigrade. There shall not be any impact on rated Short circuit current and Inertia due to increase in ambient temperature beyond 40° C. OEM/TSP shall submit temperature to MVAr derating curves (continuous & time limited). The SynCon shall be designed to support grid operation within a voltage range of ±10% and a frequency range of **47.5 Hz to 52.5 Hz at the PCC**.

2.1.1 System Studies

The TSP/supplier of Synchronous Condensers unit shall carry-out system studies in order to verify and demonstrate that the synchronous condensers units shall meet the specified performance requirements.

Load flow studies shall be performed in the initial stage to determine the optimal synchronous condensers units operating point for different system conditions.

The TSP/supplier of Synchronous Condensers unit shall perform studies to determine and confirm the design ratings and requirements of all plant and material to be supplied under this RfP.

The TSP/Supplier Synchronous Condensers may also refer IEEE Std 1110-2019 - IEEE Guide for Synchronous Generator Modelling Practices and Parameter Verification

System studies shall be performed as per the requirement. Studies are required to demonstrate that the synchronous condensers units shall meet all specified performance criteria.

When performing the designs, the following shall be considered:

1. All modes of operation specified in these specifications; and
2. The worst-case system conditions up to and including first contingency outage in the network.

The load flow and dynamic file shall be provided to the TSP in PSS/E 36 or newer version format.

PSS/E files are provided based on the data available at the time of issuance of RfP. TSP is required to validate the data before carrying out simulation. However, clarification, if any, may be sought before the bid submission. CEA/CTU shall endeavour to give clarification to the extent possible. In case of any discrepancy observed/non-availability of data for any of the machines and other control devices, typical values may be used in the studies with the intimation to CEA/CTU. The final tuning of generic parameters for various applicable scenarios shall be under the scope of TSP of the subject cited project. TSP after SPV transfer shall do the final tuning in consultation with CEA, CTU and Grid-India and share the converged dynamic files with CEA, CTUIL & Grid-India.

RMS & EMT Models shall be submitted in the format stipulated by CTUIL/ Grid-India.

2.1.2 Steady state operation study

The TSP/Supplier of Synchronous Condensers unit shall carry out such electrical studies and basic design studies as are required to design the synchronous condensers units. They shall perform design and verification studies to ensure adequate design and operation of the system.

This study comprises the verification of the design of the synchronous condenser units with respect to the steady-state performance. The steady-state operating points of the synchronous condenser units shall be simulated at the specified voltage range.

The main purpose of the steady state studies shall be:

1) Confirm short circuit capability including transformer
2) Confirm design of transformer OLTC and control settings
3) Demonstrate reactive capability including transformer under range of operating conditions

The operating points shall be represented as voltage/MVAR diagram. The load flow study points shall be also graphically included to determine the reactive power capability chart for the synchronous condenser units as built at the high voltage side of the step-up transformers. Additionally, steady-state voltages, currents and power through main components shall be demonstrated. The worst-case stresses of the individual components which occur on the operating points are input parameters for the component specification.

In addition to above, following test as International Standard shall also be carried out.

(a) No-Load Saturation Curve (Open-Circuit Characteristic, OCC)-Plot generated voltage vs. field current at rated speed - defines excitation requirements and saturation.

(b) Short-Circuit Characteristic (SCC)- Plot armature current vs. field current at rated speed with terminals shorted - used with OCC to compute synchronous reactance.

(c) Excitation System Performance Test (Steady-State)- Measure field current, voltage, and reactive power under rated voltage conditions.

(d) V-Curve (for Synchronous Condenser)-Plot stator current vs. field current at constant terminal voltage; determines stability margin and reactive power range.

(e) Reactive Capability Curve Test (for Condenser)- Determine leading and lagging VAR capability vs. field current and stator current limits.

TSP shall also submit Negative sequence impedance value

2.1.3 Transient and stability study

Transient and stability studies shall be used to demonstrate the synchronous condenser unit control system performance, and, if applicable, to optimize the controller parameters of synchronous condenser unit during system disturbances, such as major faults or voltage changes at the PCC. Such studies shall be performed

using the PSS/E and PSCAD software applying dynamic simulations, using a full PSS/E and PSCAD case. List of contingencies performed is attached in **Appendix-A**, provided separately.

The transient and stability studies shall be analysed in the following cases. These studies should demonstrate compliance with the relevant Performance requirements as per network configuration:

1. Analysis of the synchronous condensers unit's system response to step changes in the point of common coupling voltage or in the reference voltage, which can be performed in a single machine infinite bus case as relevant for the scenario.
2. Analysis of the synchronous condenser unit system response for faults for a range of system short-circuit power levels, to demonstrate compliance.
3. The following fault scenarios shall be analysed:
   a) A range of three-phase faults as specified (e.g. different duration, fault locations, retained voltage, network configuration).
   b) A range of unbalanced faults as specified (e.g. different duration, fault locations, retained voltage, network configuration).
   c) Control for the synchronous condenser units according to the requirement, i.e. Q-Control or U-Control
4. Analysis of the synchronous condenser unit system response for frequency disturbances.
5. V/Hz study and demonstration of stable operation of the V/Hz limiter

   The design shall ensure the adequacy of the synchronous condensers units in order to ensure stability during system transient, dynamic and fault conditions. This is inclusive of synchronous condenser units' response time (rise time and settling time) and of the synchronous condensers units' behaviour and contribution to the system's recovery from faults and network disturbances.

2.1.4 Small signal stability studies

1. **Voltage Step/impulse response—**

   +/- 5% step tests for Voltage control set points and then quantify rise time, overshoot, settling time for relevant control loops, and obtain frequency response (gain/phase margins) for critical control loops.

2. **Off-line frequency sweep (transfer function) tests for AVR and PSS:**

   Frequency response of the excitation system to be assessed over a frequency bandwidth of at least **0.01 – 10.0 Hz** by injecting sinusoidal signals with the specific bandwidth into the control blocks. The gain and phase variations with frequency of each measured transfer function are then compared with those obtained from the model

3. **Controller interaction studies** — evaluate interaction between synchronous condenser control loops (AVR, PSS/filter, reactive control, power/frequency control)

and other nearby plant controllers (conventional generators, HVDC/FACTS, large converter plants). Include frequency-domain (Bode/Nyquist) and time-domain cross-validated tests as required.

4. **Oscillation Rejection Test:** This is a control and response sensitivity test. It is expected that SynCon model maintains a stable operation for all voltage modulated frequencies and for measured responses to be consistent with the changes.

   Grid voltage shall be modulated at following modulation frequencies through model playback or similar feature in SMIB model:

   (a) 0.1 Hz
   (b) 0.3 Hz
   (c) 0.6 Hz
   (d) 0.9 Hz
   (e) 1 Hz
   (f) 2 Hz
   (g) 3 Hz
   (h) 4 Hz
   (i) 8 Hz
   (j) 10 Hz
   (k) Or any other frequency based on requirement

2.1.5 Software simulation models

The TSP shall provide the latest PSCAD (V 5.0 or above) and PSSE simulation model(s) (V36.0 or above) and parameters to CEA/CTU/GRID-INDIA along with detailed documentation for the purpose of future simulation to adequately represent and model the proposed SynCon system in the respective software:
For the simulation of SynCon unit in the PSS/E file (load flow and dynamic) and PSCAD (Transient), a model for SynCon unit is required for the study. TSP will share SynCon unit models with CEA, CTU and Grid-India along with detailed documentation for the above study purposes and simulations.

For PSS/E, both Generic and User-defined models shall be shared by the TSP with the CEA, CTU and Grid-India. Generic model (PSS/E) response shall be benchmarked with user-defined model (PSS/E and PSCAD) to the extent possible by the TSP. Generic models can be shared by the CEA, CTU and Grid-India with the concerned stakeholders/external party(ies) e. g. STUs etc. on need basis. For User Defined model (UDM), confidentiality shall be maintained by the CEA, CTU and Grid-India.
Both UDM (PSCAD and PSS/E) and Generic model (PSCAD and PSS/E) shall be provided by OEMs to CEA/CTU/GRID-INDIA without any NDA (Non-Disclosure Agreement). RMS & EMT Models shall be submitted in the format stipulated by CTUIL/GRID-INDIA.

Model documentation shall include the following details of the model:

a) The transfer function block diagram must include all functional controllers and physical plant that materially affect the performance of the model.
b) Instructions on how the model should be set up and used.
c) The models of the controllers and items of SynCon unit must be easily identifiable.
d) Dynamic data must be provided as 'per unit' quantities on the machine megavolt amperes (MVA) base.
e) Shortest time constant (name, use and identifiable in the control block diagram) confirmed for both PSS/E models and also PSCAD models.

Model quality test of EMT & PDT model:

f) The submitted EMT & RMS (UDM) model shall be the representative of SynCon unit I with actual controls.
g) The EMT & RMS model should work appropriately within the PCC SCR range of 3 to 10 and X/R range of 3 to 14.
h) The applicable protections shall be appropriately modelled in the UDM Models.
i) EMT model should work appropriately on a range of simulation time step within 10-20us.
j) PDT (RMS) model work appropriately with a simulation time step of 1ms to 10 ms.
k) Submitted EMT model should have pre-compiled libraries and there should not be any need for loading dependent library/other files.
l) EMT model should initialize and complete the flat run in 5 sec. PSCAD & PSS/E models must allow stable initialisation and steady state run up to 5 minute.
m) Models must be initialised successfully for the entire intended plant operating range i.e reactive power set point from minimum to rated.
n) PSCAD models must have snapshot capability.
o) For User Define Model (UDM) EMT of SynCon unit, the complete model shall not be black-boxed and there shall be a full visibility/accessibility of passive components. TSP may black box the control/other parts wherein their Intellectual Property (IP) rights are involved.
p) For UDM models, TSP shall submit the schematics/block diagrams and its descriptions.
q) The RMS & EMT model used guide should contain the description of each parameter.
r) The range of parameters shall be mentioned in the PSS/E and PSCAD model user guide.
s) TSP shall specify the configurable and non-configurable parameters in the model user guide (PSS/E and PSCAD) for both Generic as well as UDM.
t) Model structure to be contained within its own module block including its plots.
u) PSCAD transformer model should include transformer specific saturation data where available (and not default model library provided settings)
v) EMT Models shall be compatible with

- Intel 15 Update 5 and newer (64-bit) and Visual Studio 2015 and newer
- Model should works across a range of time steps and does not require a specific time step

- These models must not be dependent on a specific Intel Visual FORTRAN version and should not have dependencies on additional external commercial software.

TSP shall fulfil and submit the technical connection data including models/data sheets etc. as per Grid India First Time Energization process & CTUIL Connection details process.

2.2 Functional Requirements

The Synchronous Condenser unit shall:

- Provide dynamic and steady-state reactive power support (both capacitive and inductive).
- Contribute to voltage stability, grid inertia, and short-circuit strength.
- Assist in damping of power oscillations and mitigation of sub-synchronous oscillations, if any.
- Assist in damping of reactive power oscillations and mitigation of oscillations, if any.
- Be capable of continuous operation during worst-case voltage and frequency conditions.

2.2.1 Design Considerations

- The Synchronous Condenser shall be designed with inertia specified to enhance system strength and frequency stability.
- Dedicated & coordinated control systems shall be provided in case of multiple SynCon units to ensure selective operation and avoid simultaneous tripping under common disturbances.

3. REQUIREMENT, RATINGS AND DESIGN INFORMATION

3.1 SynCon building

The SynCon station shall have independent building (PEB type) including a separate control room different from the main control room building of the main Substation. The building shall comprise of SynCons unit(s), EoT crane, control room, LT Switchgear room, Battery room, workshop space, Document/Library and general facilities etc. Adequate space shall be provided for smooth unloading and maintenance purposes of all the equipment in the SynCon building.

The SynCon Building shall comprise of following facilities:

1. Control & Relay Panel room
2. Excitation Room
3. ACDB & DCDB room
4. Battery room
5. Service Room cum workshop space

6. Conference room
7. SynCon unit(s)
8. Lobby
9. Corridor with minimum width of 1600 mm
10. Portico
11. Toilet facilities
12. Provision of shaft for electrical, sanitary, water supply facilities
13. Other facilities as per functional requirement of building
14. AHU Room

4. Ambient Condition

The following environmental data shall be considered (Table-1):

Table 1

Sr. No.	System Parameters	Values
1	Max/min Ambient temperature (dry bulb one-hour average) Max dry bulb 24 hr. average	50 deg C max 0 (Zero) deg C min 40 deg C
2	Relative Humidity (%, max)	100
3	Average annual rainfall	As per rainfall map of IMD
4	Iso-keraunic level	As applicable
5	Wind Zone	As per National Building Code 2016
6	Seismic Level	As per Seismic zone of the site
7	Altitude above sea level	<1000 m
8	Pollution level (IEC 60815)	Heavy

5. POWER SYSTEM REQUIREMENTS

The following AC Power System characteristics apply at the point of connection i.e. point of common coupling in this case (PCC). SynCon Station operation is required within the parameter value and duration given in following table:

Table 2

Sl. No	Power System Characteristic	Value	unit
1.	Nominal ac system voltage, line-to-line	400	kV
2.	Maximum continuous ac system voltage, line-to-line	440	kV
3.	Minimum continuous ac system voltage, line-to-line	360	kV

Sl. No	Power System Characteristic	Value	unit
4.	Maximum short-term ac system voltage, line-to-line	As per HVRT Table	
5.	Maximum duration of item 4		
6.	Minimum short-term ac system voltage, line-to-line	As per LVRT Curve	
7.	Maximum duration of item 6		
8.	Nominal ac system frequency	50	Hz
9.	Maximum continuous ac system frequency	52.5	Hz
10.	Minimum continuous ac system frequency	47.5	Hz
11.	Lightning Impulse Withstand Voltage (LIWV)	1550	kV peak
12.	Switching Impulse Withstand Voltage (SIWV)	1175	kV peak
13.	Power Frequency Withstand Voltage	630	kV
14.	1) Maximum three-phase fault current a) for performance requirements b) for rating of SynCon 2) X/R (Positive/Negative Seq) 3) X/R (Zero Seq) 4) Clearing time - normal 5) Clearing time – backup	 1 a) 63 1 b) 63 2) 31 3) 12 4) 0.10 5) 0.75	 kA kA for 1s s s
15.	1) Maximum three-phase fault current (with IBR contribution)* 2) Maximum three-phase fault current (without IBR contribution)*	51.1 42.7	kA kA
16.	Minimum three-phase fault current (without IBR contribution)* -for performance requirements -for safe operation	 38.7 38.7	 kA kA
17.	1) Maximum single-phase fault current (with IBR contribution) * 2) Maximum single-phase fault current (without IBR contribution) *	43.6 35.6	kA kA
18.	Minimum single-phase fault current(without IBR contribution)*	32.8	kA
19.	Power System Phase Rotation	CCW	
20.	Rated voltage at SynCon terminals (to be selected by the Contractor)	xx	kV
21.	Capacitive capability on PCC at 1.0 p.u.	+300	MVAr

Sl. No	Power System Characteristic	Value	unit
	voltage		
22.	Inductive capability on PCC at 1.0 p.u. voltage	-200	MVAr
23.	Capacitive & Inductive capability on PCC at different Voltages (p.u.)	See below capability diagram	
24.	HV Side rated Voltage (at PCC)	400	kV
25.	Voltage variation at unit step-up transformer high-voltage side (for normal operation)	±10	%
26.	Stored Energy - Inertia at Machine Terminal	>3000	MWs
27.	Short Circuit Contribution (SCC) on PCC at 1.0 p.u. voltage (calculation of SCC as per section 6)	>1200	MVA
28.	SynCon rated power factor	Zero	
29.	Rated frequency	50	Hz
30.	Maximum Overspeed shall not be more than % (of rated speed)	20	%
31.	Sub transient ratio xq''/xd''	< 1.1	
32.	Start-up and synchronization time (Contractor may offer lower times based on the SFC rating selected and overall Inertia of the SynCon & Flywheel)	30	Minutes
33.	Shut-down time to complete standstill	45	Minutes
34.	Stator winding connection	Wye	
35.	Neutral Grounding	High resistance grounding through Neutral Grounding Transformer with secondary loading Resistor	
36.	Sound pressure level (SPL) when measured at approximately 1 m distance from the Synchronous condenser surface during normal operation at rated ratings & ambient conditions.	≤90	dB (A)
37.	THD of L-L voltages	≤ 3%	
38.	**Temperature rise over 40°C cold air** Stator winding (installed RTDs)	85	K

Sl. No	Power System Characteristic	Value	unit
	Rotor winding (resistance method)	90	K
39.	**Unbalanced load**		
	Maximum value for continuous operation (I_2/I_n)	10	%
	Maximum short term unbalanced load $(I_2/I_n)^2.t$	20	s

*values calculated as per studies

6. Technical Requirements

6.1 General Requirements

(a) Under design maximum ambient temperature conditions, all the SynCon units in a SynCon Station, combinedly, shall have a nominal reactive power capability of not less than +300 MVAr at 0.9 p.u. voltage and -200 MVAr at 1.1 p.u. voltage, as measured at PCC, including all tolerances for components for the equipment installed inside the building such as the synchronous condensers, the pony motor, the fly wheel and the generator circuit breaker and for the equipment installed outdoor such as the step-up power transformers, the TEWAC cooling system, the station transformers, the isolated phase bus duct etc. The expected availability of the synchronous condenser unit shall be not less than 97%.

(b) Indicative schematic diagram of a SynCon unit and typical capability curve of a SynCon Station (+300 MVAr/ - 200 MVAr) are given below

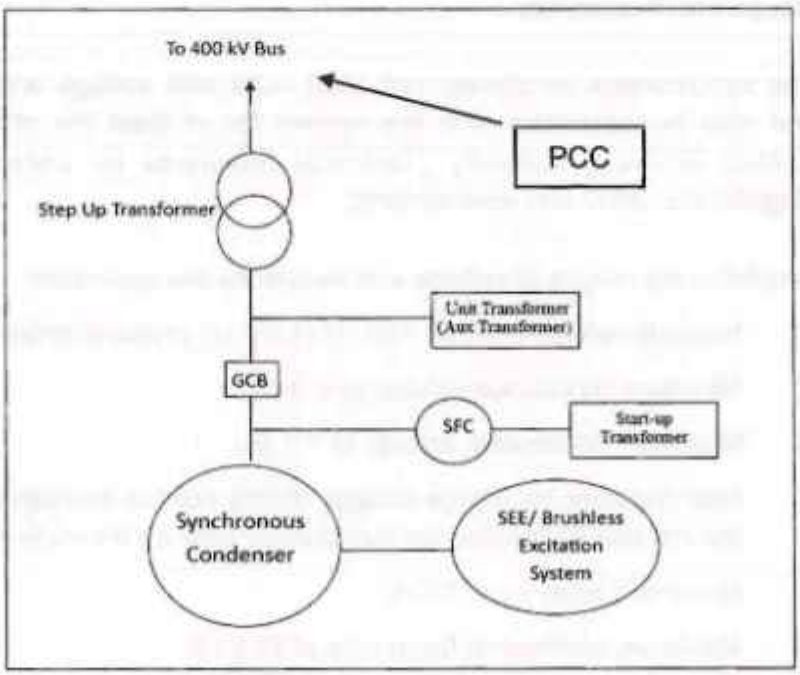
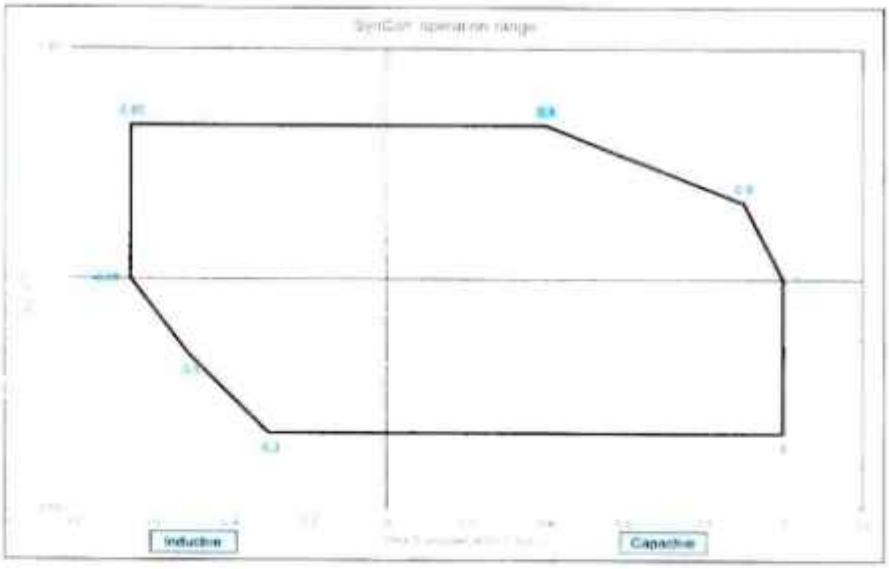


Figure-1: Conceptual Indicative Schematic diagram of SynCon Unit



Note: On x-axis, the base rating is taken as 300 MVAr

Figure-2: Capability Curve of SynCon Station

(c) The Terminal Voltage of SynCon shall be in the range of 10 kV to 28 kV.
(d) Insulation of SynCon shall be thermal class F for Stator and Rotor Winding as per relevant International Electrotechnical Commission with temperature rise limited corresponding to thermal class B insulation.
(e) The construction of the generator shall be such that the rotor poles and stator coils can be handled out or in without removal of the rotor and without disturbing the upper bearing bracket in case of vertically installed SynCon.

6.2 Voltage and Frequency

The synchronous condenser unit shall cope with voltage and frequency variation and stay in connection with the system for at least the minimum times as per Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 and amendments.

The following ranges of voltage and frequency are applicable:

1) Nominal voltage shall be 400 kV (1.0 p.u.) phase to phase
2) Minimum continuous voltage of 0.9 p.u.
3) Maximum continuous voltage of 1.1 p.u.
4) Max negative sequence voltage during normal operation of 1% measured at the HV side of the step-up transformer over a 10-minute averaging period
5) Nominal frequency of 50 Hz
6) Maximum continuous frequency of 52.5 Hz
7) Minimum continuous frequency of 47.5 Hz.

The synchronous condenser unit shall be capable of withstanding frequency variation

and maintain continuous uninterrupted operation for frequency ranges of 47.5 Hz to 52.5 Hz within a voltage range of ±10%. Further, the Synchronous Condensers Unit shall be capable of **unrestricted** and uninterrupted continuous operation for the following frequency ranges.

Table: Frequency Variations Withstand Requirements for Unrestricted Operation

Sl. No.	Frequency Range (Hz)	Duration
1.	49.5 to 50.5	Continuous
2.	49.0 to 49.5	10 Minutes
3.	50.5 to 51	10 Minutes
4.	47.5 to 49	5 Minutes
5.	51 to 52.5	5 Minutes

The Synchronous Condenser Units shall be capable of continuous uninterrupted operation for Rate of Change of Frequency (ROCOF) up to 4Hz/second for 0.25 seconds and 3Hz/second for 1 second. Rate of change of frequency (ROCOF) is calculated as the average rate of change for multiple calculated system frequencies for a time period of greater than or equal to 0.1 second The measurement of the rate of change of frequency shall not react to the sudden changes in the waveform of voltage caused by disturbance in the system i.e. during fault occurrence or clearance.

Provided that Frequency should be calculated over a window of time. Instantaneous calculated frequency should not be used for protection; this calculation should occur over a time window. Typical window/filtering lengths are three to five cycles (60–100 ms).

The SynCon Station shall continue to absorb reactive power (rated reactive power up to 1.1 p.u., and inherent reactive power beyond 1.1 p.u.) during HVRT Conditions as per the following Table-3.

Table-3

Nominal Voltage (pu)	Minimum time for remaining connected to the Grid and providing reactive power support (absorption)
V > 1.50	Instantaneous trip
1.50 ≥ V > 1.30	100 milli seconds
1.30 ≥ V > 1.10	10 seconds
V ≤ 1.10	Continuous

1 pu = 400 kV (3 phase RMS voltage at POI)

SynCon Station may be tripped if the respective temporary over voltages as

mentioned above persist for more than its respective mentioned duration.

The SynCon Station shall continue to inject reactive power (rated reactive power down up to 0.9 p.u., and inherent reactive power below 0.9 p.u.) during LVRT Conditions as per the following Curve (Figure-3) for the specified time:

V_T : Actual Voltage; V_n: Nominal Voltage

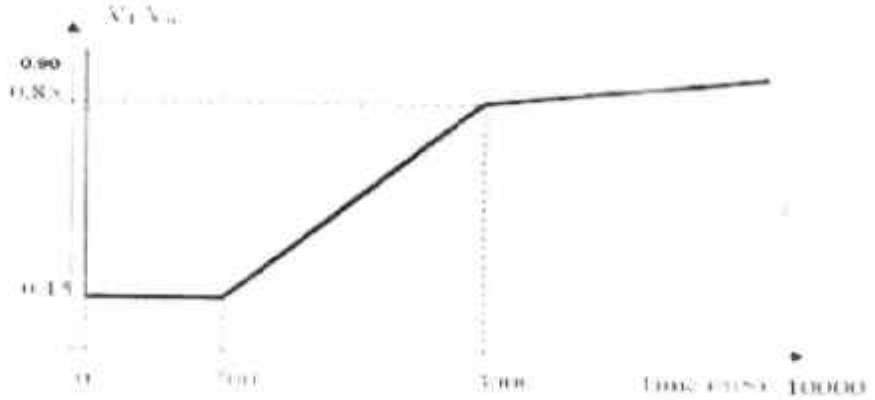


Figure-3: LVRT Curve

The synchronous condenser Station shall remain connected to the grid for a series of up to 10 voltage disturbance below 0.9 p.u within any 5-minute period as per the LVRT capability.

Provided that during such period synchronous condenser Station shall remain connected for at least 06 voltage disturbance below 0.5 p.u

Provided further that during the multiple LVRT conditions, the SynCon Station shall meet the performance requirements specified in LVRT conditions.

TSP shall include the simulation tests to demonstrate the LVRT & HVRT compliance of SynCon and shall include the following simulations tests in the study reports on both Generic and UDM of PDT (RMS) and EMT models as per **Appendix-A:**

Validation of AVR & PSS response:

In order to validate the AVR and PSS response, TSP shall carry out the testing of such controller(s) either through Hardware In Loop (HIL) test or in a laboratory as applicable. Based on the AVR controller response (open loop and closed loop) and PSS response received from HIL, the TSP shall benchmark such results with simulation-based results.

6.3 Continuous Ratings

1) The Synchronous Condensers Units shall be capable of operating continuously without tripping at the Voltage level from 0.9 p.u. to 1.1 p.u. at PCC in the specified ambient conditions.

There are additional requirements for operation for periods of time beyond the 0.9 and 1.1 p.u. Voltage as described in Table 3. The Synchronous Condenser Units shall confirm that they are capable of operating in accordance with these requirements.

For the Voltage under 0.9 p.u. SynCon Units shall be capable to operate as per Figure-3.

2) The supplier of Synchronous Condensers shall select the nominal operating voltage for the low voltage side of the step-down transformers, to optimize the design of the Synchronous Condensers Unit(s)

3) The nominal continuous operating capability of SynCon Station shall be no less than 300 MVAr capacitive at 0.9 p.u. to no less than 200 MVAr inductive at 1.1 p.u. voltage as measured at PCC, including all tolerances for components upto designed temperature. Component tolerances shall be considered, when designing against the requirement for continuous rating and considering design ambient temperature conditions. Beyond design maximum ambient temperature, TSP shall provide the derating curve, however, derating rate shall not be more than 1% of rated MVAr per degree Centigrade. OEM/TSP shall submit temperature to MVAr derating curves (continuous & time limited). There shall not be any impact on rated short circuit current and Inertia due to increase in ambient temperature beyond design maximum ambient temperature.

4) The Synchronous Condensers Units shall be capable of continuous uninterrupted operation for system frequencies in the ranges of 47.5 Hz to 52.5 Hz.

5) The voltage reference for the voltage control at the point of connection should be continuously (or using steps of negligible size) controllable in the interval 0.9 p.u. to 1.1 p.u.

6) The Supplier of Synchronous Condensers shall confirm that the synchronous condensers will be rated and capable to operate for all the frequency ranges listed.

6.4 Voltage and reactive power control

Voltage and reactive power control capabilities shall be as per requirement specified. The Synchronous Condenser unit shall be able to control the reactive power and voltage at the PCC by the excitation system and by use of unit step up transformer on-load tap changer (OLTC) regulation range as appropriate.

7. SHORT CIRCUIT CONTRIBUTION

The Synchronous condenser unit for project /substation shall be able to supply a short circuit power (Short-circuit power must be calculated according to IEC 60909-0:2016, using saturated sub-transient reactance and transformer impedance).

Calculation of short circuit contribution (SCC) shall be done according to following formula:

$$SCC = \frac{S_{SC}}{(X_d'' + \frac{S_{SC}}{S_T} u_k)}$$

S_{SC} = rated S [MVA] of SynCon

S_T = rated S [MVA] of transformer

X_d'' = subtransient direct – axis reactance (saturated) in p.u.

u_k = *unit step – up transformer* impedance in p.u.

8. SYNCHRONOUS CONDENSER DESIGN AND CONSTRUCTION FEATURES

The Synchronous condenser unit installed shall be based on either salient pole (or) non-salient pole with air-cooling or water cooling. Hydrogen-cooled SynCon will not be accepted.

8.1 General Design Requirements

The synchronous condenser shall be totally enclosed water-air cooled (TEWAC) with air-water heat exchangers connected to a closed water-cooling system shall also be provided (as per system requirements).

The pipework shall be marked with colours and arrows to show which fluid is circulating which way in the respective pipe.

All necessary auxiliaries (lube oil system, cooling system), foundation plates and bolts, covers, air and oil coolers with adjacent piping shall be included (if applicable).

Suitable arrangement shall be mounted inside the synchronous condenser enclosure to prevent condensation during shut-down periods.

Sensors, detectors, and instrumentation necessary for supervision and control shall be installed.

Detectors to provide signals for the speed measurement shall be installed. These detectors are also used for overspeed protection.

A vibration monitoring/protection system shall be provided.

Relative shaft vibration - monitoring; absolute bearing casing vibration – protection shall also be provided.

The synchronous condenser shall be designed for continuous operation and 10,000 starts/stops in its lifetime (35 years).

8.2 Inertia Requirement

If the specified inertia requirements as mentioned in the Table-2 cannot be achieved with the rotor only, the TSP shall consider the installation of an additional flywheel.

8.3 Stator

8.3.1 Stator Frame and Core

The stator frame shall be of welded construction and equipped with suitably arranged

braces to ensure structural rigidity. The interior of the stator casing/stator frame partly forms the cooling ducts and therefore the braces in the stator frame shall be arranged in such a manner that an optimum air flow will be obtained.

For easier transportation (if required) the stator casing/stator frame can be split up into two sections. The sections of the iron core and of the stator casing shall be clamped together by means of liberally dimensioned bolts. Care will be taken to avoid vibrations at the insulated joints.

The stack of laminations shall form the active part of the Synchronous condenser and shall be made of silicon alloy steel sheets. The segments shall be coated with an insulating varnish of good thermal and mechanical properties on both sides and stacked interleaved.

The core shall be clamped between non-magnetic pressure plates. A certain number of through bolts to be provided for an adequate and permanent compression of the active core. The compression fingers integrated in the pressure plates, distributing the pressure over the whole surface of the core uniformly.

The pressure fingers, plates and the core beams shall be designed to give stable and equal distributed pressure on the lamination.

The enclosure shall have openings to inspect the core and the windings.

All steelworks shall be thoroughly protected against corrosion.

Welded steel constructions shall follow relevant ISO standards.

8.3.2 Stator Core Tests

Before the stator winding is installed, the stator core shall be subjected to stator core loop test with high flux density (minimum 1T).

8.3.3 Stator Winding

The stator winding shall be three-phase with 6 terminals brought out from the synchronous condenser enclosure. Neutral of SynCon star point shall be earthed in NGT panel through dry type distribution transformer with secondary loaded with a resistor.

All material inside the slot and the winding insulation shall be of thermal class F. No kind of magnetic material, such as for slot wedges, is permitted within the slots.

The winding must be capable of being easily substituted by removing a few adjacent coils or bars (as applicable). The end windings must be suitably braced and supported by rings of non-magnetic materials to withstand any forces caused by short circuit at the terminals of the machine in grounded or ungrounded operation.

The stator winding insulation shall be made of thermosetting epoxy resin impregnated mica tape system and shall be equipped with corona protection systems suitable for the selected rated voltage.

8.4 Rotor

The shaft shall be forged of steel and sufficiently rigid. It shall have an ample margin of strength and be provided with a forged coupling to Flywheel or other (if applicable) and specified in the technical specification.

For cylindrical rotor design, the shaft shall be machined from a single alloy steel forging to give the required mechanical, metallurgical and magnetic characteristics. Rotor shall have an adequate margin between critical speed and the operating range of speed to ensure smooth running.

The rotor shaft and rotor itself shall be designed to withstand all the operating conditions as well as overspeed.

For salient pole construction, poles shall have claws to fit in matching claw slots accurately machined on the rim/ Rotor body. The pole along with field coil shall be properly secured in the slots and wedged there properly.

The rotor assembly shall be of such design that the assembling and dismantling can easily be done at site.

8.5 Damper Winding

A low resistance damper winding made of full-length copper rods or copper rotor wedges shall be provided on all the poles to dampen rotor oscillations. They shall be short circuited at the ends by a completely electrically connected ring on either side. The damper windings shall be strong enough to withstand all the electrical and mechanical stresses occurring during operation.

All contacts shall either be brazed or safely pressed by means of bolts and elastic elements. Contact surfaces of pressed contacts shall be protected against oxidization and corrosion, i.e. by appropriate galvanization.

8.6 Collector rings and brushes (if applicable)

The collector rings shall be insulated from the shaft system by epoxy glass laminations and spaced sufficiently apart and the brushes arranged to eliminate the possibility of accidental short circuit while changing or adjusting the brushes. The brush gear for the collector shall be mounted on insulated studs from the top of the exciter brush gear housing. The slip ring housing shall have sufficient space for maintenance purposes. There shall be provision for the replacement of brushes while the machine is in operation, without interrupting the excitation or normal operation of the machine.

Carbon dust collection system shall be provided to remove carbon dust generated from carbon brushes. The filters used shall be metallic and washable type having high efficiency. The piping should be routed in a way to optimize spaces.

8.7 Rotor Winding/ Poles

The rotor winding shall have an insulation that fully conforms to thermal class 155 or higher.

For salient pole type construction, the field poles shall be of laminated construction and the material used shall be of high strength. On both ends, end plates of high-grade steel shall bebe fitted. The pole core and the pole end plates shall be clamped together by screwed bolts. The insulation materials used shall provide sufficient

mechanical strength.

8.8 Instrumentation

All temperature sensors shall be Resistance Temperature Detectors (RTDs) of preferably duplex type (alternatively suitable nos. of single element RTDs with spares in place of duplex RTDs are also acceptable) and be wired to a terminal box with shielded cables.

8.8.1 Stator winding/Core

Detection / measurements shall be provided by means of RTDs; i.e. at least 3 (three) active RTDs and 1 (one) spare RTD per phase and per circuit distributed between phases and circuits around the stator bore, located between the upper and lower bar in the same slot; at least 3 (three) RTDs in the core located at each end and in the middle.

8.8.2 Rotor winding

Rotor winding temperature shall be measured using the resistance method or through RTDs as per IEC 60034-1.

In case of RTDs, Sufficient number (at least 12) of preferably duplex type RTDs (alternatively suitable nos. of single element RTDs with spares in place of duplex RTDs are also acceptable) shall be provided, distributed as per OEM design to monitor the temperature.

8.9 Terminal Boxes

Terminal boxes shall be of weatherproof construction to eliminate entry of dust, vermin and water with a degree of protection IP54. The terminal boxes on the SynCon shall be suitable to connect cable size required.

The phase terminal of the windings shall be brought out of stator frame by appropriate means and interfaced to insulated phase bus of adequate size & capacity. The leads on the neutral side shall be brought out of the stator frame and shorted through a suitable size bus bar. Provision shall be made on the main (Phase) side & neutral side of the SynCon for mounting of required no of CTs for AVR, control, protection & metering.

The phase terminals or a fitted cubicle shall be suitable for IPB termination. Insulated protective cage cover connection between stator and bus duct for line terminals shall be provided for safety of O&M and personnel.

A suitable neutral grounding cubicle shall be fitted to the neutral terminals. The cubicle shall allow for installation of all required CTs, neutral earthing via neutral earthing transformer and resistor.

Terminal boxes shall be provided for termination of the following signals/ terminals:

- Instrumentations
- Space heaters

- Temperature detectors

8.10 Bearings

The bearings shall be designed for the weight of the rotor of the synchronous condenser as well as for additional loads owing to abnormal service conditions.

The bearing pedestals may be a cast or welded structure, in any case providing the required strength and stiffness. To avoid the formation of shaft currents one pedestal is insulated from the foundation frame, pipe connections, etc. Suitable protection shall be provided to avoid the escape of oil and oil vapor via the shaft.

If the grid connection is tripped the synchronous condenser bearings shall be fed by the emergency DC pump from oil supply system until the synchronous condenser is on standstill (0 rpm).

The bearings shall withstand a defined overspeed of 10% during start-up.

A central oil mist extractor shall be present in the oil system to evacuate oil mist from the bearing housing.

The TSP shall ensure complete protection, control, and measurement for the bearing's safety and diagnosis, consisting of RTDs, at least one triple element (or two dual element) per bearing, to monitor bearing metal temperature.

8.11 Lube oil system

The flood lubricating system of the bearings shall be separately mounted. The oil plant shall comprise the bearing/oil container, the oil/water cooler for frictional heat dissipation, the flood-lubrication pump, as well as all necessary fittings, pipes, filters and supervisory instruments.

8.12 Lube oil pumps

A high-pressure oil system shall be provided for the bearing to avoid mixed friction at a low speed. A high-pressure pump with non-return valve shall take the oil from the sump and presses it between the lower part of the bearing and the shaft. The arrangement in the shell of the oil-jacked bearing ensures that no pressurized oil can infiltrate between the bearing lining and the shell.

The lube oil system shall have redundant (2 x 100%) oil pumps to supply lube oil to the bearings. They shall be fed by AC power supply. An automatic change-over from main to back-up AC pump shall occur in case of loss of lube oil pressure.

An emergency DC pump of sufficient capacity shall pump the oil until the synchronous condenser has come to a complete standstill in case of the grid connection is tripped. The DC pump shall be fed from the station battery.

8.13 Cooling system

To reduce the complexity of the synchronous condenser unit, the synchronous condenser shall be air-cooled. H2-cooling is not permissible.

Extraction of losses shall be via water-to-air heat exchangers (TEWAC cooling scheme). The secondary cooling system i.e water to air heat exchanger, shall be a redundant type such that it shall be possible to take out 10% (minimum one number) of the cooler module (fan unit) of secondary cooling system without affecting the

rated performance of SynCon unit.

In case of Water cooled Stator Winding, Stator water cooling System shall be closed loop type with 2x100% AC motor driven circulating water pumps, 2x100% de-mineralised water heat exchangers, 2x100% filters, one mixed bed de-mineraliser and one alkalizer unit (as applicable).

The scope of this system shall include but is not limited to:

a) a Pump skid with all relevant components and measurement devices
b) a Set of outdoor coolers (chillers).
c) an Expansion tank (installed on the pump skid)
d) a Refill unit (installed on the pump skid)
e) Connecting pipe system including pipe supports and interface flange connections
f) a Cooling system cabling, excluded cabling to the outdoor coolers and the outdoor temperature sensor.
g) an outdoor temperature sensor
h) all necessary foundation bolts for the cooling system and piping
i) Junction boxes for termination of control cables

The water-cooling system shall be connected to:

- the heat exchangers of the synchronous condenser to evacuate the heat generated by the machine.
- (if applicable) the fly-wheel's heat extraction system

The use of the coolant shall be adapted on the environmental condition listed in this specification.

The coolant shall be a mixture of ethylene or propylene glycol and water (with corrosion inhibitors as additives). If ambient conditions allow (ambient air permanently above freezing point) water with corrosion inhibitors can be used.

8.14 Monitoring sub-systems

Following On-Line monitoring sub-systems shall be provided for Synchronous Condenser:

8.14.1 Vibration Monitoring System

A continuous on-line vibration monitoring system complete with sensors, input/output module, control/processor unit, relays, junction boxes, cabling and associated accessories for measuring, monitoring and data acquisition of shaft vibration/run-out shall be provided.

The systems should be fully integrated with control system (SCADA) to facilitate shutdown and alarming, trending the values in SCADA for diagnosis.

8.14.2 Shaft Current online Monitoring of Synchronous condenser

A suitable shaft current online monitoring of Synchronous Condenser shall be provided to detect transient current in the synchronous condenser shaft.

8.15 Flywheel system (if applicable)

The flywheel shall be coupled to the synchronous condenser rotor.

The design shall enable a safe emergency run-down in case of total power loss (grid black-out). The required bearing lubrication during emergency run down shall be ensured by battery-powered DC pump, defined, and sized depending on unit specific parameters.

The main components of the flywheel assembly are the forged flywheel body and shall be coupled to synchronous condenser either directly or by means of attached shafts. The whole flywheel shall be supported by pedestal bearings.

The safe operation of the flywheel shall be covered by the standard protection concept for rotating power generation equipment, including overspeed, bearing temperatures and vibration limits.

8.16 Bearing and Shaft Vibration Measurement / Protection System

Two Proximity sensors (90° apart) and necessary provisions for the monitoring of shaft vibration amplitudes shall be installed on each bearing. The vibration measurement system for the bearing shall be integrated with the vibration system provided for SynCon.

At least two accelerometers per bearing shall be installed to monitor bearing casing vibration.

9. EXCITATION SYSTEM

9.1 General

Microprocessor based excitation system with thyristor control shall be provided to suit the Synchronous condenser characteristics. The excitation system shall comply with the requirements of IEC 60034-3 unless otherwise specified.

The excitation system may be offered as either:

- **Static Excitation System (SEE)** using controlled power electronic converters, **or**
- **Brushless Excitation System (BES)** using a shaft-mounted AC exciter and rotating rectifier assembly.

In case of SEE, the AC power required for the excitation shall be tapped from the SynCon terminal, stepped down by means of excitation transformers and rectified by fully controlled thyristor bridges and then fed to the SynCon field thereby controlling the voltage output. In case of Brushless Excitation System, the excitation power shall be supplied by a shaft-mounted AC exciter after rectification through a rotating diode bridge. The offered excitation system shall be capable of delivering desired synchronous condenser terminal voltage and reactive power within the specified limits during all the steady-state and transient operating conditions. Any change in the SynCon terminal voltage shall be sensed by the voltage regulator which shall automatically control the field excitation to restore the setpoint. The temperature of the field shall be determined by the resistance method.

9.2 Static Excitation System (SEE)

In case of SEE, it shall consist of following:

a) Excitation transformer.
b) A Set of Thyristor converters (fully redundant Thyristor bridges) of suitable numbers shall be provided. Power thyristor converter shall be fully controlled three phase, full wave bridge type with fast and high ceiling performance. The converter shall have 'N+1' redundancy where N is the number of bridges required to deliver rated excitation current and the ceiling voltage or current and '+1' provides redundancy such that the failure of one power section does not lead to any operational limitations.
c) Facilities to ensure excitation power supply during starting
d) Field breaker and field discharge and suppression equipment.

9.3 Brushless Excitation System:

In case of BEE, it shall consist of following:

(a) Shaft-mounted three-phase AC exciter with stationary field and rotating armature
(b) Rotating rectifier assembly using high-reliability diodes with surge protection and with either complete bridge as redundant or at least one redundant parallel branch in each of the six arms of the bridge.
(c) No slip rings or brushes for main field current supply.
(d) Field flashing equipment shall be provided for voltage build-up and recovery under low residual conditions.
(e) Monitoring of rotating rectifier health via indirect measurement of exciter current, voltage, and unbalance detection.
(f) High ceiling performance with minimum 160% ceiling field voltage.

9.4 Regulator and sequencer

TSP shall provide Digital Controller and AVR having automatic voltage regulator mode (AVR) and field current regulator mode (Manual Mode), as well as the required sequencing and communication to the plant control system. It shall be according to following.

- Number of independent regulators: 2 (full N+1 redundancy, completely doubled hardware)
- Voltage Controller of PID-type/ PI type,
- Manual (field current) regulator, common hardware with AVR
- Bump less switch between voltage regulator and field current regulator
- Digital sequencer as part of the software
- Digital setpoint interface
- Synchronous condenser voltage and current sensing: 1 or 3-phase measurement.
- Reactive load compensation: raising/falling characteristic selectable
- Field current limitation including:

  + Maximum limiter undelayed
  + Maximum limiter delayed
  + Minimum limiter undelayed

- Stator current limitation
- Over fluxing (Volts/Hertz) limiter
- Reactive power regulator
- Automatic generator voltage
- Thyristor conduction supervision via AC thyristor current measurement or detection of field voltage shape
- Soft start-up (provides smooth SynCon voltage increase according to required ramp)
- Interface to control system via suitable protocol.
- Power System Stabilizer
- Provision to connect to LAN and NTP time server.
- All Alarms and messages with timestamp.
- Fault recorder which records and stores curves in case of alarms or trips.

Auxiliary power supply to excitation control and protection shall include suitable redundancy such that failure of one auxiliary source shall not affect excitation system operation.

***Operation and monitoring*:**

Following Local operation and monitoring shall be provided via touch panel integrated in the front door of the control cabinet. Local operation Touch panel shall be Password protected.

- excitation ON/OFF
- setpoint RAISE/LOWER
- AUTO, MANUAL selection
- Voltage-/reactive power regulator or power factor regulator selection
- Alarms acknowledgement
- Indication shall include:
  - Measurement Values (SynCon Voltage and Current, Field current, SynCon active power, SynCon reactive power, SynCon power factor, etc.)
  - Event and Alarm lists
  - Other local functions

All alarms of the excitation system are stored and indicated on SOE list in correct time sequence. Furthermore, the two alarms "Excitation Alarm" and "Excitation Trip" are wired to the terminal strip for external use.

Further included components:

- 1 precision Shunt for field current sensing
- All MCBs with supervision contact
- Real measuring, analogue Meters in regulators cabinet front door, for field current, field voltage, stator current and stator voltage
- 4-20 mA signal for remote indication of excitation current

- 4-20 mA signal for remote indication of excitation voltage

9.5 Closed-Loop Control

The set points will be adjusted via the automatic follow-up function.

Each automatic channel shall have its own manual controller for field current control and its own voltage and current transformer for the processing of the SynCon terminal voltage and terminal current.

The excitation system shall provide three modes of operation:

- Manual mode: the excitation current is modified locally via the Human Machine Interface (HMI) installed in the excitation panel, the automatic voltage control functions and the limiters are deactivated (test mode or commissioning mode).
- Automatic Mode local: The automatic voltage control is active and the control setpoint for the terminal voltage control shall be modified via the HMI screen installed in the excitation panel.
- Automatic Mode remote: The automatic voltage control is active and the control setpoint for the terminal voltage control shall be modified via plant operation and control interface.

The excitation system shall be electrically and thermally capable of delivering continuously up to 110 % of the rated field current required at design ambient temperature.

The initial response ceiling voltage of the excitation system shall be adequate to meet the step response conditions as verified by Contractor/TSP - Synchronous Condensers design. The SEE shall be able to deliver a ceiling field voltage of minimum *160%* of the rated field voltage (field voltage applicable at rated field current, rated SynCon terminal voltage and defined rated reactive power rating of the SynCon).

The limiting functions of the automatic channel ensure that the SynCon is operated within its capability limits during grid operation. The following limiting and control functions shall be included:

- Stator current limitation
- Maximum field current limitation (field forcing)
- Over excitation limitation (field current)
- Under excitation limitation
- V/f limitation

The excitation system shall be provided with strategic spare parts.

The Excitation System shall have following step response characteristics:

	Description	Time
Response time	The duration from a step change in control	Minimum 1 sec

	signal until the voltage changes by 90% of its final change, before any overshoot.	
Settling time	With the Syncol Unit unsynchronised following a disturbance equivalent to a 5% step change in the sensed Syncol Unit terminal voltage	Maximum 1.5 sec
	With the Syncol Unit	Maximum 2.5 sec
	Following any disturbance which causes an excitation limiter to operate.	Maximum 5sec

9.6 Power System Stabilizers

Power System Stabilizers (PSS) are used to enhance damping of power system oscillations through excitation control(s). TSP shall implement PSS controls in line with IEEE Standards 421. The PSS controller shall have configurable range of frequency (to damp) to have a flexibility during the operation phase.

9.7 Power Supply

In case of SEE, the excitation transformer shall be connected to SynCon isolated phase bus duct between generator circuit breaker and unit step up transformer or shall be supplied from the MV-busbar system. The excitation transformer shall be a three-phase, two-winding converter transformer. In the case of a Brushless Excitation System, the SynCon shall be provided with a shaft-mounted Permanent Magnet Generator (PMG) to supply independent power to the Excitation System, while the main rotor field excitation power shall be derived from the shaft-mounted AC exciter through rotating rectifiers.

9.8 Operating Aspects

The communication interface between the Excitation System and the plant operating control system shall have redundant connection.

Signal exchange to the Excitation System shall comprise all commands for Excitation System and SFC operation and the set-point values for different Excitation System closed loop controls. The opposite direction from the Excitation System to the Synchronous Condenser unit control system shall include the feedback signals, actual values, and several alarm signals.

An operator control panel shall be installed on the front door of the control cabinet. Local or remote operation can be selected by using the key switch at the control cabinet door.

The operator control panel shall provide all required software tools to configure, maintain, and troubleshoot the excitation systems.

10. STARTING SYSTEM

The machine starting system shall be supplied as a complete system including all equipment, control and power part, hardware and software, to perform, control and

supervise the actual start-up process.

The static frequency converter (SFC) shall be provided to accelerate the synchronous condenser from any speed to the nominal speed, so as to allow the synchronous condenser units connection to the network. Specifically, if any synchronous condenser is freewheeling (e.g. following a trip), the synchronous condenser shall be able to be accelerated by the SFC, without the need of having the synchronous condenser come to a complete rest. In addition to this the drive shall have the capability to decelerate the synchronous condenser following GCB opening.

The synchronous condenser, the excitation system, the start-up system, the start supply transformer etc. shall not be overloaded in any respect; thermally, over fluxed, high currents / voltages or torque etc.

The normal start sequence duration shall be approximatively 30 min. (estimated time, required starting time< 30min) from the first rotation to required overspeed for successful synchronization.

At standstill, at the initialization of a sequence, the excitation shall be activated and supplying an excitation current to the rotor winding of the machine.

The SFC equipment will increase the frequency of the compensator until a running speed required for successful synchronization is achieved.

At this running speed of the SFC equipment, excitation is disconnected, and the exciting system of the compensator shall be activated.

The compensator achieves rated voltage and is synchronized into the grid.

If the synchronizing is unsuccessful, 2 further attempts shall be allowed.

11. Noise Levels

The overall noise level of the Synchronous Condensers Units yard shall be no greater than 85 dB(A) when measured at a distance of one metre and at a height of 1.5 metre from any equipment except SynCon. In case of SynCon, the noise level when measured at approximately 1 m distance from the Synchronous condenser surface during normal operation at rated ratings & ambient conditions shall not be more than 90 dB(A).

12. Step-up Power Transformer

The TSP shall provide single phase step-up transformers to operate as 3- phase bank with one unit as a common spare for stepping up the voltage from a suitable medium voltage value to 400 kV system as required for replacing any one of the faulty phase units. Alternatively equivalent 3-ph transformer can also be provided, in which case spare transformer of same rating shall also be provided.

TSP can have a common spare as mentioned above for all such SynCon Units whose Step up Transformer rating is same.

Step up Transformer shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above voltage class)" as amended up to date available on CEA website.

The Transformer shall be designed with the aim to achieve operation according to the overall performance requirements of the SynCon Station. The transformer should be designed and rated to carry complete capacitive and inductive reactive loading as specified for SynCon Station as well as harmonic currents associated with the most onerous operating conditions of SynCon Station, without loss of life.

The transformer shall be designed in accordance with the most up-to-date experience in SynCon application and shall incorporate the latest improvements of design currently employed in the industry. The Comprehensive design review of the Transformer of SynCon Station shall be carried out by the TSP.

12.1 General Requirements

The Step-up Power transformer shall be designed electrically and mechanically for operating conditions peculiar to SynCon Station operation, which shall include, but not be limited to the following:

a) The transformer and all its accessories like Bushings, CTs etc. shall be designed to withstand without damage, the thermal and mechanical effects of any external short circuit to earth and of a short circuit across the terminals of any winding for a period of 3 seconds. The short circuit level of the 400 kV system to which the transformer shall be connected, will be as per the maximum short circuit level of the main substation. Short Circuit level of the Transformer shall be as per the Short Circuit level of the respective Substation. Short circuit level for HV bushing shall be 63 kA for 1 Sec.

b) The transformer shall be capable of being loaded in accordance with IEC 60076 or the overload conditions as specified whichever is the worst. There shall be no limitation imposed by bushings during its terminal fault.

c) The transformer shall be capable of withstanding the mechanical stresses caused by symmetrical or asymmetrical faults on any winding.

d) All protection class Current Transformers in the transformer shall be of PX/PS type. Other details of these Current Transformers shall be as per protection/metering requirements and shall be decided during detailed engineering. However, the parameters of the Winding Temperature Indicator (WTI) of Current Transformer for each winding shall be as per the Transformer manufacturer.

e) Transformers shall be capable of operating under natural cooled conditions up to the specified load. The forced cooling equipment shall come into operation by pre-set contacts of winding temperature indicator and the transformer shall operate as a forced cooling unit initially as Oil Natural Air Forced (ONAF) up to a specified load and then as Oil Forced Air Forced (OFAF). Cooling shall be so designed that during total failure of power supply to cooling fans and oil pumps, the transformer shall be able to operate at full load for at least ten (10) minutes without the calculated winding hot spot temperature exceeding 140° (degree) Celsius. Transformers fitted with two coolers, each capable of dissipating 50 percent of the heat due to losses at the continuous maximum rating, shall be capable of operating for 20 minutes in the event of failure of the oil circulating pump or blowers associated with one cooler without the calculated winding hot spot temperature exceeding 140° degree Celsius at continuous maximum rating.

f) The transformer shall be free from any electrostatic charging tendency (ECT) under all operating conditions when all oil circulation systems are in operation. In general, the oil flow speed shall not exceed 1.0 m/sec within winding in the oil flow system of the transformers. The manufacturer shall ensure that there is no electrostatic charging tendency in the design.

The Technical Parameters of the Transformer shall be as below

Table 4

Sl. No.	Description	Unit	Technical Parameters
1.1	Rated Capacity		
	HV	MVA	To meet the performance requirement and ratings of SynCon. The transformer shall be suitable for 100% reactive loading
	MV	MVA	
1.2	Voltage ratio (Line to Line)		XX (*)/400 kV
1.3	Single / Three Phase Design		Single phase/Three phase
1.4	Applicable Standard		IEC 60076
1.5	Rated Frequency	Hz	50

Sl. No.	Description	Unit	Technical Parameters
1.6	Cooling and Percentage Rating at different cooling		ONAN/ONAF/(OFAF or ODAF): 60% / 80%/100% OR ONAN/ONAF1/ONAF2: 60% /80%/100% OR OFAF (with 5 x 25% unit cooler if required)
1.7	Impedance at 75°C (in percentage)		
	HV–MV		To suit the design requirements.
1.8	Tolerance on Impedance (HV-MV)	%	As per IEC
1.9	Service		Outdoor
1.10	Duty		Continuous Reactive loading
1.11	Overload Capacity		IEC-60076-7
1.12	Temperature rise over 50 °C ambient Temp		
i)	Top oil measured by thermometer	°C	50
ii)	Average winding measured by resistance Method	°C	55
1.13 i)	Windings System Fault level		
	HV	kA	63
	MV	kA	To suit the design requirements.
ii)	Lightning Impulse withstand Voltage		
	HV	kVp	1425
	MV	kVp	*
	Neutral	kVp	170
iii)	Switching Impulse withstand Voltage		
	HV	kVp	1175
iv)	One Minute Power Frequency withstand Voltage		
	HV	kVrms	630
	MV	kVrms	*
	Neutral	kVrms	70
v)	Neutral Grounding		Solidly grounded
vi)	Insulation		
	HV		Graded
	MV		Uniform

Sl. No.	Description	Unit	Technical Parameters
vii)	Tan delta of winding	%	< 0.5
1.14	Vector Group (3 – ph) (unless specified differently elsewhere)		YNd*
1.15	Tap Changer		*
1.16	Bushing		
i)	Rated voltage		
	HV	kV	420
	MV	kV	*
	Neutral	kV	36
ii)	Rated current (Min.)		
	HV	A	*
	MV	A	*
	Neutral	A	*
iii)	Lightning Impulse withstand Voltage		
	HV	kVp	1550
	MV	kVp	*
	Neutral	kVp	170
iv)	Switching Impulse withstand Voltage		
	HV	kVp	1175
v)	One Minute Power Frequency withstand		
	Voltage		
	HV	kVrms	750
	MV	kVrms	*
	Neutral	kVrms	77
vi)	Minimum total creepage distances		
	HV	mm/kV	31
	MV	mm/kV	31
	Neutral	mm/kV	31
vii)	Tan delta of bushings#		
	HV	%	≤ 0.5
	MV	%	
viii)	Max Partial discharge level at Um		
	HV	pC	10
	MV	pC	10
	Neutral		-
1.17	Max Partial discharge level at 1.58 * Ur /√3	pC	100
1.18	Max Noise level at rated voltage and at principal tap at no load	dB	80

Sl. No.	Description	Unit	Technical Parameters
	and all cooling Active		
1.19	**Maximum Permissible Losses of**		
	Transformers		
i)	Max. No Load Loss at rated voltage and Frequency	kW	To suit the design requirements.
ii)	Max. Load Loss at maximum continuous current and at 75° C	kW	To suit the design requirements.
iii)	Max. Auxiliary Loss at rated voltage and Frequency	kW	To suit the design requirements.

Tan δ value of OIP/RIP/RIS condenser bushing shall be 0.005 (max.) in the temperature range of 10°C to 40°C. If tan delta is measured at a temperature beyond above mentioned limit, necessary correction factor as per IEEE shall be applicable. The measured Tan δ value at site should not exceed by 0.001 w.r.t. factory results (measured at approx. similar temperature conditions) during warrantee period

Notes:

1. No external or internal Transformers / Reactors are to be used to achieve the specified HV/MV impedances.

2. The criteria for Transformer losses shall be "Copper Loss (Load Loss) > Iron Loss (No Load Loss) > Cooler Loss (Auxiliary Loss)".

(*) marked parameters shall be decided based on SynCon manufacturer's requirement

13. Generator Circuit Breaker

The Circuit Breaker shall in general be of G2/M2 class and comply to IEC/IEEE 62271-37-013:2021. They shall satisfy the General Technical Requirements and shall be designed to operate in the environmental conditions specified in this specification.

14. Bus duct

(a) The generator bus duct shall comply with the requirements of the latest versions of relevant Indian Standards or International Electrotechnical Commission standards.

(b) The bus duct shall be designed to carry maximum continuous current under normal site conditions without exceeding temperature rise limits. Based on these requirements standard size of bus duct as per relevant Indian Standards or International Electrotechnical Commission standards shall be used.

(c) Generator bus duct shall be segregated or isolated phase type. Bus duct rated more than 3150 Amperes shall be isolated phase type. The isolated phase ducts shall be preferred over the segregated phase bus ducts. The bus duct rated more than 6000 Amp shall be continuous isolated phase type.

(d) A hot air blowing system or air pressurization system shall be provided to

prevent moisture deposition in case of isolated phase busducts while space heaters may be provided in case of other bus ducts.

15. Selection of Insulation Levels

15.1 Surge Arrestors

Protective levels of arresters connected to the 400 kV AC Bus Bars of the SynCon Station shall be coordinated with the insulation and surge arrester Characteristics of the 400 kV AC systems to which the SynCon Station is to be connected. The specification and characteristics of the surge arresters installed in 400 kV AC system is given in Substation specification. The front of wave (FWWL), lightning impulse (LIWL) and switching impulse (SIWL) withstand levels shall be determined by the following margins:

a) A SIWL at least 1.15 times the switching impulse protection level.
b) A LIWL which is an IEC standard level corresponding to the SIWL and shall be at least 1.25 times the lightning impulse protection level.
c) A FWWL which is at least 1.25 times the front of wave protection level.

In addition to above minimum basic requirement the various insulations level of 400 kV equipment shall be as below. The SynCon Station equipment, Step-up Transformers etc. shall be co- ordinated accordingly.

	SIWL	LIWL
All equipment other than Transformer Bushing and winding	1175 kVp	1550 kVp

15.2 Air clearances

The air clearances shall be determined by the TSP based on the required withstand levels for all waveforms in order to limit the probability of flashover within the SynCon Station to a target value of one flashover in 15 years.

15.3 Switchyard

The air clearances for switchyard equipment shall be equal to or greater than minimum values as specified in IEC-60071. Altitude correction factor (if any) shall also be considered as per IEC.

15.4 Leakage distances

The Creepage/leakage distance across insulation shall be determined by the TSP and shall be adequate to ensure that under condition of heavy pollution, the probability of a flash over of an insulator does not exceed one in 15 years. However, the leakage distance for all AC insulators for outdoor installation shall not be less than

31 mm/kV of the maximum operating phase to earth rms voltage at the insulator. The leakage distance of equipment connected to 400 kV systems shall not be less than 13020 mm.

Specific creepage distance for outdoor bushings, insulator strings and long rod insulators shall be minimum 31mm/kV.

16. PROTECTION SYSTEM

The synchronous condenser unit shall have a protection system with necessary back-ups to protect the equipment from critical failures and faults. The protection systems shall be secure and reliable to minimize any damage due to faults in the system. Protection relays shall be numerical type.

The mechanical protection (overtemperature, vibration) should be implemented in SynCon control panel system.

16.1 General Protection Concept

The function of the protective equipment is the detection of faults and the minimization of further damages. The selected protective system must ensure that faults are detected fast, selectively acted upon, and announced to the owner of the station. The protection system must ensure correct behavior during normal operation of the synchronous condenser unit even in case of faults outside the protected zone. The protective systems shall be independent of other equipment according to the protection philosophy.

The protection equipment must be designed with a comprehensive monitoring function to provide a high level of reliability and to avoid unnecessary shutdowns due to protection equipment malfunction. The monitoring system must elicit an alarm and block protection in case of internal defects.

A redundancy concept of the protection system design shall apply to the SynCon and the machine transformer consistently throughout by duplicating all the essential components. All implemented protection functions shall be doubled in the main A and main B protection relays. The redundancy starts with separate instrument transformer cores and continues through the protection relays and trip signal, which must pass through separate DC voltage paths to switchgear with 2 circuit-breaker trip coils. All protection zones shall have overlapping zones by using different CT's or CT cores. The protection relays shall be mounted in separate panels for A and B protection.

The auxiliary transformers shall be protected with overcurrent protection function.

16.2 Protection zones

The protection system for the synchronous condenser unit must be divided into various protection zones:

- Protection for the high voltage side of machine transformers
- Protection for the machine transformer included the isolated phase bus
- Protection for the synchronous condenser
- Protection for the MV/Auxiliary transformer

For the main protection zones common tripping relays must be used for protection A and B.

All types of faults that shall be detected by the protection system.

- Heavy short circuit faults (2 / 3 phase- and double earth fault) based on differential (ANSI 87) and overcurrent measuring (ANSI 50/51) principle.
- Single earth faults at the SynCon side of the transformer and IPB system by displacement voltage detection without selection where the fault happened.

16.3 Protection Functions

A. Minimum Synchronous Condenser Protection Functions

Function	Main A	Main B
Biased SynCon Differential Protection (87 G)	Y	Y
95% Stator Earth Fault Protection (64 G1)	Y	N
100% Stator Earth Fault Protection (64 G2)	N	Y
Loss of Field Protection (40G)	Y	Y
Backup Impedance Protection (21G)	Y	Y
Overvoltage Protection (59G)	Y	Y
Negative Phase Sequence Current Protection (46G)	Y	Y
Under Frequency Protection (81G)	Y	Y
Overload Protection for SynCon (51G)	Y	Y
Rotor Earth Fault Protection (64R)	Y	Y
Under Excitation Protection	Y	Y
Bearing Current Protection (50SC)	Y	Y
SynCon Pole slipping protection (98G)	Y	Y
Excitation System Overcurrent Protection (50/51 EXE)	Y	Y
Dead machine (27/50G)	Y	Y

B. Step Up Transformer Protection Functions

Function	Main A	Main B
Steep-up transformer differential protection (87T)	Y	Y
Restricted earth fault protection	Y	Y
Overcurrent Protection	Y	Y
Over fluxing Protection	Y	Y
Back-up earth fault protection on Step-up transformer HV neutral (51NGT)	Y	Y
Buchholz Protection	Y	N
Pressure relief valve (PRV) Protection	N	Y

Function	Main A	Main B
LV Winding Temperature Protection	N	Y
HV Winding Temperature Protection	Y	N
Oil temperature Protection (49)	Y	Y

C. Unit Transformer Protection Functions (Auxiliary Transformers)

Function	Main A	Main B
Restricted earth fault protection (64)	Y	Y
Instantaneous over current protection (50)	Y	Y
IDMT over current protection (51)	Y	Y
Back up Earth Fault Protection	Y	Y
Buchholz Protection	Y	N
Pressure relief valve (PRV) Protection	N	Y
LV Winding Temperature Protection	Y	N
HV Winding Temperature Protection	N	Y
Oil temperature Protection (49)	Y	Y

D. Pony Motor Protection Functions (if applicable)

Function	Main A	Main B
Overcurrent	Y	N
Overload / Thermal Protection	Y	N
Undercurrent Protection	Y	N
No of Starts Limiter	Y	N

E. Generator Circuit Breaker

Function	Main A	Main B
Current Checked Circuit Breaker Failure Protection	Y	N
Trip Circuit Supervision	Y	Y
Synchronizing	Y	N

F. Breaker Failure Protection

a) High voltage circuit breaker

Each trip to the high voltage circuit breaker must simultaneously initiate a breaker failure start in the high voltage feeder protection system. This signal must be integrated in the high voltage feeder protection relay, which executes the breaker failure protection.

b) Generator circuit breaker

In case the generator circuit breaker does not open after a trip command, the breaker failure function in the SynCon protection relay must send an inter-trip signal to the high voltage circuit breaker.

The start of the breaker failure protection shall be realized over a signal from the trip relays to a binary input to the protection relays. This ensures that all trip signals will start the breaker failure function. The breaker failure protection supervises the current and the auxiliary contacts of the circuit breaker.

Generator Circuit Breaker Control

The control of the generator circuit breaker and the related disconnectors/earthing switches shall be implemented in synchronizing device.

Interlocking

The electrical interlocking shall be implemented in the software logic of the control device. The interlocking shall be realized with hardwired release signals. The release signal of the earthing switch and disconnector to and from the HV switchgear will be send as electrical signal. The earthing switch on the SynCon side must be interlocked with a release signal from the SynCon control system (it is only possible to close the earthing switch if the SynCon is stopped).

Synchronizing the SynCon

For the Synchronous condenser synchronizing a synchronizing relay shall be used. This synchronizing relay must work as a synchronizer. The synchronization of the SynCon to the grid shall be part of the start sequence of the SynCon control. In the synchronization step, synchronizing device monitor the voltage, the frequency, and the phase angle on both sides of the generator circuit breaker. The synchronization device will send increase or decrease commands to the excitation system until the Synchronous condenser voltage matches the grid voltage. If the voltage, frequency, and phase angle are within the set limits the close command to the generator circuit breaker will be issued by the synchronizing device.

16.4 Control and Protection SFC-MV Switchgear

The control of the medium voltage feeder for the SFC can be implemented in multifunctional control & protection relays.

16.5 Control of Auxiliary System

The control of the auxiliary system shall be implemented in the SynCon control panel.

16.6 Voltage Regulator for the Tap Changer

The control of the voltage regulator of the Main Transformer (On Load Tap-Changer) and monitor auxiliary transformer (Off Load Tap-Changer) shall be implemented in a SynCon control panel.

16.7 Communication and Time Synchronization

Communication to Control System

The protection and control devices shall be connected to the plant control system through an optical Ethernet communication network configured in a ring or other redundant topology. Communication shall be based on the IEC 61850 standard. All protection and control signals, including trip signals, shall be transmitted to and processed within the plant control system and shall be displayed and monitored through the HMI system.

Time synchronization must be realized over the same interface. Time synchronization to protection devices shall be over network time protocol. TSP shall follow CEA (Cyber Security in Power Sector) Guidelines, 2021.

16.8 Specific Requirement for Phasor Measurement Units (PMUs)

TSP shall supply, install and commission required No. of Phasor Measurement Units (PMUs) as per the "Guidelines on Unified Philosophy for placement of PMUs in Indian Grid" issued vide CEA letter No. CEA-PS-14-12/9/2024-PSETD Division dated 19.03.2025 for the SynCon. The PMUs shall be provided with LAN switch and shall connect with LAN switch of control room of respective substations/ generating stations with Fibre Optic cable. The PMUs shall be connected with the FOTE at Substation/ generating stations for onwards data transmission to the PDC (Phasor Data Concentrator) located at respective RLDC. Configuration work in existing PDC at RLDC for new PMU integration shall be done by respective RLDC, however all the necessary support in this regard shall be ensured by TSP. The maintenance of all the PMUs and associated equipment shall be the responsibility of TSP.

Note: Existing Station owner/s to provide necessary support to integrate different equipment and applications of new extended bays with the existing substation e.g. Communication (through FOTE), Voice etc. for smooth operation and monitoring of new added grid elements.

16.9 Fault Recorder

Devices

The integral fault recorder function of the protection relay shall be used for recording of the current, the voltage and the trip signals during a fault in the electrical system.

If a trip occurs anywhere within the system, all fault recorders of all protection relays shall be triggered by a hardwired binary signal. This ensures that all relevant binary and analogue signals of the whole system will be recorded in case of a fault.

For testing and monitoring purpose, a manual trigger of the fault recorders must be foreseen.

Data Storage

The transfer of the fault/ disturbance records should be performed over the communication interface and the IEC61850 protocol.

Fault Analyses

Evaluation and analyses of the fault records take place on the engineering workstation.

16.10 Generator Disturbance Recorder (DR)

a) One No. microprocessor-based Disturbance Recorder (DR) shall be provided for each synchronous condenser to record graphic form of instantaneous values of voltage and current in all three phases and neutral, open and closed positions of relay contacts and breaker during disturbances.

b) It shall have the facility for slow and fast scan to record transient and dynamic performance of the system.

c) Both slow and fast scan facility shall have atleast 8 analog and 16 digital inputs.

d) The slow scan facility shall be provided with the following minimum features

- The input shall be MW, MVAR, field voltage, frequency and generator terminal voltage etc. Any transducers, if required for interfacing, shall be provided.
- It shall be suitable to record the frequency excursions and response of generator field and governor control on system fluctuations.
- It shall have options to select the scan rate in the range having a min. of 10Hz suitable to facilitate capture of low frequency waveforms in the range of 0.5 - 3Hz.
- The non-volatile memory shall be suitable for recording for a minimum of 15 minute at scan rate corresponding to selected pre-fault zone of recording.

e) The fast scan facility shall be provided with the following minimum features

- The input shall be voltages and current etc. Any transducers, if required for interfacing, shall be provided.
- It shall have scan rate of 1000 Hz or better for sampling each of the analog channel having fundamental frequency of 50 Hz. The frequency response for these channels shall be DC on the lower side to 500 Hz or

better on the upper side. Any interposing devices provided shall be suitable for this frequency response.

- The pre and post fault recording time shall be atleast 200 ms and 5s respectively.

f) All external and internal faults in the DR equipment such as power supply fail, printer faults, paper exhausting, processor failure, memory failure etc. are to be indicated by means of light emitting diodes on the front of the panel of restitution unit. The DR shall be provided with a MMI (man machine interface) through a PC with VDU, keyboard and printer.

g) The internal clock of the system shall be synchronized through the GPS. The output shall be in IEEE/ COMTRADE format. The format shall be compatible for dynamic protection Relay Test Kit Necessary interfacing and software for analysis shall also be provided.

h) The amplitude resolution of the analog channels shall not be less than 16 bit and event resolution for digital channels shall be 1ms or better.

16.11 Metering

Operational Metering

The unit operational metering is measured by multifunction meter and linked to synchronous condenser control system for operation and control purposes.

16.12 SynCon Station Auxiliary Power Supply

The auxiliary supply of SynCon Station shall conform with the system requirements relating to reliability, availability, and redundancy, performing continuously to help ensure that the complete SynCon Station operates as per the requirements. SynCon Station Auxiliary supply including all necessary switchgear (viz. AC/DC, lighting boards etc.) shall be completely separate from the main 765/400/220 kV substation auxiliary supply, all loads of SynCon station shall be fed from this supply. The auxiliary supply provides power to the excitation system, starting system, controllers, cooling system, station supplies, and various other essential and non-essential loads. All essential loads are connected to the DC system of the SynCon Station which is also to be provided separately from the DC system of the main 765/400/220 kV substation.

The auxiliary supply system shall be able to provide a stable supply for the SynCon Station during system faults such as single-phase faults, phase-to-phase faults, and three-phase faults and LVRT (Low Voltage Ride Through) to allow continuous operation of the SynCon Station during these transient events.

Auxiliary Supply System of SynCon Station shall be fed from two independent sources as per CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007. In addition to this one emergency incomer from DG set shall also be there. DG set of SynCon Station shall be separate from DG set of Main Substation.

16.13 Power and control cables, and cabling

(i) For essential auxiliaries, the power and control cables shall be of fire survival type. All other Power and control cables shall be of flame retardant low smoke (FRLS) type.
(ii) Cables to be directly buried shall be essentially armoured type.
(iii) Flame retardant low smoke cables and fire survival cables shall meet test requirements as per relevant American Society of Testing and Materials, International Electrotechnical Commission, Institute of Electrical and Electronics Engineers and Swedish Standards.
(iv) Derating factors for site ambient and ground temperatures, grouping and soil resistivity shall be considered while determining the size of cables.
(v) Cable installation shall be carried out as per relevant IS and other applicable standards.
(vi) Power cables and control cables shall be laid on separate tiers. The laying of different voltage grade cables shall be on different tiers according to the voltage grade of the cables with higher voltage grade cables in topmost tier and control cables in bottommost tier.
(vii) All cables associated with one unit shall preferably be segregated from cables of other units.
(viii) Cable routes for one set of auxiliaries of same unit shall be segregated from the other set.

16.14 Fire Protection System for SynCon Station:

Necessary fire protection for SynCon units and Step-up Transformer shall be required. The main features of these protections are as under.

A) Fire Detection and Alarm System:

Suitable fire detection system using smoke detectors and/or heat detectors shall be provided in SynCon Station for all room and areas. These smoke fire detection systems shall be connected to a separate Fire annunciation system clearly identifying the zone.

B) Hydrant System:

The hydrant system shall be extended from fire-fighting system of the substation in the yard. Suitable number of hydrants shall be provided for protection of SynCon Station equipment in the yard namely Step-up Transformers etc. as applicable for the station. Further suitable number of hydrants shall also be provided for SynCon Station building

HVW System:

HVW (High Velocity Water) Spray system shall be provided for Step-up transformers. The tapping for HVW system shall be done from nearby transformer/Reactor or any other suitable point of the main substation fire-

fighting line.

Fire protection system shall be provided in accordance with the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2023.

17. VISUAL MONITORING SYSTEM FOR WATCH AND WARD OF SynCon STATION

Visual monitoring system (VMS) for effective watch and ward of SynCon station premises covering the areas of entire switchyard, SynCon building, Step-up Transformer, Cooling Towers and Main gate, shall be provided. The TSP shall design, supply, erect, test and commission the complete system including cameras, Digital video recorder system, mounting arrangement for cameras, cables, LAN Switches, UPS and any other items/accessories required to complete the system.

System with Colour IP Cameras for VMS surveillance would be located at various locations including indoor areas and outdoor switchyard. The VMS data partly/completely shall be recorded (minimum for 15 days) and stored on network video recorder.

Features of VMS system shall be as those specified for main substation. The number of cameras and their locations shall be decided in such a way that any location covered in the area can be scanned. The cameras shall be located in such a way to monitor at least:

a) Step-up Transformers.
b) SynCon Cooling System, Electrical and Mechanical Auxiliary area.
c) Entrance to SynCon Station.
d) All other Major Equipments (such as CB, CT, VT, SA etc.)

The cameras can be mounted on structures, buildings or any other suitable mounting arrangement.

Advisory on deployment of CCTV issued by Ministry of Electronics and Information Technology (MEITY) shall be followed.

18. Spares, Special Tools and Tackles

Considering high technology proprietary equipment of the SynCon TSP shall ensure necessary spares are procured to maintain the necessary reliability and availability of SynCon Station. Further all necessary special tools and tackles required for erection, testing, commissioning and maintenance of equipment shall also be taken.

19. Losses

19.1 Calculation of losses

The TSP must guarantee total losses of less than 2% of highest reactive power output of SynCon Station at PCC for complete Synchronous Condenser Station,

under the following conditions:

a) At 40°C ambient temperature for specified Short Circuit Contribution at Point of Common Coupling
b) Specified rated frequency & voltage at Point of Common Coupling
The TSP shall calculate the total losses of the Synchronous Condenser Unit at each operating point specified below which must meet the guaranteed total losses mentioned above. The calculation of guarantee total losses shall include losses of all the components up to the PCC including losses of the synchronous condenser, flywheel (if applicable), IPB, transformer and the relevant auxiliary systems like pumps, fans, excitation system, building HVAC etc., whether conducting currents or not, based on the above assumptions.

The operating points shall be as follows:

i) Maximum Capacitive Output.
ii) Maximum Inductive Output; and
iii) Zero MVAr Output.

The actual losses shall be measured during SAT.

19.2 Loss measurement

Procedure according to IEC 60034-2-2 using the retardation method:

Losses will be determined by measurement of partial losses using retardation method according to the ITP and as specified in IEC 60034-2.1, chapter 7.1.1, method 2-1-2C: Summation of separate losses without a full load test. Short circuit test for the determination of the additional load losses to be applied for one type of synchronous machine per plant.

20. Availability and Reliability

20.1 Availability

The percentage availability of Synchronous Condenser is defined as follows:

$$\%\ Availability = \frac{Total\ time\ SynCon\ is\ able\ to\ Perfrom\ specified\ Duty}{Total\ time\ Period} x\ 100$$

Synchronous Condenser shall be considered to be available for service only if it is able to perform the whole of the specified duty. Operation with limited control functions or within a limited range of outputs (any parameters i.e. Inertia, Short Circuit MVA and Capacitive and Inductive MVAr) due to a subsystem failure shall be treated as unscheduled servicing downtime. The period basis for availability calculation shall be 12 months (365 days).

The total time period during which the SynCon Station is not able to perform the specified duty shall include Planned Outage hours (POH), Maintenance Outage Hours (MOH) and Forced Outage Hours (FOH).

Planned Outage (POH = Planned Outage Hours) is the state where the Equipment is unavailable due to Planned Maintenance activities (Scheduled Routine Maintenance, Scheduled Annual and Biennial Maintenance, Small Revisions and

Major Revisions) that require the shutdown of the Equipment. Such activities leading to a Planned Outage.

Unplanned Outage

Unplanned Outage is the state where the Equipment is unavailable but is not in the Planned Outage state.

The Unplanned Outage can be due to **Forced Outage Hours** (FOH = Forced Outage Hours) or due to **Maintenance Outage Hours** (MOH = Maintenance Outage Hours)

Forced Outage is considered as an outage that requires removal of the Equipment from the Available State **immediately** or **within 7 days maximum**.

Maintenance Outage is considered an outage that **does not require immediate removal** from the Available State but requires the Equipment to be removed from the Available State **before the next Planned Outage**. This is scheduled **at least 7 days in advance** (otherwise it's classified as FOH).

20.2 Reliability

In the assessment of reliability, the following events shall also be considered to constitute a SynCon Station outage:

i) A SynCon Station shut down.

ii) A reduction of SynCon Station capacity (any parameters i.e. Inertia, Short Circuit MVA and Capacitive and Inductive MVAr) due to an outage of any component of SynCon Station

The calculated reliability of the complete SynCon Station shall be equal to or exceed the following design target values.

	Design target for SynCon Station	Max acceptable Guaranteed value for SynCon Station
Total Number of Forced Outages	3	5

Here definition of Forced Outage shall be considered as same as given in the "20.1 Availability".

The period basis for availability calculation shall be 12 months (365 days).

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, CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, CERC (Communication System for inter-State transmission of electricity) Regulations, 2017, CEA (Cyber Security in Power Sector) Guidelines, 2021, CEA Guidelines on Unified Philosophy for placement of PMUs in Indian Grid, March 2025, CERC Guidelines on "Interface Requirements" 2024 and all above documents as amended from time to time.

The communication services viz. SCADA, AGC (wherever applicable), VoIP, AMR and PMU have been identified as critical services and therefore shall be provisioned with 2+2 redundancy i.e. 2 channels for Main Control Centre and 2 channels for Backup Control Centre. In order to meet this requirement, suitable redundancy at port and card level need to be ensured by the TSP to avoid any single point of failure which may lead to interruption in real-time grid operation.

PMU to PDC communication (wherever required) shall be through 2 channels to the PDC (main) as there is no backup PDC at present.

Accordingly, all the hardware for communication services of station as stated above shall support dual redundancy for data transmission of station to respective main and backup RLDCs

The complete ISTS communication system commissioned by TSP under the RFP shall be the asset of ISTS and shall be available for usage of ISTS requirements as suggested by CTU from time to time.

In order to meet the requirement for grid management and operation of substations, Transmission Service Provider (TSP) shall provide the following:

C.1.0 Establishment of 765/400kV Lakadia-II S/s

(i) TSP shall supply, install & commission one or more FODP with minimum 672 Fiber capacity with panel and required approach Cables (48F/24F each) with all associated hardware fittings from gantry tower to Control Room for all the incoming lines envisaged under the present scope.

(ii) TSP shall supply, install & commission One or more STM-16 (FOTE) equipment alongwith panel/s supporting minimum **twenty-three (23)** MSP (Multiplex Section Protection – 1+1) STM-16 directions alongwith required interfaces to meet the voice and data communication requirement among **Ahmedabad S/s, Vataman S/s, Halvad S/s, Lakadia-II S/s** and **upcoming RE generators**. These directions shall exclude protected (1+1) local patching among equipment (if any). The suitable DC Power Supply and backup to be provided for communication equipment.

(iii) FODP & FOTE equipment with panels shall be provided in Control Room of **Lakadia-II S/s.** FOTE & FODP Eq can be accommodated in same panel to optimize space.

(iv) 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.

(v) TSP shall deploy Cyber Security System in compliance with CEA (Cyber Security in Power Sector) Guidelines, 2021 and CEA (Cyber Security in Power Sector) Regulation, from its date of publication/ notification and their amendments thereof.

(vi) The maintenance of all the communication equipment and related software, including FOTE, FODP, PMU, approach cable, DCPS alongwith Battery Bank & Cyber Security System shall be the responsibility of TSP.

C.2.0 Lakadia-II - Halvad 765 kV D/c line

On Lakadia-II – Halvad 765kV D/c line, TSP shall supply, install & commission One (1) no. OPGW cable containing 48 Fibres (48F) on one E/W peak and conventional earth wire on other E/W peak. The TSP shall install this OPGW from gantry of Lakadia-II up to the gantry of Halvad with all associated hardware including Vibration Dampers, mid-way & gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at end Substations.

(i) The transmission line length is 140 kms (approx.), where repeater may not be required to meet the link budget requirement of Lakadia-II – Halvad link. However, after survey link length may exceed to 220 kms. To meet link budget requirement of Lakadia-II – Halvad link (including service loops and sag etc.) 1 set of FOTE at repeater station to be provided by TSP.

(ii) TSP shall finalize the location of repeater station depending upon the actual site conditions. Further TSP shall comply with the requirements mentioned as per Appendix-F.1.

(iii) Maintenance of OPGW Cable, OPGW Hardware & repeater equipment & items associated with repeater shelter shall be the responsibility of TSP.

C.3.0 2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765 kV D/c line

(i) TSP shall supply, install & commission one or more FODP with minimum 144 Fiber capacity with panel and required approach Cables (48F each) with all associated hardware fittings from gantry towers to Bay Kiosks and from the Bay Kiosks to Control room.

(ii) TSP shall supply, install & commission One or more STM-16 (FOTE) equipment alongwith panel/s supporting minimum **three (3)** MSP (Multiplex Section Protection – 1+1) STM-16 directions alongwith required interfaces at Lakadia-II S/s to meet the voice and data communication requirement between **Halvad S/s** and **Lakadia-II S/s**. These directions shall exclude protected (1+1) local patching among equipment (if any). 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/ upcoming FOTE at control room of existing/ upcoming **Halvad S/s** which shall be communicating with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing/ upcoming FOTE/FODP panels in control room for integration with the existing/ upcoming FOTE for onwards data transmission.

In case spare optical direction is not available in the existing/ upcoming FOTE at the control room, the TSP shall coordinate with station owner to reconfigure the directions in existing/ upcoming FOTE at control room. Alternatively, The TSP may integrate the FOTE under the present scope with existing/ upcoming FOTE in the nearby Kiosk connected to the control room FOTE (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/ upcoming 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.

The maintenance of all the communication equipment including FOTE, PMU, FODP, approach cable, DCPS alongwith Battery Bank shall be the responsibility of TSP.

C.4.0 Lakadia-II – Ahmedabad 765kV D/c line

(i) On Lakadia-II – Ahmedabad 765kV D/c line, TSP shall supply, install & commission One (1) no. OPGW cable containing 48 Fibres (48F) on one E/W peak and conventional earth wire on other E/W peak. The TSP shall install this OPGW from gantry **of Lakadia-II** up to the gantry of **Ahmedabad** with all associated hardware including Vibration Dampers, mid-way & gantry Joint Boxes (called **OPGW Hardware** hereafter) and finally terminate in Joint Boxes at end Substations.

(ii) The transmission line length is **190 kms (approx.),** where repeater may not be required to meet the link budget requirement of **Lakadia-II – Ahmedabad** link. However, after survey link length may exceed to 220 kms. To meet link budget requirement of **Lakadia-II – Ahmedabad** link (including service loops and sag etc.) 1 set of FOTE at repeater station to be provided by TSP.

(iii) TSP shall finalize the location of repeater station depending upon the actual site conditions. Further TSP shall comply with the requirements mentioned as per Appendix-F.1.

(iv) Maintenance of OPGW Cable, OPGW Hardware & repeater equipment & items associated with repeater shelter shall be the responsibility of TSP.

C.5.0 2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765kV D/c line

(i) TSP shall supply, install & commission one or more FODP with minimum 144 Fiber capacity with panel and required approach Cables (48F each) with all associated hardware fittings from gantry towers to Bay Kiosks and from the Bay Kiosks to Control room.

(ii) TSP shall supply, install & commission One or more STM-16 (FOTE) equipment alongwith panel/s supporting minimum **three (3)** MSP (Multiplex Section Protection – 1+1) STM-16 directions alongwith required interfaces at Ahmedabad S/s meet the voice and data communication requirement between **Ahmedabad S/s** and **Lakadia-II S/s**. These directions shall exclude protected (1+1) local patching among equipment (if any). 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/ upcoming FOTE at control room of existing/ upcoming **Ahmedabad S/s** which shall be communicating with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing/ upcoming FOTE/FODP panels in control room for integration with the existing/ upcoming FOTE for onwards data transmission.

In case spare optical direction is not available in the existing/ upcoming FOTE at the control room, the TSP shall coordinate with station owner to reconfigure the directions in existing/ upcoming FOTE at control room. Alternatively, The TSP may integrate the FOTE under the present scope with existing/ upcoming FOTE in the nearby Kiosk connected to the control room FOTE (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/ upcoming 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.

The maintenance of all the communication equipment and related software, including FOTE, PMU, FODP, approach cable, DCPS alongwith Battery Bank shall be the responsibility of TSP.

C.6.0 Lakadia-II – Vataman 765kV D/C line

(i) On Lakdia-II – Vataman 765kV D/C line, TSP shall supply, install & commission One (1) No. OPGW cable containing 48 Fibres (48F) on one E/W peak and conventional earth wire on other E/W peak. The TSP shall install this OPGW from

gantry of **Lakadia-II** S/s up to the gantry of **Vataman 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 end Substations.

(ii) The transmission line length is 220 kms (approx.), where repeater may not be required to meet the link budget requirement Lakadia-II – Vataman link. However, after survey link length may exceed to 220 kms. To meet link budget requirement of Lakadia-II – Vataman link (including service loops and sag etc.) 1 set of FOTE at repeater station to be provided by TSP.

(iii) TSP shall finalize the location of repeater station depending upon the actual site conditions. Further TSP shall comply with the requirements mentioned as per Appendix-F.1.

(iv) Maintenance of OPGW Cable, OPGW Hardware & repeater equipment & items associated with repeater shelter shall be the responsibility of TSP.

C.7.0 2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765kV D/C line

(i) TSP shall supply, install & commission one or more FODP with minimum 144 Fiber capacity with panel and required approach Cable (48F each) with all associated hardware fittings from gantry towers to Bay Kiosks and from the Bay Kiosks to Control room.

(ii) TSP shall supply, install & commission One or more STM-16 (FOTE) equipment alongwith panel/s supporting minimum **three (3)** MSP (Multiplex Section Protection – 1+1) STM-16 directions alongwith required interfaces at **Vataman S/s** meet the voice and data communication requirement between **Vataman S/s** and **Lakadia-II S/s**. These directions shall exclude protected (1+1) local patching among equipment (if any). 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/ upcoming FOTE at control room of existing/ upcoming **Vataman S/s** which shall be communicating with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing/ upcoming 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/ upcoming 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 existing/ upcoming FOTE in the nearby Kiosk connected to the control room FOTE (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/ upcoming 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.

The maintenance of all the communication equipment and related software including FOTE, PMU, FODP, approach cable, DCPS alongwith Battery Bank shall be the responsibility of TSP.

C.8.0 Specific Requirement for Phasor Measurement Units (PMUs)

TSP shall supply, install & commission required no. of Phasor Measurement Units (PMUs) as per Guidelines for Unified Philosophy for Placement of Phasor Measurement Units (PMUs) in Indian Grid (along with all amendments if any) dated March 25 and all the applicable Regulations, Standards, Guidelines issued time to time. These PMUs shall be provided with GPS clock and LAN switch and shall connect with LAN switch of control room of respective substations/ generating stations with Fibre Optic cable. These PMUs shall be connected with the FOTE at Substation/ generating stations for onwards data transmission to the PDC (Phasor Data Concentrator) located at respective RLDC. Configuration work in existing PDC at RLDC for new PMU integration shall be done by respective RLDC, however all the necessary support in this regard shall be ensured by TSP. The maintenance of all the PMUs and associated equipment shall be the 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), Voice etc. for smooth operation and monitoring of new added grid elements.

Communication system integration in UNMS/CSMS

TSP is to ensure integration of communication system into UNMS/CSMS as per following:

"The new communication equipment/ system under the present scope shall be compatible for integration with existing regional level NMS system/ Centralized Supervision & Monitoring System (CSMS) i.e. Regional UNMS. The local configuration of the new communication equipment/ system at the station end shall be the responsibility of TSP as per followings. The configuration work in the existing centralized NMS/ UNMS at Control center end, for integration of new Communication equipment/ system shall be done by Regional ULDC Team/ NMT, however all the necessary support in this regard shall be ensured by TSP.

Requirement for integration of Communication Equipment/ system with Regional UNMS:

1. TSP shall ensure that NMS/EMS/NE supplied by them is NBI compliant and all FCAPS functionality is supported in the NBI such as NE Inventory, Hardware Inventory– Shelf/Slot/Card/SFP/Port, Topology, Protections, Alarms, Performance-real time and periodic, Performance KPI parameters (E-1, STM, Ethernet), Remote Configuration, Cross Connects, Trails and Circuits, Services Provisioning (NE), E-1, STM, Ethernet, TX and RX Trace, loop back and details are published in the NBI guide for the configuration parameters.

2. TSP shall be obliged to provide/share all necessary documentations such as NBI Guide/MIB/IDL/WSDL/API files etc. for onward integration of their NMS/EMS/NE with regional UNMS.

3. The following support shall be provided by TSP for integration of their supplied equipment with regional UNMS.
   - Enabling and activating NBI license in their EMS/NMS and providing NBI login access along with User credentials.
   - Assist in verifying NBI Connectivity with UNMS vendor for the successful communication and retrieval of data.
   - Assist in troubleshooting (if required) for NBI connectivity along with UNMS vendor for the communication and retrieval of data.

4. For standalone NE which is not integrated with any EMS/NMS, TSP shall provide modality of complete FCAPS data acquisition as above through industry standard programmatic methods and provide the CLI command manual."

Repeater Requirements

1.1.1 If the repeater location is finalized in the Control Room of a nearby substation, TSP shall provide OPGW to accommodate all the fibers in main transmission line on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and required approach Cable to accommodate all the OPGW fibers 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 required for link budget of respective link.

OR

1.1.2 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 OPGW to accommodate all the fibers in main transmission line on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and required approach Cable/UGFO to accommodate all the OPGW fibers 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

1.1.3 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 required approach Cable to accommodate all the OPGW fibers 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.*

Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)

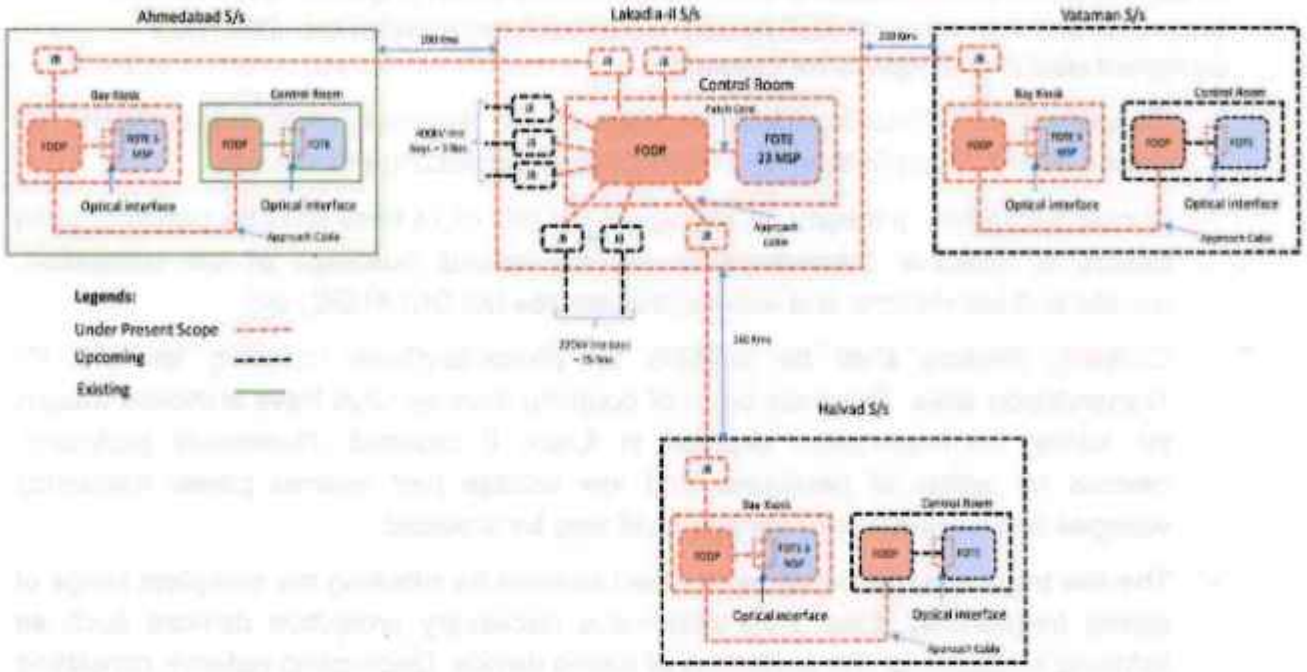


Figure F.1

C.8.0 PLCC and PABX:

Power line carrier communication (PLCC) equipment complete for speech, tele-protection commands and data channels shall be provided on each transmission line. The PLCC equipment shall in brief include the following: -

- Coupling device, Coupling filters 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 400 kV 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 shall be provided by TSP. PLCC to be provided for following lines under present scope:

Sl. No	Line name	PLCC configuration
1.	Lakadia-II – Ahmedabad 765 kV D/c line	1 set Analog PLCC + 1 set Digital Protection Coupler for each circuit at both ends.
2.	Lakadia-II – Vataman 765 kV D/c line	1 set Analog PLCC + 1 set Digital Protection Coupler for each circuit at both ends.
3.	Lakadia-II – Halvad 765kV D/c line	1 set Analog PLCC + 1 set Digital Protection Coupler for each circuit at both ends.

- Further, CVT and Wave trap for all 765 kV and 400 kV 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.

- Two (2) sets of 48 V battery banks for PLCC and communication equipment shall be provided at each new Substation with at least 10-hour battery backup and extended backup, if required.

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 and conditions. As far as shutdown of ISTS lines are concerned the same can be availed by approaching respective Regional Power Committee.

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 and 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 the 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.

1.5 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 general CEA regulations and relevant standards. Kindly confirm.

Reply: The minimum specific creepage distances shall be decided for the site pollution severity in the area of installation keeping in mind further increase in pollution during life of the line. It shall be as per CEA regulations and relevant standards. However, the tower shall be designed considering the porcelain insulators with creepage factor of 31 mm/kV irrespective of type of insulator used.

2.0 Substation

2.1 We understand that space for storage of O&M spare shall be provided by the 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 the responsibility of the TSP. Further, TSP shall follow CEA's "Operation and Maintenance (O&M) guidelines and Standard Format for Memorandum of Understanding between New TSP and Existing TSP" issued by CEA vide its letter No. I/28514/2023 dated 22.06.2023.

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 be 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 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 a 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 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 the respective substation owner for construction of new bays.

Reply: Arrangement of construction power and water is in the scope of TSP.

2.8 It is understood that the 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 the Status of land acquisition for new Substations. Whether the lands have been acquired by BPC and will be transferred to TSP.

Reply: The acquisition of land for new substation is in the scope of TSP.

2.10 We understood that no any dedicated metering CT and CVT required for Line/feeders. Further, we understood that requisite Energy meters for various 765 kV, 400 kV and 220 kV Feeders shall be provided and 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 matches with metering requirement. Requisite Special Energy Meters shall be provided and installed by CTU at the cost of TSP in C&P panel subject to space availability, else, in separate metering panel (to be provided by TSP at its cost).

2.11 A draft copy of the Connection Agreement may be furnished. A draft copy of the Connection Agreement may be furnished.

Reply: Web page link https://www.ctuil.in/formats_gna_transition

2.12 Please clarify whether the spare 765 kV single phase Reactor unit for Bus reactor shall be provided with 1ph 765 kV CB.

Reply: As per RfP, the spare 1-Ph reactor unit shall be utilized for all the bus and switchable line reactor banks (including for future reactor banks). Hence, 1ph 765 kV CB shall also be provided with spare 1-Ph reactor for utilizing with bus reactor as well as switchable line reactor.

2.13 It is understood that existing busbar protection has provision for future bays and also PUs are available for future bays. BPC to confirm availability of CU and PU for bays under present scope of work at existing substations. BPC may kindly confirm availability of communication ports for integrating new PUs with the existing CUs at existing

substations.

Reply: Bus Bar Protection with Central Unit (CU) is required for the new bus section as specified in RfP. Peripheral Units (PUs) shall be provided by the respective bay owner. Further, augmentation/replacement of existing CU, if required, to meet the system requirement shall also be provided for proper functioning of bus bar protection.

2.14 For SCADA, it is understood that necessary process I/O shall be available for future bays and accordingly license for same. BPC to confirm.

Reply: Necessary process I/O along with license shall be in the scope of the successful bidder.

2.15 No separate FF system is envisaged under the present scope of work for existing substation. BPC to confirm.

Reply: Existing fire-fighting systems shall be extended to meet the additional requirements under present scope.

2.16 PLCC for 220 kV Lines are not under the scope of TSP. BPC to Confirm.It is requested to provide Type of Coupling for 220 kV Transmission Lines under present scope.

Reply: PLCC for 220 kV line is in the scope of developer of the line. Inter circuit coupling for 220 kV D/C and phase to phase coupling for 220 kV S/C shall be applicable for PLCC.

2.17 BPC is requested to confirm the availability of space in the existing control rooms at existing substation for execution of extension work under current project.

Reply: Switchyard Panel Rooms are generally required for AIS type substation and relay room are required for GIS type substation. Further, if needed, the control room shall be augmented as per requirement.

3.0 Communication

3.1 What are 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 e.g. OPGW, FOTE etc. and PMU 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 install FOTE/FODP panels in the new Bay Kiosk (Switchyard Panel Room (SPR)) / Bay Kisok/ 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 to complete the communication path upto RLDC.

In Case 132 kV 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 2x48F OPGW shall be required to install by TSP on both earthwire peak on 400 kV and 765 kV lines where two E/W peaks are available. On 220 kV and 132 kV lines where only one E/W peak is available TSP to install one No. 96F OPGW.

Incase 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 1x48F OPGW shall be required to install by TSP on one earthwire peak and conventional earthwire on second earthwire peak, on both Line In and Line Out portion towers of 400 kV and 765 kV lines. On 220 kV and 132 kV lines where only one E/W peak is available TSP to install one No. 48F 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. 48F OPGW to be installed on both E/W peaks for common M/C portion of 765 kV and 400 kV lines.
Incase 220/132 kV lines using multi circuit portion where single E/W peak is available one No. 96F may be installed for common multi circuit portion.

3.5 How PMUs are integrated for new bays at existing Substations?

Reply: PMU data of new bays to be provided in the ethernet port of switch at control room and thereafter to be connected with existing FOTE of existing substation to send data to PDC of RLDC by TSP. These PMUs shall be provided with LAN switch and shall connect with LAN switch of control room of respective substations with Fiber Optic cable. In this regard, the "Guidelines on Unified Philosophy for placement of PMUs in Indian Grid" issued vide letter No. CEA-PS-14-12/9/2024-PSETD Division dated 19.03.2025 shall be followed.

3.6 Is Spare direction available in existing FOTE for integration with new bay kiosk FOTE

Reply: The FOTE under present scope shall be integrated by TSP with the existing FOTE at control room of substation 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.

3.7 What is the distance from LILO point to proposed substation for feasibility of repeater station?

Reply: Tentative Location of LILO point shall be as per survey report of BPC however, exact location to be ascertained after detailed survey by TSP.

3.8 What is the make and model of existing OPGW in case LILO of main line at new substation?

Reply: All OPGW(alongwith optical fibers) meet Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020 and bidder shall install OPGW accordingly.

3.9 In case of LILO of existing line at new substation who shall provide PMUs at existing substation bays?

Reply: TSP shall provide the PMUs for the scope under the RfP in compliance of "Guideline on Unified Philosophy for placement of PMUs in Indian Grid" issued vide letter No. CEA-PS-14-12/9/2024-PSETD Division dated 19.03.2025.

4.0 Planning:

4.1 Whether the Project/ Elements are eligible for early commissioning incentive as per MoP, GoI order dated 15.07.2015.?

Reply: Commissioning is to be done as per the timeline mentioned in RfP. However, early commissioning shall be treated as per applicable CERC Regulations/orders.

Schedule: 2 Scheduled COD

Transmission system for integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)

Sl. No.	Name of the Transmission Element	Scheduled COD	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.	**Establishment of 765/400 kV, 6x1500 MVA & 10x500 MVA, 400/220 kV Lakadia-II (Near Chitrod)** with 2x330 MVAr 765 kV Bus reactor and 2x125 MVAr 400 kV Bus reactor. *[765 kV, 400 kV & 220 kV levels to be established in two sections with Sectionaliser arrangement. The 220 kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400 kV and 765 kV Sectionaliser shall be* ***kept normally closed.*** *(3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-I & 3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-II)]* • 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220 kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos.	36 months (19.10.2029)	22.54%	All the elements are required simultaneously to ensure their utilization

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	(7x110 MVAr single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 765 kV line bays: 6 Nos. (4 Nos. on Sec-I (2 for Halvad D/C & 2 for Ahmedabad D/C) and 2 Nos. on Sec-II (for Vataman)) • 765 kV Sectionaliser bay: 1 -set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220 kV BC– 2 Nos. • 220 kV TBC – 2 Nos. • 1x125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Bus reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 Nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 Nos. on Sec-I & 8 Nos. on Sec-II for interconnection of RE Projects) **Future provision (space for):** • 765 kV line bays along with switchable line reactors – 8 Nos. (2 Nos. on Sec-I & 6 Nos. on Sec-II) • 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II)			

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	+ 4 Nos. 400 kV bays (2 nos. on each section) for HVDC Interconnection • 420 kV, 125 MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II • Synchronous Condenser (+300/-200 MVAr) along with 400 kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)			
2.	Installation of Synchronous Condenser (+300/-200 MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW s • Synchronous Condenser along with associated 400 kV bay-2 Nos. (one each on Sec-I & II)		15.09%	
3.	Lakadia-II – Halvad 765 kV D/C line		12.70%	
3a.	2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765kV D/c line. • 765 kV line bays- 2 nos. (AIS)		0.66%	
3b.	765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of Lakadia-II – Halvad 765 kV D/c line • 240 MVAr, 765 kV Switchable Line Reactor- 2 Nos. (2 for Lakadia-II end) • 765 kV Switchable Line Reactor bay - 2 Nos. for Lakadia-II end.		1.64%	

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	• 80 MVAr spare single-phase reactor at Lakadia-II as proposed under Sl. 9 for above 240 MVAr Switchable Line Reactor shall be utilized.			
4.	Lakadia-II – Ahmedabad 765 kV D/C line		17.18%	
5.	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765 kV D/C line • 765 kV line bays – 2 Nos. (AIS)		0.66%	
6.	765 kV, 330 MVAr Switchable line reactors on each circuit at Lakadia-II end of Lakadia-II – Ahmedabad 765 kV D/C line • 330 MVAr, 765 kV Switchable Line Reactor- 2 Nos. • 765 kV Switchable Line Reactor bay - 2 Nos. • 110 MVAr spare single phase reactor at Lakadia-II S/s is already provided in scope of work above and same shall be used for subject Switchable Line Reactor.		1.82%	
7.	Lakadia-II – Vataman 765 kV D/C line		23.62%	
8.	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765 kV D/C line		0.66%	
9.	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765 kV D/C line • 240 MVAr, 765 kV Switchable Line Reactor- 4 Nos. (2 for Lakadia-II end and 2		3.43%	

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	for Vataman end) • 765 kV Switchable Line Reactor bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80 MVAr spare single-phase reactor at Lakadia-II for above 240 MVAr Switchable Line Reactor. • 80 MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Switchable Line Reactor.			

Note: Effective date as per TSA of present scheme shall be matched with the Effective date of "Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5 GW), Jam Khambhaliya (Phase-II: 5.5 GW) and Jamnagar (Phase-I: 1 GW)" Parts A, B & C.

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: 36 Months (19.10.2029) from effective date.

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

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

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

b. 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%)

For Synchronous Condenser Station:

a. If Actual Transmission System Availability for the month m of contract year n is greater than or equal to 97% and less than or equal to 98.5;

Monthly Transmission Charges MTC(m) = Tmn *1

b. 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 97% and greater than or equal to 95%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 97%)

e. If Actual Transmission System Availability for the month m of contract year falls below 95%;

Monthly Transmission Charges MTC(m) = Tmn * (AA/ 97%) - 0.02 * (Tmn* (AA/ 95%))

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.

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 11,524.88 Million per annum

Proportionate Transmission Charges payable for each Element of the Project:

Sl. No.	Name of the Transmission Element	Scheduled COD	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	**Establishment of 765/400 kV, 6x1500 MVA & 10x500 MVA, 400/220 kV Lakadia-II (Near Chitrod)** with 2x330 MVAr 765 kV Bus reactor and 2x125 MVAr 400 kV Bus reactor. *[765 kV, 400 kV & 220 kV levels to be established in two sections with Sectionaliser arrangement. **The 220 kV Sectionaliser shall be kept normally open and may be closed under contingency condition. The 400 kV and 765 kV Sectionaliser shall be kept normally closed.** (3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-I & 3x1500 MVA 765/400 kV ICTs, 5x500 MVA 400/220 kV ICTs, 1x330 MVAr 765 kV BR & 1x125 MVAr 420 kV BR shall be on Sec-II)]* • 765/400 kV, 1500 MVA ICT – 6 Nos. (19x500 MVA single phase units including one spare ICT Unit) • 400/220 kV ICTs - 10 Nos. (5 on Sec-I & 5 on	36 months (19.10.2029)	22.54%	All the elements are required simultaneously to ensure their utilization

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	Sec-II) • 765 kV ICT bays – 6 Nos. • 400 kV ICT bays – 16 Nos. • 220 kV ICT bays – 10 Nos. • 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAr single phase Reactors including one spare Unit for bus /line reactor) (1 on Sec-I & 1 on Sec-II) • 765 kV Bus reactor bay – 2 Nos. • 765 kV line bays: 6 Nos. (4 Nos. on Sec-I (2 for Halvad D/C & 2 for Ahmedabad D/C) and 2 Nos. on Sec-II (for Vataman)) • 765 kV Sectionaliser bay: 1 set • 400 kV Sectionaliser bay: 1- set • 220 kV Sectionaliser bay: 1- set • 220 kV BC– 2 Nos. • 220 kV TBC – 2 Nos. • 1x125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV Bus reactor bay- 2 Nos. • 400 kV line bays - 3 Nos. (2 Nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • 220 kV line bays - 15 Nos. (7 Nos. on Sec-I & 8 Nos. on Sec-II for interconnection of RE Projects) **Future provision (space for):**			

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	• 765 kV line bays along with switchable line reactors – 8 Nos. (2 Nos. on Sec-I & 6 Nos. on Sec-II) • 765 kV Bus Reactor along with bay: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 400 kV line bays along with switchable line reactors– 7 Nos. (3 on Sec-I & 4 on Sec-II) + 4 Nos. 400 kV bays (2 nos. on each section) for HVDC Interconnection • 420 kV, 125 MVAr Bus Reactor along with bays: 2 Nos. (1 on Sec-I & 1 on Sec-II) • 220 kV line bays: 2 No. on Sec-I & 1 Nos. on Section-II • Synchronous Condenser (+300/-200 MVAr) along with 400 kV bay – 2 Nos. (1 on Sec-I & 1 on Sec-II)			
2	Installation of Synchronous Condenser (+300/-200 MVAr) (Minimum) & Short circuit contribution at PCC of 1200 MVA (Minimum) at Lakadia-II – 2 Nos. Value of Inertia (Minimum) shall be 3000 MW-s • Synchronous Condenser along with associated 400 kV bay-2 Nos. (one each on Sec-I & II)		15.09%	
3	Lakadia-II – Halvad 765 kV D/C line		12.70%	
3a.	2 Nos. 765 kV line bays at Halvad S/s for Lakadia-II – Halvad 765kV D/c line. • 765 kV line bays- 2 nos. (AIS)		0.66%	
3b.	765 kV, 240 MVAr Switchable line reactors on Lakadia-II end of Lakadia-II – Halvad 765 kV D/c		1.64%	

Sl. No.	Name of the Transmission Element	Scheduled COD	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
	line • 240 MVAr, 765 kV Switchable Line Reactor- 2 Nos. (2 for Lakadia-II end) • 765 kV Switchable Line Reactor bay - 2 Nos. for Lakadia-II end. • 80 MVAr spare single-phase reactor at Lakadia-II as proposed under Sl. 9 for above 240 MVAr Switchable Line Reactor shall be utilized.			
4	Lakadia-II – Ahmedabad 765 kV D/C line		17.18%	
5	2 Nos. 765 kV line bays at Ahmedabad S/s for Lakadia-II – Ahmedabad 765 kV D/C line • 765 kV line bays – 2 Nos. (AIS)		0.66%	
6	765 kV, 330 MVAr Switchable line reactors on each circuit at Lakadia-II end of Lakadia-II – Ahmedabad 765 kV D/C line • 330 MVAr, 765 kV Switchable Line Reactor- 2 Nos. • 765 kV Switchable Line Reactor bay - 2 Nos. • 110 MVAr spare single phase reactor at Lakadia-II S/s is already provided in scope of work above and same shall be used for subject Switchable Line Reactor.		1.82%	
7	Lakadia-II – Vataman 765 kV D/C line		23.62%	
8	2 Nos. 765 kV line bays at Vataman S/s for Lakadia-II – Vataman 765 kV D/C line		0.66%	

Sl. No.	Name of the Transmission Element	Scheduled COD	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
9	765 kV, 240 MVAr Switchable line reactors on each circuit at both ends of Lakadia-II – Vataman 765 kV D/C line • 240 MVAr, 765 kV Switchable Line Reactor- 4 Nos. (2 for Lakadia-II end and 2 for Vataman end) • 765 kV Switchable Line Reactor bay - 4 Nos (2 for Lakadia-II end and 2 for Vataman end) • 80 MVAr spare single-phase reactor at Lakadia-II for above 240 MVAr Switchable Line Reactor. • 80 MVAr spare single-phase reactor at Vataman S/s is already available and same shall be used for subject Switchable Line Reactor.		3.43%	

***Note**: Effective date as per TSA of present scheme shall be matched with the Effective date of "Common Transmission System for evacuation of power from Lakadia (Phase-II: 7.5 GW), Jam Khambhaliya (Phase-II: 5.5 GW) and Jamnagar (Phase-I: 1 GW)" Parts A, B & C.*

Schedule: 6

Appendix -IV to the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2024

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, 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 the case of the AC system, transmission System Availability shall be calculated separately for each Regional Transmission System and inter-regional transmission system. In the case of the HVDC system, transmission System Availability shall be calculated on a consolidated basis for all inter-state HVDC systems.

2. Transmission system availability factor for nth calendar month ("TAFPn") shall be calculated by considering the 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 transformers 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 the HVDC link, along with associated equipment at both ends, shall be considered as one element;

   vi) **HVDC back-to-back station:** Each block of the HVDC back-to-back station shall be considered as one element. If the associated AC line (necessary for the transfer of inter-regional power through the HVDC back-to-back station) is not available, the HVDC back-to-back station block shall also be considered unavailable;

   vii) **Static Synchronous Compensation ("STATCOM"):** Each STATCOM shall be considered as a separate element.

3. The Availability of the AC and HVDC portion of the Transmission system shall be calculated by considering each category of transmission elements as under:

TAFPn (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
q1	=	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 STATCOM

TAFMn (in %) for HVDC System:

$$= \frac{\sum_{x=1}^{s} Cxbp\,(act) \times AVxbp + \sum_{y=1}^{t} Cy\,(act)btb \times AVybtb}{\sum_{x=1}^{s} Cxbp + \sum_{y=1}^{t} Cy\,btb} \times 100$$

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 the Availability of each category of the transmission elements are as per **Appendix-V**. The weightage factor for each category of transmission elements shall be considered as under:

   (a) For each circuit of the AC line – The 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 stations 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 the 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 an 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 a dispute regarding deemed availability, the matter may be referred to the Chairperson, CEA, within 30 days.

   ii. Switching off of a transmission line to restrict over-voltage and manual tripping of switched reactors as per the directions of the concerned RLDC.

   iii. Shut down of a transmission line due to the Project(s) of NHAI, Railways and Border Road Organization, including for shifting or modification of such transmission line or any other infrastructure project approved by Ministry of Power. Member Secretary, RPC may restrict the deemed availability period to that considered reasonable by him for the work involved; Provided that apart from the deemed availability, any other costs involved in the process of such shutdown of transmission line shall not be borne by the DICs.

Provided that such deemed availability shall be considered only for the period for which DICs are not affected by the shutdown of such transmission line.

6. For the following contingencies, the outage period of transmission elements, as certified by the Member Secretary, RPC, shall be excluded from the total time of the element under the period of consideration for the following contingencies:

   i) Outage of elements due to 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 the 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 a substation or bays owned by another agency causing an 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;

   iii) The outage period which can be excluded for the purpose of sub-clause (i) and (ii) of this clause shall be declared as under:

      a. Maximum up to one month by the Member Secretary, RPC;

      b. Beyond one month and up to three months after the decision at RPC;

      c. Beyond three months by the Commission for which the transmission license shall approach the Commission along with reasons and steps taken to mitigate the outage and restoration timeline.

7. Time frame for certification of transmission system availability: (1) The following schedule shall be followed for certification of availability by the Member Secretary of the concerned RPC:

- Submission of outage data along with documentary proof (if any) and TAFPn calculation by Transmission Licensees to RLDC/ constituents – By the 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 the 3rd of the next month.

Appendix-V

FORMULAE FOR CALCULATION OF AVAILABILITY OF EACH CATEGORY OF TRANSMISSION ELEMENTS

For AC transmission system

AVo(Availability of o no. of AC lines) = $\frac{\sum_{l=1}^{o} Wl(Tl - TNAl)/Tl}{\sum_{l=1}^{o} Wl}$

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) = $\frac{(Tx - TN)}{Tx}$

AV_{ybb} (Availability of an individual HVDC Back-to-back Blocks) = $\frac{(Ty - TNAy)}{Ty}$

For the HVDC transmission system

For the new HVDC commissioned but not completed twelve months:

For first 12 months: [(AV_{cbp} or AV_{ybb})x95% + 85%], subject to a 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;
t	=	Total number of STATCOM;
AVt	=	Availability of t number of STATCOM;
W1	=	Weightage factor for 1st AC line;
W2	=	Weightage factor for 2nd ICT;
Wr1	=	Weightage factor for 1st SVC;
Wm	=	Weightage factor for mth bus reactor;
Wn	=	Weightage factor for nth STATCOM;
T1, T2, T3, ...		The total hours of 1st AC line, 1st ICT, 1st SVC, mth Switched Bus Reactor
Tm, Tn, Tx, Ty		& nth STATCOM, xth HVDC pole, yth HVDC back-to-back blocks during the period under consideration (excluding time period for outages not attributed to transmission licensee for the reasons given in Para 5 of the procedure)
T_{1AM}, T_{2AM}, ...		The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as T_{1AP}, T_{1Ab}, T_{1AX}, T_{1AY} per Para 5 of the procedure) for 1st AC line, 2nd ICT, 1st SVC, mth Switched Bus Reactor, nth STATCOM, xth HVDC pole and yth HVDC back-to-back block

Schedule: 7

Entire Bid (both financial bid and technical bid) of the Selected Bidder to be attached here

Bid dated 05.08.2026 and 28.08.2026 shall be an integral part of this Agreement.

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: 8A

(ISB for CPG)

FORMAT FOR SURETY INSURANCE CONTRACT

(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 of India)

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] (hereinafter referred to as the **'Principal Debtor'** for the purposes of this Surety Insurance Contract as provided in Section 126 of the Indian Contract Act, 1872) having been selected to undertake the Transmission Project on the terms and conditions contained in the Transmission Service Agreement dated ...../ to be executed as per the Model Transmission Service Agreement provided along with the Request for Proposal **('RFP')** and other RFP Project Documents, subject to the condition of providing a Performance Bank Guarantee or a Surety Insurance Contract guaranteeing/insuring the due performance of the obligations under the Transmission Service Agreement, to the Central Transmission Utility of India Limited **('CTUIL')** [herein after referred to as the Nodal Agency], the [Insert name and address of the Insurance Company issuing the Surety Insurance Contract and address of the head office] (hereinafter referred to as **"Surety")** hereby agrees unequivocally, irrevocably, absolutely and unconditionally, without demur, to pay to the Nodal Agency at _____ [Insert Place and Address of the Nodal Agency indicated in Transmission Service Agreement, or to the designated Bank Account of the Nodal Agency, namely] forthwith on demand in writing from the Nodal Agency, or any Officer authorized by it in this behalf, intimated to the Surety at the address mentioned above, any amount as may be decided by the Nodal Agency not exceeding Rupees.....Crores (Rs.....) only [Insert the amount of the Surety Insurance Contract]

The Surety hereby acknowledges, accepts and confirms that the Surety has received from the Principal Debtor, by way of premium the entire consideration for the Surety to execute, in favour of the Nodal Agency, this Surety Insurance Contract, as extended by the Surety from time to time and assuming the obligation to pay to the Nodal Agency the amount in terms hereof, without any requirement for payment of any other consideration to the Surety by the Principal Debtor, or otherwise.

This Surety Insurance Contract shall be valid and binding on the Surety, as the principal obligation of the Surety to pay on demand by the Nodal Agency, and shall not be terminable by notice or any change in the constitution of the Surety or the term of the Transmission Service Agreement or by any other reasons whatsoever and the liability hereunder of the Surety shall not be impaired or discharged by any

extension of time or variations or alternations made, given, or agreed (with or without the knowledge or consent of the Surety) by or between the Principal Debtor and the Nodal Agency.

The liability of the Surety under this Surety Insurance Contract is restricted to Rupees.....Crores (Rs) only. The Surety Insurance Contract shall remain in force until [Insert the date of validity of the Surety Insurance Contract]. The Nodal Agency shall be entitled to invoke this Surety Insurance Contract up to three hundred sixty five (365) days after the last date of the validity of this Surety Insurance Contract.

The Surety hereby expressly agrees that it shall not require any proof except for the written demand from the Nodal Agency, containing the statement that the contractor has failed to meet its contractual obligations raised at the above mentioned address of the Surety (address of Surety office should be a place in NCR only) and the Surety shall pay the amount without reference to the Principal Debtor.

Any such demand made by the Nodal Agency on the Surety shall be conclusive and binding not withstanding any difference between the Nodal Agency and the Principal Debtor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Surety undertakes not to revoke this guarantee during its currency without previous consent of the Nodal Agency and further agrees that the Surety Insurance Contract herein contained shall continue to be enforceable till the Nodal Agency discharges this contract or till the expiry of tenor (including Claim period) whichever is earlier.

The Surety shall make payment hereunder within two (02) working days on first demand without restriction or conditions and notwithstanding any objection by the Principal Debtor, namely, ... [Insert name of SPV], or ..... [Insert name of the Selected Bidder], or ..... [Insert name of the TSP] and/or any other person. The Surety shall not require the Nodal Agency to justify the invocation of this Surety Insurance Contract, nor shall the Surety have any recourse against the Nodal Agency in respect of any payment made hereunder.

This **SURETY INSURANCE CONTRACT** shall be interpreted in accordance with the laws of India.

This SURETY INSURANCE CONTRACT is being executed by the Surety in terms of the IRDAI (Surety Insurance Contract) Guidelines, 2022 and the Surety hereby acknowledges, accepts and confirms that this Surety Insurance Contract shall be a Contract of Guarantee as provided under Section 126 of the Indian Contract Act, 1872 and further shall be covered by Section 14(3)(b) of the Insolvency and Bankruptcy Code, 2016 (as amended) shall be enforceable as such.

The Surety represents that this Surety Insurance Contract has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Surety in the manner provided herein.

This SURETY INSURANCE CONTRACT 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 Surety.

In order to give effect to this surety Bond, the Nodal Agency shall be entitled to act as if the surety insurer were the principal debtor and any change in the constitution of the contractor and/or the surety insurer, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the surety insurer under this surety Bond.

This SURETY INSURANCE CONTRACT shall be a primary obligation of the Surety as a Principal to pay on demand by the Nodal Agency and the Nodal Agency shall not be obliged before enforcing this Surety Insurance Contract to take any action in any court or arbitral proceedings against the Principal Debtor, namely,..... [Insert name of SPV], or ... ...[Insert name of the Selected Bidder], or ....[Insert name of the TSP] and/or any other person, as the case may be, to make any claim against or any demand on the Principal Debtor, namely, ... [Insert name of SPV], or ..... [Insert name of the Selected Bidder], or..... [Insert name of the TSP] and/or any other person, as the case may be, or to give any notice to Principal Debtor, namely..... [Insert name of SPV], or..... [Insert name of the Selected Bidder], or..... [Insert name of the TSP] and/or any other person, 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 the Principal Debtor, namely,.....[Insert name of SPV], or ..... [Insert name of the Selected Bidder], or.....[Insert name of the TSP] and/or any other person, as the case may be.

The Surety acknowledges that this Surety Insurance Contract 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 Provided that any such assignment shall be in compliance with the relevant provisions of the Insurance Act 1938

The Surety hereby agrees and acknowledges that the Nodal Agency shall have a right to invoke this Surety Insurance Contract either in part or in full, as it may deem fit. In case of invocation of this Surety Insurance Contract in part, besides making payment for the part of Surety Insurance Contract invoked, surety at the request of nodal agency shall amend the value of Surety Insurance Contract to the extent of balance amount.

The Surety undertakes not to revoke this Surety Contract during its currency, except with the previous express consent of the Nodal Agency in writing and declares and warrants that it has the power to issue this Surety Contract and the undersigned has full powers to do so on behalf of the Surety

In witness where of:

Signature.....

Name: .....

Power of attorney No/ Employee No. as applicable.: .....

For:

.....[Insert Name of the Surety-Insurance Company]

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 Insurance Company

SCHEDULE: 8B

(POI for CPG)

Format for Issuance of Payment on Order Instrument

Dear Sir,

1. Indian Renewable Energy Development Agency Limited ('IREDA")/PFC/REC has sanctioned a non-fund based limit loan of Rs. (Rupees..... Only) to M/s. .... [Insert name of SPV or selected Bidder] under the Loan Agreement executed on.....to execute Transmission System Projects.

2. 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] for the purposes of this Payment on Order Instrument ("POI") having been selected to undertake the Transmission Project on the terms and conditions contained in the Transmission Service Agreement dated ...../ to be executed as per the draft of the Model Transmission Service Agreement provided along with the Request for Proposal (,,RFP") and other RFP Project Documents, subject to the condition of providing a POI guaranteeing the due performance of the obligations under the Transmission Service Agreement to the Nodal Agency/Central Transmission Utility of India Limited (,,CTUIL"), the .....[Insert name and address of the non-banking financial institutions (IREDA/PFC/REC) issuing the POI and address of the head office] (hereinafter referred to as "Guarantor") hereby agrees unequivocally, irrevocably, absolutely and unconditionally, without demur, to pay to the Nodal Agency at ..... [Insert Place and Address of the Nodal Agency indicated in Transmission Service Agreement, or to the designated Bank Account of the Nodal Agency, namely .....] forthwith on demand in writing from the Nodal Agency, or any Officer authorized by it in this behalf, intimated to the Guarantor at the address mentioned above, any amount as may be decided by the Nodal Agency not exceeding Rupees ..... Crores (Rs) only [Insert the amount of Payment on Order Instrument]

3. At the request of .....and on behalf of M/s. ....., [Insert name of SPV or selected Bidder] this Payment on Order Instrument (POI) for an amount of Rs..... (Rupees .....) is being issued with IREDA/PFC/REC assuming the obligations to remit such amount to CTUIL from the sanctioned loan.

4. This Payment on Order Instrument comes into force immediately and IREDA/PFC/REC confirms that it has sufficient amount out of the sanctioned loan and shall maintain the required amount to pay under this Payment on Order Instrument, during the validity and claim period of this Payment on Order Instrument.

5. This POI has been issued by IREDA/PFC/REC utilizing the credit limit of M/s.....[Insert name of SPV or selected Bidder]

IREDA/PFC/REC confirms that its liability to pay under this Payment on Order Instrument shall be primary and independent of whether at the time of invocation of Payment on Order Instrument, the sanctioned funds are available or not and notwithstanding, the status of M/s [Insert name of SPV or selected Bidder] at the relevant time and to whether IREDA/PFC/REC is able to recover the amount advanced by it to the said developer.

6. IREDA/PFC/REC and M/s..... [Insert name of SPV or selected Bidder] hereby acknowledges, accepts and confirms that this Payment on Order Instrument shall be a Contract of Guarantee as provided under Section 126 of the Indian Contract Act, 1872 and further shall be covered by Section 14(3)(b) of the Insolvency and Bankruptcy Code, 2016 (as amended) shall be enforceable as such.

7. IREDA/PFC/REC liability under this POI is restricted to Rupees Crores (Rs.....) only. This POI shall remain in force until..... [Insert the date of validity of the POI]. The Nodal Agency shall be entitled to invoke this POI up to three hundred sixty-five (365) days after the last date of the validity of this POI. This POI shall be extended from time to time for such period, as may be desired by the TSP.

8. The Guarantor hereby expressly agrees that it shall not require any proof except for the written demand from the Nodal Agency, raised at the above- mentioned address of the Guarantor (address of Guarantor office should be in NCR only) and the Guarantor shall pay the amount to the Nodal Agency without reference to the TSP.

9. Any such demand made by the Nodal Agency on the Guarantor shall be conclusive and binding not withstanding any difference between the Nodal Agency and the TSP or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Guarantor undertakes not to revoke this guarantee during its currency without previous consent of the Nodal Agency and further agrees that the POI herein contained shall continue to be enforceable till the Nodal Agency discharges this contract or till the expiry of tenure or (including Claim period) whichever is earlier.

10. The Guarantor shall make payment hereunder within two (02) working days on first demand without restriction or conditions and notwithstanding any objection or disputes raised by the TSP, namely, ... [Insert name of SPV], or [Insert name of the Selected Bidder], or ..... [Insert name of the TSP] and/or any other person. The Guarantor shall not require the Nodal Agency to justify the invocation of this POI, nor shall the Guarantor have any recourse against the Nodal Agency in respect of any payment made hereunder.

11. This POI shall be interpreted in accordance with the laws of India.

12. The Guarantor represents that this POI Contract has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor in the manner provided herein.

13. This POI 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.

14. This POI Contract shall be a primary obligation of the Guarantor as a Principal to pay on demand by the Nodal Agency and the Nodal Agency shall not be obliged before enforcing this POI Contract to take any action in any court or arbitral proceedings against the TSP, namely, ... [Insert name of SPV], or..... [Insert name of the Selected Bidder], or ..... [Insert name of the TSP] and/or any other person, as the case may be to make any claim against or any demand on the TSP, namely, ... [Insert name of SPV], or.....[Insert name of the Selected Bidder], or ..... [Insert name of the TSP] and/or any other person, as the case may be, or to give any notice to TSP, namely..... [Insert name of SPV], or ..... [Insert name of the Selected Bidder], or.....[Insert name of the TSP] and/or any other person, 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 the TSP, namely, ... [Insert name of SPV], or.....[Insert name of the Selected Bidder], or ..... [Insert name of the TSP] and/or any other person, as the case may be.

15. The Guarantor acknowledges that this POI Contract 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.

16. The Guarantor hereby agrees and acknowledges that the Nodal Agency shall have a right to invoke this POI Contract either in part or in full, as it may deem fit. In case of invocation of this POI Contract in part, besides making payment for the part of POI Contract invoked, Guarantor at the request of Nodal Agency shall amend the value of POI Contract to the extent of balance amount.

IN WITNESS WHERE OF the non- banking financial institutions through its authorized officer, has set its hand and stamp on this..... day of.....at.....

Signature .....

Name:

Power of attorney No.:

.....For:

..... [Insert Name of the non- banking financial institutions Company]

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:

$\Delta T = [(P \times d)]+[1-(1+ d)^(-n)]$

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.

FORM-I

1. Particulars of the Applicant

S.No.	Particulars	Details
I	Name of the Applicant	**Lakadia II Power Transmission Limited**
II	Status	Public Limited Company
III	Address	B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi 110 016
IV	Name, Designation & Address of the contact person	Sh. Haresh Patel Project In-charge, Lakadia II Power Transmission Limited (100% wholly owned subsidiary of Power Grid Corporation of India Limited) C/o ED (Commercial & RC), Power Grid Corporation of India Limited, Floor No. 02, Tower-01, IRCON International Tower, Plot No. 16, Institutional Area, Sector-32, Gurgaon-122003
V	Contact Tele. No.	
VI	Fax No.	0124-2822062
VII	Email ID	regulatory@powergrid.co.in
VIII	Place of Incorporation / Registration	New Delhi, India
IX	Year of Incorporation / Registration	2026
X	Copies of the following documents are enclosed:	
a.	Certificate of Registration	Attached as Annexure – 6 in petition
b.	Copy of Power of Attorney	Attached as Annexure – 14 in petition

2. Particulars of the Project:

(a) Transmission Line :

S.No.	Name (end points location)	Voltage class (kV)	Length (km)	Type (S/C or D/C)
1	Lakadia-II – Halvad 765kV D/C line	765 kV	140 km	D/C
2	Lakadia-II – Ahmedabad 765kV D/C line	765 kV	190 km	D/C
3	Lakadia-II – Vataman 765kV D/C line	765 kV	220 km	D/C

(b) Sub-stations :

S. No.	Name of substation	Voltage Level	Transformer	Reactive Compensation	No. of bays
1	**Lakadia-II S/s**	765 kV	765/400 kV, 1500 MVA ICT - 6 Nos. (19x500 MVA single phase units including one spare ICT Unit)	• 1x330 MVAr, 765 kV bus reactor- 2 Nos. (7x110 MVAR single phase Reactors including one spare Unit for bus /line reactors) (1 on Sec-I and 1 on Sec-II) • 1x240 MVAr, 765 kV switchable line reactor- 4 Nos. • 80MVAr spare single-phase reactor for above 240MVAr SW LR - 2 No. • 1x330 MVAr, 765 kV switchable line reactor- 2 Nos.	• 765 kV ICT bays - 6 Nos. • 765 kV Bus reactor bay – 2 Nos. • 765 kV Sectionalisation bay: 1- set • 765 kV line bays: 6 Nos. (4 Nos. on Sec-I (2 for Halvad D/C & 2 for Ahmedabad D/C) and 2 Nos. on Sec-II (for Vataman)) • 765 kV switchable line reactor bays: 6 Nos.
		400 kV	400/220 kV, 500 MVA ICT-10 Nos. (5 on Sec-I and 5 on Sec-II)	• 125 MVAr, 420 kV bus reactor- 2 Nos. (1 on Sec-I and 1 on Sec-II) • Synchronous Condenser (+300/-200 MVAr) (Minimum) and Short circuit contribution at PCC of 1200 MVA (Minimum) – 2 Nos.	• 400 kV ICT bays – 16 Nos. • 400 kV Sectionaliser bay: 1- set • 400 kV Bus Reactor bays – 2 Nos. • 400 kV line bays - 3 Nos. (2 Nos. on Section-I & 1 No. on Sec-II for interconnection of RE Projects) • Associated 400 kV bay for Syn Con - 2 Nos.
		220 kV			• 220 kV ICT bays - 10 Nos.

S. No.	Name of substation	Voltage Level	Transformer	Reactive Compensation	No. of bays
					• 220 kV Sectionalisation bay: 1 set • 220 kV BC– 2 Nos. • 220 kV TBC – 2 Nos. • 220 kV line bays - 15 Nos. (7 Nos. on Sec-I & 8 Nos. on Sec-II for interconnection of RE Projects)
2	**Ahmedabad S/s**	765 kV		• 1x330 MVAr, 765 kV bus reactor- 2 Nos. • 80 MVAr spare single-phase reactor	• 765 kV line bays: 2 Nos.
3	**Vataman S/S**	765 kV		• 1x240 MVAr, 765 kV switchable line reactor- 2 Nos. • 1x240 MVAr, 765 kV switchable line reactor- 2 Nos. • 80MVAr spare single-phase reactor for above 240MVAr SW LR - 1 No.	• 765 kV line bays: 2 Nos. • 765 kV switchable line reactor bays: 2 Nos.

a) Remarks: Application is being filed for grant of a fresh license

b) Scheduled COD of the project: **19.10.2029**

c) Ageements with CTU (Nodal Agency) for the Project: Transmission Service Agreement (TSA) is enclosed as Annexure-12 to the instant petition.

3. Quoted transmission charges : Rs. 11,524.88 million per annum

4.	(a) Approval of Central Government as per Electricity (Transmission System Planning, Development and Recovery of Inter-state Transmission Charges) Rules, 2021	Copy of Gazette notification is enclosed as Annexure-2 to the petition
	(b) Evaluation report (if made public) by the Bid Process Coordinator	Certificate of Bid Evaluation Committee as furnished by BPC is enclosed Annexure-7 to the petition

5. List of documents enclosed:

a) Certificate of Registration

b) Certificate of Bid Evaluation Committee as furnished by BPC

c) Copy of Power of Attorney

Haresh Uttamlal Patel

Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 20:05:26 +05'30'

Signature of the Applicant

Represented by Haresh Patel

Place: Gurgaon

Date: 19.10.2026

सत्यमेव जयते

INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No.	:	IN-DL00963702122357Y
Certificate Issued Date	:	17-Sep-2026 02:59 PM
Account Reference	:	IMPACC (IV)/ dl1074803/ DELHI/ DL-SWD
Unique Doc. Reference	:	SUBIN-DLDL10748030078064429864 2Y
Purchased by	:	LAKADIA II POWER TRANSMISSION LIMITED
Description of Document	:	Article Others
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	LAKADIA II POWER TRANSMISSION LIMITED
Second Party	:	Not Applicable
Stamp Duty Paid By	:	LAKADIA II POWER TRANSMISSION LIMITED
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

NOTARY
Dhan Singh Nagar
Advocate
R. No.-16726
New Delhi, INDIA
Expiry Date
31-1-2030
GOVT. OF INDIA

Please write or type below this line

General Power of Attorney

Know all men by these presents, we **Lakadia II Power Transmission Limited (LIIPTL)** (hereinafter referred to as LIIPTL which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, and assigns) having its Registered Office at B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi – 110 016 do hereby constitute, appoint and authorize Shri Haresh Uttamlal Patel, Project Incharge of LIIPTL residing at A-602, A-wing, Omsai Aaradhana CHS Ltd., Shiv Vallabh road, Ashokvan, Borivali East, Mumbai, Pin-400066 as our true and lawful attorney, to do in our name and our behalf, all of the acts or things hereinafter mentioned, that is to say:-

Statutory Alert:
1. The authenticity of this stamp certificate should be verified at www.shcilestamp.com or using e-Stamp Mobile App of Stock Holding.
Any discrepancy in the details on this Certificate and as available on the website renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
In case of any discrepancy please inform the Competent Authority.

1. To constitute, and defend legal cases, sign and verify plaints, written statements, petitions and objections, memorandum of appeal, claims, affidavits, applications, re-applications and pleadings of all kinds and to file them in Central Electricity Regulatory Commission (CERC), State Electricity Regulatory Commissions (SERCs), Appellate Tribunal for Electricity (ATE) , Civil, Criminal or Revenue courts, Arbitration, Labour Court, Industrial Tribunal, High Court and Supreme Court, whether having original or appellate jurisdiction and before Government or Local Authorities or Registration Authorities, Tax Authorities, Tribunals, etc.

2. To appear, before various Courts / Tribunals / CERC / SERCs / Appellate Tribunal for Electricity.

3. To appoint any Advocate, Vakil, Pleader, Solicitor or any other legal practitioner as Attorney to appear and conduct case proceedings on behalf of the company and to sign Vakalatnama.

4. To compromise, compound or withdraw cases from any Court / Tribunal / CERC / SERCs / Appellate Tribunal for Electricity.

5. To file petitions/applications or affidavits before the Supreme Court / High Court / CERC / SERCs / Appellate Tribunal for Electricity and to obtain the copies of documents, papers, records etc.

6. To file and receive back documents, to deposit and withdraw money from Courts, Tribunal, Registrar's Office and other Government or Local Authorities and to issue valid receipts thereof.

7. To apply for and obtain refund of stamp duty or court fee, etc.

8. To issue notices and accept service of any summons, notices or orders issued by any Court / Tribunal / CERC / SERCs / Appellate Tribunal for Electricity on behalf of the Company.

9. To execute deeds, agreements, bonds and other documents and returns in connection with the affairs of the company and file them or cause to be filed for Registration, whenever necessary.

10. To issue Project Authority Certificate(s) in respect of contracts for Load Despatch & Communication Systems, Transmission Systems etc. and to lodge claims with the Railways, Transporters, Shipping Agents and Clearing Agents and to settle/compromise such claims.

11. To lodge claims with the Insurance companies, to settle/compromise such claims and on satisfactory settlement thereof, to issue letters of subrogation/power of attorney in favour of Insurance companies.

12. To execute, sign and file applications, undertakings, agreements etc. to or with the Central / State Government(s) / Body(ies) to obtain 'right of way' or any of other Right(s) / Privilege(s) etc.

13. To execute, sign and file applications, undertakings, agreements, bills, documents etc. to or with the Central / State Government(s) / Body(ies) and other authorities / entities including Central Transmission Utility (CTU)/ Grid Controller of India Limited / Central Electricity Authority (CEA)/ CERC with respect to Commissioning of the Project, realization of Transmission charges, to obtain 'right of way' or any of other Right(s) / Privilege(s) etc.

NOTARY
Dhan Singh Nagar
Advocate
Regd. No.-16726
New Delhi INDIA
Expiry Date
31-1-2025
GOVT. OF INDIA

14. To execute Transmission Service Agreement (TSA) with Central Transmission Utility of India Limited (CTUIL)

15. To execute Consultancy, Funding and other Agreements.

16. To act as administrator for e-filing process with CERC and other Statutory authorities.

17. Generally to do all lawful acts, necessary for the above mentioned purposes.

The Company hereby agrees to ratify and confirm all and whatsoever the said Attorney shall lawfully do execute or perform or cause to be done, executed or performed in exercise of the power or authority conferred under and by virtue of this Power of Attorney.

.....

Signed by the within named

Lakadia II Power Transmission Limited

through the hand of

Duly authorized by the Board to issue such Power of Attorney

Dated this ..13th..... day of ..October....., 2026

Accepted

.....

Signature of Attorney

Name: Shri Haresh Uttamlal Patel

Designation: Project Incharge, **Lakadia II Power Transmission Limited**

Address: A-602, A-wing, Omsai Aaradhana CHS Ltd., Shiv Vallabh road, Ashokvan, Borivali East, Mumbai, Pin-400066

Attested

.....

(Signature of the Executant)

Name: Sh. Ajay Kumar Shukla

Designation: Director

Address: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110 016

NOTARY Dhan Singh Nagar Advocate R. No.-16726 New Delhi, INDIA Expiry Date 31-1-2030 GOVT. OF

.....

Signature and Stamp of Notary of the place of execution

WITNESS

ATTESTED NOTARY PUBLIC DELHI

Haresh Uttamlal Patel

Digitally signed by Haresh Uttamlal Patel
Date: 2026.10.19 20:05:52 +05'30'

13 OCT 2026