BEFORE

THE CENTRAL ELECTRICITY REGULATORY COMMISSION,

NEW DELHI

PETITION NO. _____ OF 2024

IN THE MATTER OF

Application 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, 2009 for Grant of separate Transmission License for implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 and Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV bus section-1) on Regulated Tariff Mechanism (RTM) route

AND IN THE MATTER OF

Khavda – Bhuj Transmission Ltd.

....Petitioner

Versus

Adani Renewable Energy Holding Four Limited and Ors.

....Respondents

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Khavda-Bhuj Transmission Limited

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Petitioner

Khavda-Bhuj Transmission Limited

Place: Ahmedabad

Date: 11.03.2024

BEFORE

THE CENTRAL ELECTRICITY REGULATORY COMMISSION,

NEW DELHI

PETITION NO. _____ OF 2024

IN THE MATTER OF

Application 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, 2009 for Grant of separate Transmission License for implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 and Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV bus section-1) on Regulated Tariff Mechanism (RTM) route

AND IN THE MATTER OF

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Adani Renewable Energy Holding Four Limited and Ors.

....Respondents

MEMO OF PARTIES

Khavda – Bhuj Transmission Limited

Having its registered office at;

C/o Khavda - Bhuj Transmission Limited,

C 105, Anand Niketan

New Delhi 110021 ..... Petitioner

Versus

1. Adani Renewable Energy Holding Four Limited

   Adani Corporate House, Shantigram,

   Nr. Vaishno Devi Circle, S G Highway,

   Khodiyar, Ahmedabad – 382421

2. Chief Executive Officer, CTU Planning,

   POWERGRID Corporation of India Limited,

   Saudamini, Plot No.2, Sector-29,

   Gurgaon-122 001

3. Madhya Pradesh Power Management Company Limited (MPPMCL)

   Block No. – 11, Ground Floor, Shakti Bhavan,

Khavda-Bhuj Transmission Limited

Vidhyut Nagar, Rampur,

Jabalpur – 482 008, Madhya Prade

4. Chhattisgarh State Power Distribution Company Limited (CSPDCL)

   P.O. Sunder Nagar, Dangania,

   Raipur – 492013, Chhattisgarh

5. Maharashtra State Electricity Distribution Company Limited (MSEDCL),

   Prakashgad, 4th Floor, Bandra (East),

   Mumbai – 400051

6. Gujarat Urja Vikas Nigam Limited (GUVNL)

   Vidhyut Bhavan, Race Course,

   Vadodara – 390007

7. DNH Power Distribution Corporation Limited,

   66 kV, Amli Ind. Estate, Silvasa – 396230

   Dadar Nagar Haveli

8. Electricity department, Government of Goa,

   Vidyut Bhavan, Near Mandvi Hotel,

   Panaji, Goa – 403001

9. DADRA AND NAGAR HAVELI AND DAMAN AND DIU POWER DISTRIBUTION CORPORATION LIMITED (DNHDDPDCL)

   1st & 2nd Floor, Vidyut Bhavan, Silvassa,

   DADRA & NAGAR HAVELI - 396230

….Respondents

Petitioner

Khavda-Bhuj Transmission Limited

Place: Ahmedabad
Date: 11.03.2024

BEFORE

THE CENTRAL ELECTRICITY REGULATORY COMMISSION,

NEW DELHI

PETITION NO. _____ OF 2024

IN THE MATTER OF

Application 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, 2009 for Grant of separate Transmission License for implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 and Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV bus section-1) on Regulated Tariff Mechanism (RTM) route

AND IN THE MATTER OF

Khavda – Bhuj Transmission Ltd.

....Petitioner

Versus

Adani Renewable Energy Holding Four Limited and Ors.

....Respondents

NOTARY VIJAY C. SHAH AHMEDABAD GUJARAT STATE REGD. 2260/02 GOVT. OF INDIA

Khavda-Bhuj Transmission Limited

6

S. No. 2249 /2024

VIJAY C. SHAH
NOTARY
GOVT. OF INDIA

11 MAR 2024

AFFIDAVIT

I, **Bhavesh Kundalia**, son of **Sh Pradyumna Kundalia**, aged about 61 years, R/o **A63, Luv Kush Towers, Thaltej, Ahmedabad** do hereby solemnly affirm and state on oath as under:

1. That I am the Authorised Representative, of the Petitioner, Khavda – Bhuj Transmission Ltd, and I am fully conversant with the facts and circumstances of the case and I have been duly authorized and am, therefore, competent to affirm this affidavit.

2. That I have read the accompanying submissions being submitted on behalf of Khavda – Bhuj Transmission Ltd and have understood the contents thereof and that the contents therein are true and correct to the best of my knowledge and belief

Bhavesh

DEPONENT

Khavda-Bhuj Transmission Ltd.

NOTARY
VIJAY C. SHAH
AHMEDABAD
GUJARAT STATE
REGD. 2260/02
GOVT. OF INDIA

VERIFICATION

I, **Bhavesh Kundalia**, the above named deponent do hereby verify that the contents of this affidavit are true and correct to the best of my knowledge and belief, no part of it is false and nothing material has been concealed therefrom.

Verified by me on this 11th March, 2024, at Ahmedabad

Bhavesh

DEPONENT

SOLEMNLY AFFIRMED
BEFORE ME

VIJAY C. SHAH
NOTARY
GOVT. OF INDIA

11 MAR 2024

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BEFORE

THE CENTRAL ELECTRICITY REGULATORY COMMISSION,

NEW DELHI

PETITION NO. _____ OF 2024

IN THE MATTER OF

Application 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, 2009 for Grant of separate Transmission License for implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 and Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV bus section-1) on Regulated Tariff Mechanism (RTM) route

AND IN THE MATTER OF

Khavda – Bhuj Transmission Ltd.

....Petitioner

Versus

Adani Renewable Energy Holding Four Limited and Ors.

….Respondents

Khavda-Bhuj Transmission Limited

PETITION / APPLICATION UNDER SECTION 14 & 15 OF THE ELECTRICITY ACT, 2003 FOR GRANT OF TRANSMISSION LICENSE

MOST RESPECTFULLY SHOWETH:

1. The present application is being filed by Khavda – Bhuj Transmission Ltd. (herein after referred to as "Petitioner") under Section 14 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, 2009 for grant of separate Transmission License for implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 and Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV bus section-1) on RTM route.

2. It is most respectfully submitted that Ministry of Power, Government of India, vide Gazette Notification dated 25.09.2020 notified PFC Consulting Limited to be the Bid Process Coordinator (Hereinafter referred as "BPC") for the purpose of selection of Bidder as Transmission Service Provider (Hereinafter referred as "TSP") to establish below mentioned

Khavda-Bhuj Transmission Limited

project through Tariff Based Competitive Bidding process on build, own, operate and maintain basis.

	Name of the Transmission Element	Scheduled COD in months from Effective Date
1.	Establishment of 3X1500 MVA 765/400 kV Khavda (GIS) with 1X330 MVAR 765 kV bus reactor and 1X125 MVAR 420 kV bus reactor • 765/400 kV, 1500 MVA ICT - 3 Nos. • 765 kV ICT bays - 3 Nos. • 400 kV ICT bays - 3 Nos. • 330 MVAR 765 kV bus reactor -1 No. • 125 MVAR 420 kV bus reactor -1 No. • 765 kV reactor bay - 1 Nos. • 765 kV line bay - 2 Nos. • 400 kV reactor bay - 1 No. • 400 kV line bay - 3 Nos. • 500 MVA, 765/400 kV Spare ICT - 1 No. • 110 MVAR, 765 kV, 1-ph reactor (spare unit) - 1 No. **Future Scope: Space for** • 765/400 kV, ICT along with bays - 5 Nos. • 400/220 kV, ICT along with bays- 4 Nos. • 765 kV Line bays along with switchable line reactor- 6 Nos. • 400 kV Line bays – 9 Nos. • 220 kV Line bays - 8 Nos. • 765 kV reactor along with bays - 2 Nos. • 400 kV reactor along with bays – 1 No.	24 months

Khavda-Bhuj Transmission Limited

	Name of the Transmission Element	Scheduled COD in months from Effective Date
	• 765 kV bus sectionalizer- 1 No. • 400 kV bus sectionalizer- 1 No.	
2.	Khavda PS (GIS) – Bhuj PS 765 kV D/c line	
3.	2 nos. of line bays each at Bhuj PS for termination of Khavda PS (GIS) – Bhuj PS 765 kV D/c line • 765 kV AIS line bays – 2 Nos.	

Note:

i. As on date, Adani Green Energy Four Limited (AGEFL) has been granted Stage-I connectivity for 5000 MW and Stage-II Connectivity for 3500 MW at proposed Khavda PS at 400 kV level. Accordingly, 3nos. of 400 kV GIS line bay for termination of the dedicated lines from AGEFL's Solar PV project has been included under the scope of works of Khavda P.S. Further, 1000MW LTA application has been received from AGEFL and the same is under process.

ii. GIS Bay (if any) for completion of diameter in one and half breaker scheme shall also be in the scope of the TSP.

3. Thereafter, a Company under the Companies Act 2013 by the name "Khavda – Bhuj Transmission Limited" having its registered office at C 105, Anand Niketan New Delhi 110021 has been incorporated on 18.05.2021 by PFC Consulting Ltd. (Bid Process Coordinator) as its

100% wholly owned subsidiary to initiate the activities for execution of the Project and subsequently to act as Transmission Service Provider after being acquired by the successful bidder selected through Tariff Based Competitive Bidding process.

4. Subsequently, BPC initiated the process for selection of the successful bidder to acquire the TSP in accordance with the "Tariff Based Competitive Bidding Guidelines for Transmission Service" and "Guidelines for Encouraging Competition in Development of Transmission Projects" issued by Government of India, Ministry of Power under section - 63 of The Electricity Act, 2003 and as amended from time to time. Subsequent to the process of competitive bidding conducted by the BPC, Adani Transmission Limited had been declared as the successful bidder. The Letter of Intent dated 22nd December, 2021 was issued to Adani Transmission Limited (Presently Known as Adani Energy Solutions Limited) by the BPC.

5. Thereafter in accordance with the RFP documents, Adani Transmission Limited on 18th January, 2022 acquired the Khavda - Bhuj Transmission Limited, after execution of the Share Purchase Agreement and completing all procedural requirements specified.

6. Subsequently, based on the application filed by the Khavda – Bhuj Transmission Limited before this Hon'ble Commission, Transmission

license for the project scope was granted vide its order in Petition No. 107/TL/2022 dated 16th June, 2022. Copy of this Hon'ble Commission's order dated 16th June, 2022 along with the Transmission License is enclosed and marked as **Annexure-1**.

7. In addition to above scope, National Committee on Transmission (NCT), vide its Minutes of the 14th Meeting dated 09.06.2023, notified implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 on Regulated Tariff Mechanism (RTM) to Khavda - Bhuj Transmission Limited in line with the MoP office order dated 28.10.2021. The MoP office order dated 28.10.2021 was issued with reference to the Re-constitution of the National Committee on Transmission (NCT) and Terms of Reference of NCT. The Terms of Reference of the NCT as specified in the order is as under:

> *"viii. The NCT shall recommend to Ministry of Power (MoP) for implementation of the ISTS for projects with cost more than Rs 500 crore, along with their mode of implementation i.e. Tariff Based Competitive Bidding (TBCB) / Regulated Tariff Mechanism (RTM), as per the existing Tariff Policy.* ***However, the NCT shall approve the ISTS costing between Rs 100 crore to Rs.500 crore or such limit as prescribed by MoP from time to time, along with their mode of implementation under intimation to MoP.*** *The ISTS costing less than or equal to Rs. 100 crores, or such limit as prescribed by MoP from time to time, will be approved by the CTU along with their mode of implementation under intimation to the*

Khavda-Bhuj Transmission Limited

NCT and MoP. After approval of the ISTS by the NCT or the CTU (as the case may be), the TBCB project shall be allocated to Bid Process Coordinators through Gazette Notification, while the RTM project shall be allocated to CTU."

8. In the above background, NCT approved the implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 on Regulated Tariff Mechanism (RTM) to Khavda-Bhuj Transmission Limited. The copies of NCT Minutes of the 14th Meeting dated 09.06.2023 and MoP office order 28.10.2021 are enclosed as **Annexure - 2** and **Annexure – 3** respectively.

The Scope of the Project is as follows:

SN	**Name of the scheme and Implementation timeframe**	**Estimated Cost (₹ Crores)**	**Remark**
1	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 Implementation timeframe: 24 months from the date of allocation	216	Approved to be implemented under RTM by Khavda Bhuj Transmission Limited

Detailed scope of Part E1 Scheme is given below:

Khavda-Bhuj Transmission Limited

SN	Scope of the Transmission Scheme	Capacity/ Route length
1	Augmentation of transformation capacity at KPS1 (GIS) by 1x1500 MVA, 765/400 kV ICT (8th) on bus section-I	1500 MVA, 765/400 kV ICT – 1 No. 765 kV bays – 2 Nos. on bus Section-I (including 1 No. bay for Dia completion) 400 kV bays – 2 Nos. on bus section-I (including 1 No. bay for Dia completion)

Note:

i. *The TSP shall implement one complete diameter consisting of 2 main bays & 1 Tie Bay at both 765 kV & 400 kV levels of KPS1 (GIS) for completion of diameter (GIS) in one and- half breaker scheme.*

ii. *Further, TSP of KPS1 shall provide space to carry out the above augmentation work.*

9. Chief Engineer & Member Secretary (NCT), vide its letter dated 07.07.2023, requested Central Transmission Utility of India Limited (CTUIL) to take necessary action for implementation of the above scheme. A copy of letter dated 07.07.2023 is attached as **Annexure – 4**.

10. Thereafter, CTUIL, vide its letter dated 10.07.2023, requested the Petitioner to initiate the necessary actions for implementation of the

Khavda-Bhuj Transmission Limited

aforementioned transmission scheme. A copy of letter dated 10.07.2023 is attached as **Annexure – 5.**

11. Further, Consultation Meeting for Evolving Transmission Schemes (CMETS) in Western Region, vide its Minutes of the 25th Meeting dated 29.01.2024, notified implementation of Interconnection of RE developer's DTL at Bay of KPS-1 (400kV Bus section - 1) on Regulated Tariff Mechanism (RTM) to Khavda -Bhuj Transmission Limited in line with the MoP office order dated 28.10.2021. The MoP office order dated 28.10.2021 was issued with reference to the Re-constitution of the National Committee on Transmission (NCT) and Terms of Reference of NCT. The Terms of Reference of the NCT as specified in the order is as under:

> *"viii. The NCT shall recommend to Ministry of Power (MoP) for implementation of the ISTS for projects with cost more than Rs 500 crore, along with their mode of implementation i.e. Tariff Based Competitive Bidding (TBCB) / Regulated Tariff Mechanism (RTM), as per the existing Tariff Policy. However, the NCT shall approve the ISTS costing between Rs 100 crore to Rs.500 crore or such limit as prescribed by MoP from time to time, along with their mode of implementation under intimation to MoP.* ***The ISTS costing less than or equal to Rs. 100 crores, or such limit as prescribed by MoP from time to time, will be approved by the CTU along with their mode of implementation under intimation to the NCT and MoP. After approval of the ISTS by the NCT or the CTU (as the case may be), the TBCB project shall be allocated to Bid Process Coordinators through Gazette Notification, while the RTM project shall be allocated to CTU."***

Khavda-Bhuj Transmission Limited

12. In the above background, CTU approved the implementation of Interconnection of RE developer's DTL at Bay of KPS-1 (400kV Bus section - 1) on Regulated Tariff Mechanism (RTM) to Khavda-Bhuj Transmission Limited. The copies of CMETS Minutes of the 25th Meeting dated 29.01.2024 and MoP office order 28.10.2021 are enclosed as **Annexure – 6** and **Annexure – 3** respectively.

Detailed Scope of the Project is as follows:

SN	**Name of the scheme and Implementation timeframe**	**Estimated Cost (₹ Crores)**	**Remark**
1	Implementation of additional line bay equipment including other miscellaneous works required for physical interconnection of dedicated transmission line of RE Developer at bay no. 412 of KPS-1 (400kV Bus Section-1) Implementation timeframe: 24 months from the date of SPV transfer which is 26.12.2023	4.7	Approved to be implemented under RTM by Khavda Bhuj Transmission Limited

13. Thereafter, CTUIL, vide its letter dated 16.02.2024, requested the Petitioner to initiate the necessary actions for implementation of the

Khavda-Bhuj Transmission Limited

aforementioned transmission scheme. A copy of letter dated 16.02.2024 is attached as **Annexure – 7.**

14. It is humbly submitted that Section-14 of the Electricity Act, 2003 provides that the Appropriate Commission may, on an application made under Section-15 of the Electricity Act, 2003, grant Licence to any person to transmit electricity as a transmission licensee in any area as may be specified in the Licence. The word 'person' has been defined in Section 2(49) of the Act to include any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person. Therefore, the Petitioner under Section 14 of the Electricity Act, 2003 is filing the present Petition/Application inter-alia seeking grant of Transmission Licence for the Project as explained above.

15. The Hon'ble Commission in its CERC (Procedure, Terms & Conditions for grant of Transmission Licence and other related matters) Regulations, 2009 had prescribed the form of Application and also the amount of fee for making an Application for a Transmission Licence and the Petitioner is submitting herewith the Application in such prescribed format along with the fees as per Regulation 7(1) of the said Regulation. Copy of duly filled Form-I is enclosed herewith and marked as **Annexure – 8**.

16. It is most respectfully submitted that the copy of the Application for grant of Transmission Licence is being forwarded to each of the Respondents as per Regulation 7(4) of CERC (Procedure, Terms and Conditions of Transmission Licence and other related matters) Regulations, 2009 read with CERC order dated 22.01.2022 in Suo-motu Petition No. 1/SM/2022.

17. It is further submitted that the Petitioner is submitting/furnishing a copy of the instant Application to Central Transmission Utility, as required under Section 15 (3) of the Act and Regulation 7(6) of CERC (Procedure, Terms and Conditions of Transmission Licence and other related matters) Regulations, 2009 for the recommendation, if any, in accordance with Section 15 (4) simultaneously along with submission of this petition to Hon'ble Commission.

18. The Petitioner has posted the Application for grant of Transmission Licence on the website www.adanienergysolutions.com as required under Regulation 7(4) and 7(5) of CERC (Procedure, Terms and Conditions of Transmission Licence and other related matters) Regulations, 2009 read with CERC order dated 22.01.2022 in Suo-motu Petition No. 1/SM/2022 so as to facilitate the access to the Application by any person through internet.

19. Keeping in view of the above, the Petitioner fulfils the eligibility criteria for grant of transmission licence as stipulated in Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2009 read with CERC order dated 22.01.2022 in Suo-motu Petition No. 1/SM/2022 and therefore the Hon'ble Commission may grant the prayer as prayed for.

20. The Petitioner shall also comply with all the other requirements as provided in the Transmission License Regulations including posting the public notice in Form-II on its website, service on the beneficiaries of the Petitioner's Transmission System. The Petitioner shall place the compliance report on record before the Hon'ble Commission.

21. On completion of the Project, the Applicant shall approach the Hon'ble Commission with the actual cost incurred for determination of transmission charges in accordance with Section 61, 62 of the Electricity Act; 2003.

22. **PRAYER**

The Petitioner hereby humbly prays the Hon'ble Commission to:

a) Grant Separate Transmission Licence to the Applicant for implementation of **"Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1"** and **"Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV bus section-1)"** on Regulated Tariff Mechanism (RTM) basis with detailed scope as per above para 8 and para 12 respectively.

b) Allow the Applicant liberty to approach the Hon'ble Commission for determination of transmission charges for the aforementioned additional scope in Transmission license in accordance with Section 61, 62 of the Electricity Act, 2003.

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

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

Khavda-Bhuj Transmission Limited

Petitioner

Place: Ahmedabad

Date: 11.03.2024

CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 107/TL/2022

Coram:
Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri P. K. Singh, Member

Date of order: 16th June, 2022

In the matter of

Application under Section-14, 15, 79(1)(e) of the Electricity Act, 2003 read with Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission Licence and other related matters) Regulations, 2009 with respect to Grant of Transmission License to Khavda-Bhuj Transmission Limited

And
In the matter of

Khavda-Bhuj Transmission Limited,
C-105, Anand Niketan,
New Delhi-110021. **.....Petitioner**

Versus

1. Adani Renewable Energy Holding Four Limited,
   Adani Corporate House, Shantigram,
   Nr. Vaishno Devi Circle, S G Highway, Khodiyar,
   Ahmedabad- 382421

2. PFC Consulting Limited,
   First Floor, Urja Nidhi,1, Barakhamba Lane, Connaught Place,
   New Delhi-110 001

3. Chief Executive Officer,
   CTU Planning,
   POWERGRID Corporation of India Limited,
   Saudamini, Plot No.2, Sector-29,
   Gurgaon-122 001 **.....Respondents**

Parties present:

Shri Bhavesh Kundalia, KBTL
Shri Afak Pothiawala, KBTL
Shri Naresh Desai, KBTL
Shri Partha Sarathi Das, CTUIL
Shri Bhaskar Laxmanrao Wagh, CTUIL
Shri Siddharth Sharma, CTUIL
Shri Ranjeet Singh Rajput, CTUIL

Shri Sanjay Nayak, PFFCL
Shri Manish Agawal, PFFCL
Shri Kunal Kumar, PFCCL
Ms. Nirmala Meena, PFFCL

ORDER

The Petitioner, Khavda-Bhuj Transmission Limited, has filed the present Petition for grant of transmission licence under Section 14, Section 15 and Section 79(1)(e) of the Electricity Act, 2003 (hereinafter referred to as "the Act") read with the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2009 (hereinafter referred to as "Transmission Licence Regulations") to establish "Transmission Scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I" (hereinafter referred to as "Transmission System" or "Project") on Build, Own, Operate and Maintain (BOOM) basis comprising of the following elements:

	Name of the Transmission Element	***Scheduled COD in months from Effective Date***
1.	*Establishment of 3X1500 MVA 765/400 kV Khavda (GIS) with 1X330 MVAR 765 kV bus reactor and 1X125 MVAR 420 kV bus reactor* • *765/400 kV, 1500 MVA ICT - 3 Nos.* • *765 kV ICT bays - 3 Nos.* • *400 kV ICT bays - 3 Nos.* • *330 MVAR 765 kV bus reactor -1 No.* • *125 MVAR 420 kV bus reactor -1 No.* • *765 kV reactor bay - 1 Nos.* • *765 kV line bay - 2 Nos.* • *400 kV reactor bay - 1 No.* • *400 kV line bay - 3 Nos.* • *500 MVA, 765/400 kV Spare ICT - 1 No.* • *110 MVAR, 765 kV, 1-ph reactor (spare unit) - 1 No.* ***Future Scope: Space for*** • *765/400 kV, ICT along with bays - 5 Nos.* • *400/220 kV, ICT along with bays- 4 Nos.*	*24 months*

	Name of the Transmission Element	Scheduled COD in months from Effective Date
	• *765 kV Line bays along with switchable line reactor- 6 Nos.* • *400 kV Line bays – 9 Nos.* • *220 kV Line bays - 8 Nos.* • *765 kV reactor along with bays - 2 Nos.* • *400 kV reactor along with bays – 1 No.* • *765 kV bus sectionalizer- 1 No.* • *400 kV bus sectionalizer- 1 No.*	
2.	*Khavda PS (GIS) – Bhuj PS 765 kV D/c line*	
3.	*2 nos. of line bays each at Bhuj PS for termination of Khavda PS (GIS) – Bhuj PS 765 kV D/c line* • *765 kV AIS line bays – 2 Nos.*	

Note:

i. As on date, Adani Green Energy Four Limited (AGEFL) has been granted Stage-I connectivity for 5000 MW and Stage-II Connectivity for 3500 MW at proposed Khavda PS at 400 kV level. Accordingly, 3 nos of 400 k V GIS line bay for termination of the dedicated lines from AGEFL`s Solar PV project has been included under the scope of works of Khavda P.S. Further, 1000MW LTA application has been received from AGEFL and the same is under process.

ii. GIS Bay (if any) for completion of diameter in one and half breaker scheme shall also be in the scope of the TSP.

2. Based on the competitive bidding carried out by PFC Consulting Limited (PFCCL) in its capacity as the Bid Process Coordinator (BPC) in accordance with the Guidelines issued by Ministry of Power, Government of India under Section 63 of the Act, Khavda-Bhuj Transmission Limited emerged as the successful bidder with the lowest levelized transmission charges of Rs.1000.33 million per annum.

3. The Commission after considering the application of the Petitioner in the light of the provisions of the Act and the Transmission Licence Regulations, in its order dated 29.4.2022, *prima facie* proposed to grant transmission licence to the Petitioner. Relevant extract of order dated 29.4.2022 is extracted as under:

"*17. We have considered the submissions of the Petitioner and BPC. The proviso to Clause 2.4 of the RfP provides that "if for any reason attributable to the BPC, the*

said activities are not completed by the selected bidder within the above period of ten (10) days as mentioned in this clause, such period of 10 days shall be extended, on a day to day basis till the end of the Bid validity period". Though LoI was issued on 22.12.2021, BPC, vide its letter dated 18.1.2022, in terms of Clause 2.4, Clause 2.5 and Clause 2.6 of RfP extended the date up to 28.1.2022 for completion of all activities by the successful bidder. The selected bidder furnished the Contract Performance Guarantee to the Long Term Transmission Customers of the Project for an amount of Rs.23.40 crore and has acquired hundred percent equity-holding in the applicant company on 18.1.2022 after execution of the Share Purchase Agreement. The TSP on behalf of the selected bidder filed the Application through e-filing for grant of transmission licence and adoption of tariff on 27.1.2022. Considering the material on record, we are prima-facie of the view that the Petitioner satisfies the conditions for grant of inter-State transmission licence under Section 15 of the Act read with Transmission Licence Regulations for construction, operation and maintenance of the Transmission System as described in paragraph 1 of this order. We therefore, direct that a public notice under clause (a) of sub-section (5) of Section 15 of the Act be published to invite suggestions or objections to grant of transmission licence aforesaid. The objections or suggestions, if any, be filed by any person before the Commission, by 20.5.2022."

4. A public notice under Sub-section (5) of Section 15 of the Act was published on 13.5.2022 in all editions of the Hindustan Times (English) and Hindustan (Hindi). No suggestions/ objections have been received from the members of the public in response to the public notice.

5. The Petitioner, vide order dated 29.4.2022, was directed to file an affidavit to the effect that the execution of the transmission project shall not be delayed due to time taken in obtaining statutory clearances required under Request for Proposal (RfP) and the Transmission Service Agreement (TSA) or adjudication of any claim of the Petitioner arising under the TSA.

6. In response, the Petitioner vide its affidavit dated 11.5.2022 has submitted that the claims, if any, shall be in accordance with the provisions of the RfP Project documents. The Petitioner has submitted that the bidding process was governed by the Tariff Based Competitive Bidding Guidelines for the Transmission Service and Standard Bidding Documents issued by the Ministry of Power. The tariff quoted inter-alia takes into consideration the rights and obligations of the developer including the

provisions available to claim time and cost variations as allowed in the TSA. The Petitioner has further submitted that the terms of the TSA are binding on the parties (TSP and LTTCs). The Petitioner has submitted that any claim for escalation in transmission charges or for extension of time that may be raised by the Petitioner in pursuance of such competitive bidding process needs to be dealt with in accordance with terms contained in the TSA. Post selection of the successful bidder and the decision to award the Project, there cannot be a review of the bidding terms including scope of implications of the clauses such as force majeure and change in law etc. specified in the TSA. The Petitioner has submitted that Section 56 of the Indian Contract Act, 1872 provides for frustration of contract and impossibility of performance, etc. and the Commission in number of cases has been giving reliefs as per the provisions of law. The Petitioner has submitted that in terms of Section 28 of the Indian Contract Act, 1872, no restraint in taking legal proceedings in future can be validly placed. The Petitioner has submitted that in terms of the TSA, it would implement the Project as per the provisions of the Article 16.4 of the TSA which is extracted as under:

> *"16.4. Parties to Perform Obligation: Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission or the Arbitration Tribunal as provided in Article 16.3 and save as the Appropriate Commission or the Arbitration Tribunal may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement."*

7. The Petitioner has submitted that claim, if any, made by the Petitioner shall be in accordance with the provisions of the RfP Project documents. We direct that the Petitioner shall remain bound by the commitment given by it under affidavit dated 11.5.2022.

8. In the order dated 29.4.2022, the following provisions of the TSA with regard to quality control and workmanship were taken note of:

(a) As per Article 5.1.1 of the TSA, the TSP at its own cost and expense, shall be responsible for designing, constructing, erecting, completing and commissioning each element of the Project by Scheduled COD in accordance with the various regulations of the Central Electricity Authority.

(b) Article 5.4 of the TSA provides that the TSP shall ensure that the Project is designed, built and completed in a good workmanlike manner using sound engineering and construction practices and using only materials and equipment that are new and of international utility grade quality such that the useful life of the Project will be till the expiry date.

(c) The design, construction and testing of all equipment, facilities, components and systems of the project shall be in accordance with Indian Standards and Codes issued by Bureau of India Standards.

9. Accordingly, the Petitioner was directed to submit information with regard to quality control mechanism available or to be put in place to ensure compliance of the requirements stipulated in Article 5.1.1 and Article 5.4 of the TSA.

10. The Petitioner, vide its affidavit dated 11.5.2022, has submitted as under:

"14. According to the terms of the TSA, there are two external agencies, viz CEA and Lead LTTC, which monitor the quality of the construction of the Transmission Project being constructed by the Applicant. Further, the Applicant under the TSA is entrusted with the obligation of providing on a monthly basis, a progress report to all the Long term Transmission Customer and Central Electricity Authority (CEA), with regard to the project and its execution, to enable them to monitor and co-ordinate the development of the Project. Further, it is most respectfully submitted that in terms of the TSA, the Lead LTTC is duty bound to designate, at the most 3 employees for the purpose of inspecting the progress of the Project. In addition, the CEA may carry out random inspections during the Project execution, as and when deemed necessary by it....

16. In terms of the above quoted provisions of the TSA, there are sufficient checks and balances and the quality control mechanism is already available whereby both, CEA and the Lead LTTC will monitor the overall quality of construction of the Project by the

Applicant to ensure that the Applicant is complying with Article 5.1.1 and 5.4 of the TSA.

18. The Applicant being an experienced entity will ensure that the project is constructed by following the required quality standard and prudent utility practices by putting in place the following:

(i) At the procurement stage, the Qualification Requirement for short listings of a supplier/contractor is done on the basis of the technical specifications as mentioned in the TSA. The purchase order/contract mentions the technical standard and the testing requirements. Material despatch is allowed after the conformance report is validated.

(ii) For tower material, a Manufacturing Quality Plan (MQP) in line with the applicable technical standards and the one followed by CTU is followed.

(iii) For ensuring construction quality, a Field Quality Plan (in line with the standards mentioned in TSA and that followed by CTU) is specified to the contractors in advance. The conformance report to the said document is also maintained at site.

(iv) The construction and material supply quality is also validated with respect to the TSA by the Lenders Independent Engineer during its quarterly construction review."

11. We have considered the submissions of the Petitioner. In the TSA, there is provision for inspection, random inspection and monthly progress reporting of the Project. The Petitioner shall provide monthly progress report along with likely completion date of each element of the Project and its likely execution to CEA and CTUIL. The random inspection may be carried out by CEA and CTUIL as and when deemed necessary. We consider it necessary that CEA and CTUIL devises a mechanism for random inspection of the Project every three months to ensure that the Project is not only being executed as per the schedule, but the quality of equipment and workmanship of the Project conform to the Technical Standards and Grid Standards notified by CEA and IS Specifications.

12. Case was called out for virtual hearing on 14.6.2022 through video conferencing. It was submitted by the representative of the Petitioner that as per order dated 29.4.2022, the Petitioner has submitted the information called for. He further submitted that in response to public notice published by the Commission, no objection has been received.

13. As regards grant of transmission licence, Clauses (15) and (16) of Regulation 7 of Transmission Licence Regulations provide as under:

> *"(15) The Commission may after consideration of the further suggestions and objections, if any, received in response to the public notice as aforesaid, grant licence as nearly as practicable in Form-III attached to these regulations or for reasons to be recorded in writing, reject the application if such application is not in accordance with the provisions of the Act, the rules or regulations made thereunder or any other law for the time being in force or for any other valid reason.*
>
> *(16) The Commission may, before granting licence or rejecting the application, provide an opportunity of hearing to the applicant, the Central Transmission Utility, the long-term customers, or the person who has filed suggestions and objections, or any other person:*
>
> *Provided further that the applicant shall always be given a reasonable opportunity of being heard before rejecting the application."*

14. In our order dated 29.4.2022, we had proposed to grant transmission licence to the Petitioner company and directed for issue of public notice. In response to the public notice, no suggestions/objections have been received. CTU in its letter dated 25.2.2022 has recommended for grant of transmission licence to the Petitioner. We are satisfied that the Petitioner company meets the requirements of the Act and the Transmission Licence Regulations for grant of transmission licence for the subject Transmission System mentioned at paragraph 1 of this order. Accordingly, we direct that transmission licence be granted to the Petitioner, Khavda-Bhuj Transmission Limited, to establish to establish "Transmission Scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I", on Build, Own, Operate and Maintain basis as per the details given in paragraph 1 above.

15. It is expected that while carrying out the survey, the Petitioner has complied with the provisions of clause 2.5.7.3, clause 2.5.7.4 and clause 2.5.7.5 of the RfP. The Petitioner will comply with the provisions of bidding documents and TSA for commissioning of the Project within SCOD.

16. The grant of transmission licence to the Petitioner (hereinafter referred to as "the licensee") is subject to the fulfilment of the following conditions throughout the period of licence:

(a) The transmission licence shall, unless revoked earlier, remain in force for a period of 25 years from the date of issue;

(b) The transmission licensee shall comply with the provisions of the Transmission Licence Regulations or any subsequent enactment thereof and the terms and condition of the TSA during the period of subsistence of the licence.

(c) Since the expiry date as per the TSA is 35 years from the scheduled COD of the Project, the licensee may make an application, two years before the expiry of initial licence period, for grant of licence for another term in accordance with Regulation 13(2) of the Transmission Licence Regulations which shall be considered by the Commission in accordance with law;

(d) The licensee shall not enter into any contract for or otherwise engage in the business of trading in electricity during the period of subsistence of the transmission licence;

(e) The licensee shall have the liability to pay the license fee in accordance with the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012, as amended from time to time or any subsequent enactment thereof. Delay in payment or non-payment of licence fee or a part thereof for a period exceeding sixty days shall be construed as breach of the terms and conditions of the licence;

(f) The licensee shall comply with the directions of the National Load Despatch Centre under Section 26 of the Act, or the Regional Load Despatch Centre under sub-section (3) of Section 28 or sub-section (1) of Section 29 of the Act, as may be issued from time to time for maintaining the availability of the transmission system;

(g) The licensee shall remain bound by the Central Electricity Regulatory Commission (Standard of Performance of inter-State transmission licensees) Regulations, 2012 or subsequent enactment thereof;

(h) The licensee shall provide non-discriminatory open access to its Transmission System for use by any other licensee, including a distribution licensee or an electricity trader, or generating company or any other person in accordance with the Act; the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008; the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009; the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010, as amended from time to time or any subsequent re-enactments thereof;

(i) The licensee shall not undertake any other business for optimum utilization of the Transmission System without prior intimation to the Commission and shall comply with the provisions of the Central Electricity Regulatory Commission (Sharing of Revenue Derived from Utilization of Transmission Assets for other business) Regulations, 2020;

(j) The licensee shall remain bound by provisions of the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time;

(k) The licensee shall remain bound by the provisions of the Act, the rules and regulations framed thereunder, in particular the Transmission Licence Regulations, the Grid Code, the Standards specified by the Central Electricity Authority, orders and directions of the Commission issued from time to time;

(l) The licensee shall ensure execution of the Project within timeline specified in the Schedule 3 of the TSA and as per the Technical Standards and Grid Standards of CEA prescribed in Article 5.1.1 and Article 5.4 of the TSA;

(m) The licensee shall as far as practicable coordinate with the licensee (including deemed licensee) executing the upstream or downstream transmission projects and the Central Electricity Authority and CTUIL for ensuring execution of the Project in a matching timeline; and

(n) The licensee shall submit all such report or information as may be required under Transmission Licence Regulations, Standard of Performance Regulations, Transmission Service Agreement or any other regulation of the Commission or as per the directions of the Commission as may be issued from time to time.

17. Central Electricity Authority shall monitor the execution of the Project and bring to the notice of the Commission any lapse on the part of the licensee to meet the schedule for further appropriate action in accordance with the provisions of the Act and the Transmission Licence Regulations.

18. Let an extract copy of this order be sent to CEA for information and necessary action.

19. Petition No. 107/TL/2022 is allowed in terms of the above.

Sd/-	sd/-	sd/-
(P. K. Singh)	**(Arun Goyal)**	**(I.S. Jha)**
Member	**Member**	**Member**

CENTRAL ELECTRICITY REGULATORY COMMISSION
3rd & 4th Floor Chanderlok, Building, 36 Janpath, New Delhi 110 001
(Tele No.23353503 FAX No.23753923)

Reference No. 102/TL/2022 **01/08/2022**

To

The Secretary
Ministry of Power
Govt. of India
Sharam Shakti Bhavan
Rafi Marg, New Delhi.

The Secretary
Central Electricity Authority
Sewa Bhavan, R.K. Puram
New Delhi

Subject: Grant of transmission licence to KARUR TRANSMISSION LIMITED.

Sir,

In exercise of powers conferred under Section 14 of the Electricity Act, 2003 (36 of 2003), the Commission has granted the licence to KARUR TRANSMISSION LIMITED.

2. I am directed to send herewith a copy of the above licence No. 72/Transmission/2022/CERC, dated 16th June, 2022 for your information.

Yours faithfully,

(T.D. Pant)
Joint Chief (Legal)

Encl: as stated.

Copy to:

1. The Chairman,
   Power Grid Corporation of India Limited,
   Plot No.2, Sector-29,
   Gurgaon-122 001 (Haryana)

2. The Authorised Representative,
   Karur Transmission Limited
   C – 105, Anand Niketan,
   New Delhi - 110021

(T.D. Pant)
Joint Chief (Legal)

केन्द्रीय विद्युत विनियामक आयोग
CENTRAL ELECTRICITY REGULATORY COMMISSION
तीसरा एवं चौथा तल, चंद्रलोक बिल्डिंग, 36 जनपथ, नई दिल्ली–110001
3rd & 4th Floor, Chanderlok Building, 36 Janpath, New Delhi-110001

TRANSMISSION LICENCE

The Central Electricity Regulatory Commission (hereinafter referred to as "Commission"), in exercise of the powers conferred under Section 14 of the Electricity Act, 2003 (36 of 2003) (hereinafter referred to as "Act"), hereby grants the licence to Karur Transmission Limited, having its registered office at C-105, Anand Niketan, New Delhi-110021 (hereinafter referred to as "licensee") to establish "Transmission System for evacuation of power from RE sources in Karur/Tiruppur Wind Energy Zones (Tamil Nadu) (1000 MW) under Phase-I" on Build, Own, Operate and Maintain (BOOM) basis, more specifically described in the schedule attached to this licence, which shall be read as a part and parcel of this licence, subject to the Act, the rules and the terms and conditions specified under the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2009 which shall be read as part and parcel of this licence.

2. The conditions such as but not limited to, completion schedule, transfer value, liquidated damages, Project Implementation Guarantee Deposit, escalation due to domestic inflation, which are specified in bid documents and provisions in the Agreements, shall be treated as part of this licence, unless these provisions are contrary to the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2009.

3. This licence is not transferable, except as provided in the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2009.

4. The grant of licence to the licensee shall not in any way or manner restrict the right of the Commission to grant a licence to any other person within the same area for the transmission system other than the project described in the schedule attached to this licence. The licensee shall not claim any exclusivity.

5. The licence shall, unless revoked earlier, continue to be in force for a period of 25 (twenty five) years from the date of issue.

Copy of the licence endorsed to:-
(1) Ministry of Power, Government of India
(2) Central Electricity Authority
(3) Central Transmission Utility of India Limited

(Harpreet Singh Pruthi)
Secretary

Place: New Delhi
Date : 16th June, 2022

(Harpreet Singh Pruthi)
Secretary

SCHEDULE

Project Related Details:

The project comprises of the following elements of the inter-State Transmission System:

S.No.	Name of the Transmission Element	Scheduled COD- from Effective Date
1	Establishment of 2x500 MVA, 400/230 kV Karur Pooling Station (at a location in between Karur Wind zone and Tiruppur wind zone) 4 Nos. of 230 kV line bays for interconnection of wind projects • 2x500 MVA, 400/230 kV ICTs • 400 kV ICT bay - 2 nos. • 230 kV ICT bay - 2 nos. • 400 kV line bay -4 nos. • 400 kV reactor bay - 2 nos. • 230 kV line bays - 4 nos. • 230 kV Bus coupler bay - 1 no.* • 230 kV Transfer Bus Coupler (TBC) bay - 1 no.* Space provision for Phase-II: i. 400/230 kV ICTs along with bays: 3 nos. ii. 230 kV line bays: 5 nos. iii. 230 kV Bus Sectionaliser bays: 2 nos. Future provisions (Additional Space for): i. 400/230 kV ICTs along with bays: 3 nos. ii. 400 kV line bays: 6 nos. iii. 230 kV line bays: 7 nos.	Matching with schedule of RE developers or 18 months from the date of transfer of SPV whichever is later
2	LILO of both circuits of Pugalur-Pugalur (HVDC) 400 kV D/c line (with Quad Moose ACSR Conductor) at Karur PS	
3	2x125 MVAr, 400 kV Bus reactors at Karur PS	

Note :
* To fulfil the requirement of bus switching scheme.

Licence No. 72/ Transmission /2022/CERC
Authority: Orders of the Commission dated 13.5.2022 and 16.6.2022 in Petition No. 102/TL/2022.

Khavda - Bhuj Transmission Limited

(Harpreet Singh Pruthi)
Secretary

सत्यमेव जयते

केन्द्रीय विद्युत विनियामक आयोग
CENTRAL ELECTRICITY REGULATORY COMMISSION

के वि वि आयोग
CERC

तीसरा एवं चौथा तल, चंद्रलोक बिल्डिंग, 36 जनपथ, नई दिल्ली–110001
3rd & 4th Floor, Chanderlok Building, 36 Janpath, New Delhi-110001

पारेषण अनुज्ञप्ति

केन्द्रीय विद्युत विनियामक आयोग (जिसे इसके पश्चात् 'आयोग' कहा गया है), विद्युत अधिनियम, 2003 (2003 का 36) (जिसे इसके पश्चात् 'अधिनियम' कहा गया है) की धारा 14 के अधीन प्रदत्त शक्तियों का प्रयोग करते हुए, इस अनुज्ञप्ति से संलग्न अनुसूची में विशेष रूप से वर्णित, निर्माण, स्वामित्व, प्रचालन एंव अनुरक्षण (बूम) के आधार पर "फेज–I के अधीन करूर/तिरूप्पुर पवन उर्जा क्षेत्र (तमिलनाडु) (1000 एमडब्ल्यू) में नीकरणीय उर्जा स्रोतो से विद्युत की निकासी के लिए पारेषण प्रणाली" को स्थापित करने के लिए जो इस अनुज्ञप्ति के भाग रुप माने जाएंगे, करूर ट्रांसमिशन लिमिटेड, जिसका रजिस्ट्रीकृत कार्यालय सी–105, आनंद निकेतन, नई दिल्ली–110021 में है (जिसे इसके पश्चात् 'अनुज्ञप्तिधारी' कहा गया है), अधिनियम तथा नियमों तथा केन्द्रीय विद्युत विनियामक आयोग (पारेषण अनुज्ञप्ति प्रदान करने तथा अन्य सहबद्ध विषयों के लिए प्रक्रिया, निबंधन तथा शर्तें) विनियम, 2009 के अधीन विर्निदिष्ट निबंधन तथा शर्तों, जो इस अनुज्ञप्ति के भाग रूप माने जाएंगे, के अधीन रहते हुए, पारेषण अनुज्ञप्ति प्रदान करता है।

2. ऐसी शर्तें, जो समापन अनुसूची, अंतरण मूल्य, परिनिर्धारित नुकसानी, परियोजना कार्यान्वयन गारंटीकृत निक्षेप, स्वदेशी मुद्रास्फीति के कारण वृद्धि, जो बोली दस्तावेजों में विर्निदिष्ट हैं तथा करार के उपबंध हैं, जो सीमित नहीं हैं, इस अनुज्ञप्ति का भाग रूप तब तक समझे जाएंगे, जब तक कि ये उपबंध केन्द्रीय विद्युत विनियामक आयोग (पारेषण अनुज्ञप्ति प्रदान करने तथा अन्य सहबद्ध विषयों के लिए प्रक्रिया, निबंधन तथा शर्तें) विनियम, 2009 के प्रतिकूल न हों।

3. केन्द्रीय विद्युत विनियामक आयोग (पारेषण अनुज्ञप्ति प्रदान करने तथा अन्य सहबद्ध विषयों के लिए प्रक्रिया, निबंधन तथा शर्तें) विनियम, 2009 में अन्यथा उपबंधित के सिवाय, यह अनुज्ञप्ति अंतरणीय नहीं है।

4. अनुज्ञप्तिधारी को अनुज्ञप्ति प्रदान किए जाने से किसी अन्य ऐसे व्यक्ति का इस अनुज्ञप्ति से संलग्न अनुसूची में वर्णित परियोजना से भिन्न पारेषण प्रणाली के लिए उसी क्षेत्र में अनुज्ञप्ति प्रदान करने के लिए आयोग का अधिकार किसी रूप या रीति से निर्बंधित नहीं होगा। अनुज्ञप्तिधारी अनन्य रूप से कोई भी दावा नहीं करेगा।

5. अनुज्ञप्ति जब तक पहले प्रतिसंहृत नहीं कर ली जाए, इसके जारी होने की तारीख से 25 वर्षों की अवधि के लिए प्रवृत्त रहेगी।

अनुज्ञप्ति की प्रति निम्नलिखित को :
(1) विद्युत मंत्रालय, भारत सरकार
(2) केन्द्रीय विद्युत प्राधिकरण
(3) सेन्ट्रल ट्रांसमिशन यूटिलिटि ऑफ इंडिया लिमिटेड

(हरप्रीत सिंह प्रुथी)
सचिव

Khavda Bhuj Transmission Limited

(हरप्रीत सिंह प्रुथी)
सचिव

स्थान : नई दिल्ली
तारीख : 16 जून, 2022

अनुसूची

परियोजना से संबंधित ब्यौरेः

परियोजना में अंतर–राज्यिक पारेषण प्रणाली के निम्नलिखित तत्व सम्मिलित हैंः

क्र.सं.	पारेषण घटक का नाम	प्रभावी तारीख से मास में कमीशनिग की अनुसूचित तारीख
1	2x500 एमवीए 400/230 केवी करूर पूलिंग स्टेशन की स्थापना (करूर विंड जोन और तिरूप्पुर विंड जोन के बिच के स्थान पर) विंड परियोजनाओ के इंटरकनेक्शन के लिए 230 केवी लाइन बे की संख्या* 4 • 2x500 एमवीए 400/230 केवी आईसीटीएस • 400 केवी आईसीटी बे – 2 संख्या • 230 केवी आईसीटी बे – 2 संख्या • 400 केवी लाईन बे – 4 संख्या • 400 केवी रिएक्टर बे – 2 संख्या • 230 केवी लाईन बे – 4 संख्या • 230 केवी बस कपलर बे – 1 संख्या* • 230 केवी ट्रांसफर बस कपलर (टीबीसी) बे – 1 संख्या* फेज–II के लिए स्थान का प्रावधानः I. बे सहित 400/230 केवी आईसीटीएस : 3 संख्या* II. 230 केवी लाईन बे : 5 सख्या III. 230 केवी बस सेक्शनलाइजर बे : 2 संख्या भावी प्रावधान (के लिए अतिरिक्त स्थान) : I. बे सहित 400/230 केवी आईसीटी : 3 संख्या II. 400 केवी लाईन बे : 6 संख्या III. 230 केवी लाईन बे : 7 संख्या	आरई डेवलेपर की अनुसूची के अनुरूप या एसपीवी के अंतरण की तारीख से 18 माह जो भी बाद में है।
2	करूर पीएस पर पुगालुर– पुगालुर (एचवीडीसी) 400 केवी डी/सी लाईन की दोनों सर्किट का लीलो (क्वेद मूस एसीएसआर कंडक्टर सहित)	
3	करूर पीएस में 2x125 एमवीएआरए 400 केवी बस रिएक्टर्स	

नोट :

*बस स्विचिंग स्कीम की अपेक्षा की पूर्ति के लिए।

अनुज्ञप्ति सं॰ 72/पारेषण/2022/केविविआ

प्राधिकार : आयोग की याचिका सं॰ 102/टीएल/2022 में तारीख 13.5.2022 तथा 16.6.2022 के आदेश।

(हरप्रीत सिंह प्रुथी)
सचिव

Annexure - 2

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 चौदहवी बैठक का कार्यवृत - के सम्बन्ध में ।

Subject: Minutes of the 14th Meeting of National Committee on Transmission (NCT) – regarding.

महोदया (Madam) / महोदय (Sir),

The 14th meeting of the "National Committee on Transmission" (NCT) was held on 09th June, 2023. Minutes of the meeting are enclosed herewith.

भवदीय/Yours faithfully,

07.07.2023

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

प्रतिलिपि / Copy to:

Joint Secretary (Trans), Ministry of Power, New Delhi

Khavda - Bhuj Transmission Limited

List of Addresses:

1.	Chairperson, Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2.	Member (Power System), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3.	Member (Economic & Commercial), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	4.	Director (Trans), Ministry of Power Shram Shakti Bhawan, New Delhi-110001.
5.	Sh. Ajay Yadav, Joint Secretary Room no 403, Atal Akshay Urja Bhawan, Opposite CGO Complex gate no 2, Lodhi Road, New Delhi – 110003	6.	Chief Operating Officer, CTUIL, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122 001.
7.	Sh. Rajnath Ram, Adviser (Energy), NITI Aayog, Parliament Street, New Delhi – 110 001.	8.	CMD, Grid Controller of India, B-9, Qutub, Institutional Area, Katwaria Sarai, New Delhi – 110010
9.	Dr. Radheshyam Saha, Ex. Chief Engineer, Central Electricity Authority	10.	Ms. Seema Gupta, Ex. Director (Operations), POWERGRID

Special Invitee

Chief Engineer (PCD), CEA

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Minutes of the 14th meeting of National Committee on Transmission

List of Participants is enclosed at Annex-I.

1 Confirmation of the minutes of the 13th meeting of National Committee on Transmission.

1.1 The minutes of the 13th meeting of NCT held on 12.05.2023 were issued vide CEA letter no CEA-PS-12-13/3/2019-PSPA-II dated 19.05.2023. Comments/observations were not received on the minutes.

1.2 Accordingly, members confirmed the minutes.

2 Status of the transmission schemes noted/approved/recommended to MoP in the 13th meeting of NCT:

2.1 The status of the transmission schemes noted/approved/recommended in the 13th meeting of NCT is tabulated below:

Sl. No.	Name of the Transmission Scheme	Noted/ Recommended / Approved	Survey Agency	MoP approval	Remarks
1.	Establishment of State-of the Art Unified Network Management System (U-NMS) for ISTS and State Utility Communication System for Southern Region	Approved	Not Applicable	Not Applicable (Cost of the scheme being less than Rs. 500 Crore)	Under RTM route
2.	Eastern Region Expansion Scheme-XXXVII (ERES-XXXVII)	Approved	Not Applicable	Not Applicable (Cost of the scheme being less than Rs. 500 Crore)	Under RTM route

3 New Transmission Schemes:

3.1 Augmentation of transformation capacity by 1x1500 MVA, 765/400 kV ICT (3rd) at Maheshwaram (PG) substation in Telangana

3.1.1 As per SRLDC, augmentation of transformation capacity at Maheshwaram by 1x1500 MVA, 765/400 kV ICT is required as existing ICTs (2x1500 MVA) at Maheshwaram (GIS) are over loaded and 'N-1' criterion is not getting satisfied. Additionally, as per the studies carried out as part of the Rolling Plan exercise for the year 2026-27, under N-1 contingency of one ICT, loading on the other is around 114% of the rating and therefore augmentation by 1x1500 MVA, 765/400 kV ICT (3rd) at Maheshwaram is required.

Accordingly, augmentation of transformation capacity at Maheshwaram (PG) by 1x1500 MVA (3rd) for improving reliability and meeting the peak demand of Telangana was discussed and agreed in the 14th CMETS-SR meeting held on 26.12.2022.

3.1.2 After detailed deliberations, augmentation of transformation capacity by 1x1500 MVA (3rd), 765/400 kV ICT at Maheshwaram (PG) substation in Telangana was agreed to be implemented under RTM route by POWERGRID.

3.1.3 Summary of the scheme is given below:

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Augmentation of transformation capacity by 1x1500 MVA, 765/400 kV ICT (3rd) at Maheshwaram (PG) substation in Telangana Implementation timeframe: 21 months from the date of allocation	123.12	Approved to be implemented under RTM route by POWERGRID.

3.1.4 Detailed scope of the scheme is given below:

Sl. No.	**Scope of the Transmission Scheme**	**Capacity / Route length**
1.	Augmentation by 1x1500 MVA, 765/400 kV ICT at Maheshwaram(PG) S/s	• 765/400 kV, 1500 MVA ICT – 1 No. • 765 kV ICT bays – 1 No. (GIS) • 400 kV ICT bays – 1 No. (GIS) • 400 kV GIS duct along with associated support structure – 710 m (total length for three phases) • 765 kV GIS duct along with associated support structure – 800 m (total length for three phases)

3.2 **Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW*)***

3.2.1 Transmission system for evacuation of 15 GW power from Khavda RE Park has already been evolved in 3 phases (Phase-I: 3 GW, Phase-II: 5 GW & Phase-III: 7 GW). Phase I and Phase II transmission schemes are under construction and Phase III transmission scheme is under bidding.

3.2.2 Stage-II connectivity applications for 18.605 GW (KPS-I: 9 GW, KPS-II: 3.755 GW & KPS-III: 5.85 GW) have already been received till January, 2023. Considering the rapid pace of connectivity applications being received in Khavda area and request from GPCL vide e-mail dated 23.12.2022 to consider 30 GW RE potential in Khavda for planning the power evacuation system, transmission system for balance 15 GW Khavda REZ has now been planned in two phases (Phase-IV: 7 GW AC & Phase-V: 8 GW HVDC). The present scheme has been planned to enable the evacuation of additional 7 GW RE power from Khavda RE park under Phase IV.

3.2.3 Member Secretary, NCT, stated that the modified scheme as per deliberations in 12th NCT meeting held on 28.03.2023 and meetings held on 20.04.2023 & 09.05.2023 amongst CEA, CTUIL & GRID-INDIA, had been sent by CTUIL to WRPC vide letter dated 12.05.2023 for views/observations within 10 days. However, no views were received from WRPC in this regard.

3.2.4 After detailed deliberations, the transmission scheme was agreed to be implemented subject to views of WRPC. Subsequently, in the 47th WRPC meeting held on 15.06.2023, the subject scheme was deliberated. However, minutes of WRPC meeting are yet to be issued. Details of the packages formulated for implementation of the scheme is given below:

Sl. No.	Name of the scheme	Implementation mode
1.	Part A	TBCB
2.	Part B	TBCB
3.	Part C	TBCB
4.	Part D	TBCB
5.	Part E1	RTM
6.	Part E2	TBCB
7.	Part E3	RTM
8.	Part E4	RTM

Package wise details of the scheme are given below:

3.2.5 **Phase-IV: Part A - Summary**

Sl. No.	Name of the transmission scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda RE park of Gujarat under Phase-IV (7 GW): Part A Tentative Implementation timeframe: 24 months from SPV transfer and matching with Parts B, C & D of Khavda Ph-IV (7 GW)	4091	Recommended to be implemented through TBCB route.

3.2.6 Detailed scope of Part A Scheme is given below:

	Sl. No.	**Scope of the Transmission Scheme**	**Capacity/ Route length**
	1.	Creation of 765 kV bus section-II at KPS3 (GIS) along with 765 kV Bus Sectionaliser & 1x330 MVAR, 765 kV Bus Reactors on Bus Section-II Bus section – II shall be created at 765 kV & 400 kV level both with 3x1500 MVA, 765/400 kV ICTs at Bus Section-II	Bus Section-II at KPS3 765 kV Bus Sectionaliser – 1 set 1500 MVA, 765/400 kV ICT – 3 Nos. 330 MVAR, 765 kV Bus Reactor – 1 No. 765 kV reactor bay – 1 No. 765 kV ICT bays – 3 Nos.
	2.	Creation of 400 kV bus Section-II at KPS3 (GIS) along with 400 kV Bus Sectionaliser & 1x125 MVAR, 420 kV Bus Reactors on Bus Section-II and 3 Nos. 400 kV bays at Bus Section-II for RE interconnection	Bus Section-II at KPS3 400 kV Bus Sectionaliser – 1 set 125 MVAR, 420 kV Bus Reactors – 1 No.

	Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
			400 kV reactor bay – 1 No. 400 kV ICT bays – 3 Nos. (for ICTs at Sl. 1 above) 400 kV line bays – 3 Nos. (for RE interconnection)
	3.	KPS3 (GIS) – Lakadia (AIS) 765 kV D/C line	Route length: 185 km
	4.	2 Nos. of 765 kV line bays each at KPS3 (GIS) & Lakadia (AIS) for KPS3 (GIS) – Lakadia (AIS) 765 kV D/C line	• 765 kV line bays (GIS) – 2 Nos. (at KPS3 end Bus section-II) • 765 kV line bays (AIS) – 2 Nos. (at Lakadia end)
	5.	±300 MVAR STATCOM with 1x125 MVAR MSC, 2x125 MVAR MSR at KPS3 400 kV Bus section-II	• ±300 MVAR STATCOM (with 1x125 MVAR MSC, 2x125 MVAR MSR) • 400 kV bay – 1 No.
	6.	KPS1 (GIS)– Bhuj PS 765 kV 2nd D/C line	• Route length: 110 km
	7.	2 Nos. of 765 kV line bays each at KPS1 (GIS) & Bhuj PS for KPS1 (GIS) – Bhuj PS 765 kV D/C line	• 765 kV line bays (GIS) – 2 Nos. (at KPS1 end Bus section-II) • 765 kV line bays (AIS) – 2 Nos. (at Bhuj end)
	8.	330 MVAR switchable line reactors at KPS3 end of KPS3 (GIS) – Lakadia 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. • 1x110 MVAR spare switchable reactor unit at KPS3 (GIS) end

Note:

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

ii. TSP of KPS3 shall provide space for work envisaged at Sl. 1, 2, 4, 5 & 8.

iii. The TSP of the present scheme shall arrange for additional land for installation of STATCOM (with MSC/MSR) as specified at Sl. No. 5 at KPS3 and TSP of KPS3 shall provide space for 1 No. 400 kV bay for termination of STATCOM.

iv. TSP of KPS1 and Bhuj PS shall provide space for work envisaged at Sl. No. 7.

v. The TSP of the present scheme shall arrange for additional land adjoining Lakadia S/s for creation of 2 Nos. 765 kV diameter consisting of 1 main bay & 1 Tie bay (for each diameter)

in one-and-half breaker AIS scheme, towards implementation of 2 Nos. 765 kV line bays at Lakadia S/s (at Sl. No. 4) associated with KPS3 – Lakadia 765 kV D/c line and the same shall be extendable in future for integration of 2nd main bay (future line with switchable line reactor) for diameter completion.

vi. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

vii. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.2.7 **Phase-IV: Part B - Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part B Tentative Implementation timeframe: 24 months from SPV transfer and matching with Parts A, C & D of Khavda Ph-IV (7 GW)	4,766	Recommended to be implemented through TBCB route.

3.2.8 Detailed scope of Part B Scheme is given below:

Sl. No.	**Scope of the Transmission Scheme**	**Capacity/ Route length**
1.	Establishment of 2x1500 MVA, 765/400 kV & 2x500 MVA, 400/220 kV GIS S/s at a suitable location South of Olpad (between Olpad and Ichhapore) with 2x330 MVAR, 765 kV & 1x125 MVAR, 420 kV bus reactors **Future Provisions**: Space for ➢ 765/400 kV ICT along with bays- 4 Nos. ➢ 765 kV line bays along with switchable line reactors – 8 Nos. ➢ 765 kV Bus Reactor along with bay:	765/400 kV, 1x1500 MVA ICT-2 Nos. (7x500 MVA single phase units including one spare unit) 400/220 kV, 500 MVA ICT – 2 Nos. 765 kV ICT bays- 2 Nos. 400 kV ICT bays- 4 Nos. 220 kV ICT bays- 2 Nos. 220 kV BC bay – 1 No. 330 MVAR, 765 kV bus

	2 Nos. ➢ 765 kV Sectionaliser bay: 1 - set ➢ 400 kV line bays along with switchable line reactor – 8 Nos. ➢ 400/220 kV ICT along with bays - 8 Nos. ➢ 420 kV Bus Reactor along with bay: 3 Nos. ➢ 400 kV Sectionalization bay: 1- set ➢ 220 kV line bays: 18 Nos. ➢ 220 kV Sectionalization bay: 1 set ➢ 220 kV BC: 1 Nos. ➢ Establishment of 2500 MW, ± 500 kV South Olpad (HVDC) [VSC] terminal station (2x1250 MW)	reactor-2 Nos. 125 MVAR, 420 kV bus reactor-1 No. 765 kV reactor bay- 2 Nos. 765 kV line bay- 4 Nos. 400 kV reactor bay- 1 No. 400 kV line bay- 4 Nos. 110 MVAR, 765 kV, 1-ph reactor (spare unit for line/bus reactor)-1 No.
2.	Vadodara (GIS) –South Olpad (GIS) 765 kV D/C line	Route length: 140 km
3.	240 MVAR switchable line reactors on each ckt at Vadodara(GIS) end of Vadodara(GIS) –South Olpad (GIS) 765 kV D/C line (with NGR bypass arrangement)	• 240 MVAR, 765 kV switchable line reactor- 2 Nos. • Switching equipment for 765 kV line reactor- 2 Nos. • 1x80 MVAR spare bus reactor available at Vadodara (GIS) to be used as spare
4.	2 Nos. of 765 kV line bays at Vadodara (GIS) for Vadodara(GIS) – South Olpad (GIS) 765 kV D/C line	• 765 kV line bays (GIS) – 2 Nos. (at Vadodara end)
5.	LILO of Gandhar – Hazira 400 kV D/c line at South Olpad (GIS) using twin HTLS conductor with minimum capacity of 1700 MVA per ckt at nominal voltage	LILO route length ~ 10 km.
6.	Ahmedabad – South Olpad (GIS) 765 kV D/c line	Route length: 250 km
7.	240 MVAR switchable line reactors on each ckt at Ahmedabad & South Olpad (GIS) end of Ahmedabad – South Olpad (GIS) 765 kV D/c line (with NGR bypass arrangement)	• 240 MVAR, 765 kV switchable line reactor- 4 Nos. [2 for Ahmedabad end and 2 for South Olpad (GIS) end] • Switching equipment for 765 kV line reactor- 4 Nos. [2 for Ahmedabad end and 2 for South Olpad (GIS) end] • 1x80 MVAR, 765 kV 1-ph spare line reactor – 1 No. (for South Olpad end)

		• 1x80 MVAR, 765 kV 1-ph spare line reactor being implemented for Lakadia – Ahmedabad line (under Khavda Ph-II Part B scheme) at Ahmedabad S/s to be used as spare
8.	2 Nos. of 765 kV line bays at Ahmedabad S/s for Ahmedabad – South Olpad (GIS) 765 kV D/c line	• 765 kV line bays (AIS) – 2 Nos. (at Ahmedabad end)

Note:

i. TSP of Vadodara S/s shall provide space for work envisaged at Sl. No. 3 & 4 given above
ii. TSP of Ahmedabad S/s shall provide space for work envisaged at Sl. No. 7 & 8 given above
iii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

iv. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.2.9 Phase-IV: Part C - Summary

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part C Tentative Implementation timeframe: 24 months from SPV transfer and matching with Parts A, B & D of Khavda Ph-IV (7 GW)	5,340	Recommended to be implemented through TBCB route.

3.2.10 Detailed scope of Part C Scheme is given below:

	Sl. No.	**Scope of the Transmission Scheme**	**Capacity / Route length**
	1.	Establishment of 4x1500 MVA, 765/400 kV & 2x500 MVA, 400/220 kV Boisar-II (GIS) S/s with 2x330 MVAR, 765 kV bus reactors and 2x125 MVAR, 420 kV bus	765/400 kV, 1500 MVA ICT- 4 Nos. (13x500 MVA single phase units

	Sl. No.	Scope of the Transmission Scheme	Capacity / Route length
		reactors. (2x1500 MVA, 765/400 kV ICTs shall be on each 400 kV section and 2x500 MVA, 400/220 kV ICTs shall be on 400 kV Bus Section-II. 2x125 MVAR Bus reactors shall be such that one bus reactor is placed on each 400 kV bus section. 400 kV Bus Sectionaliser to be kept under normally OPEN condition) **Future Provisions**: Space for ➢ 765/400 kV ICT along with bays- 2 No. ➢ 765 kV line bays along with switchable line reactors – 8 Nos. ➢ 765 kV Bus Reactor along with bay: 2 No. ➢ 765 kV Sectionaliser bay: 1 - set ➢ 400 kV line bays along with switchable line reactor – 8 Nos. ➢ 400/220 kV ICT along with bays - 6 Nos. ➢ 420 kV Bus Reactor along with bay: 2 No. ➢ 220 kV line bays: 12 Nos. ➢ 220 kV Sectionalization bay: 1 set ➢ 220 kV BC: 1 No.	including one spare unit) 400/220 kV, 500 MVA ICT – 2 Nos. 765 kV ICT bays- 4 Nos. 400 kV ICT bays- 6 Nos. (2 Nos. on Bus Section-I and 4 Nos. on Bus Section-II) 400 kV Bus Sectionaliser-1 set 220 kV ICT bays- 2 Nos. 220 kV BC bay – 1 No. 330 MVAR, 765 kV bus reactor-2 Nos. 125 MVAR, 420 kV bus reactor-2 Nos. 765 kV reactor bays- 2 Nos. 765 kV line bays- 6 Nos. 400 kV reactor bays- 2 Nos. (one on each bus section) 400 kV line bay- 6 Nos. (4 Nos. on bus Section-I and 2 Nos. on bus Section-II)

	Sl. No.	Scope of the Transmission Scheme	Capacity / Route length
			110 MVAR, 765 kV, 1-ph reactor (spare unit for line/bus reactor)-1 No.
	2	South Olpad (GIS) – Boisar-II (GIS) 765 kV D/c line	Route length: 225 km
	3	2 Nos. of 765 kV line bays at South Olpad (GIS) for termination of South Olpad (GIS) – Boisar-II (GIS) 765 kV D/c line	765 kV line bays (GIS) – 2 Nos. (for South Olpad end)
	4	240 MVAR switchable line reactors on each ckt at South Olpad (GIS) & Boisar-II (GIS) end of South Olpad (GIS) – Boisar-II (GIS) 765 kV D/c line (with NGR bypass arrangement)	• 240 MVAR, 765 kV switchable line reactor- 4 [2 for Boisar-II (GIS) and 2 for South Olpad (GIS)] • Switching equipment for 765 kV line reactor- 4 (2 for Boisar-II (GIS) and 2 for South Olpad (GIS)) • 1x80 MVAR, 765 kV 1-ph spare line reactor – 1 No. (for Boisar-II end) • 1x80 MVAR, 765 kV 1-ph spare line reactor proposed for Ahmedabad – South Olpad (GIS) 765 kV line (under Khavda Ph-IV Part B scheme) at South Olpad (GIS) S/s to be used as spare
	5	LILO of Navsari (New) – Padghe (PG) 765 kV D/c line at Boisar-II	LILO route length: 25 km.
	6	Boisar-II (Sec-II) – Velgaon (MH) 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line	Route length: 10 km.
	7	2 Nos. of 400 kV line bays at Velgaon (MH) for termination of Boisar-II – Velgaon (MH) 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line	400 kV line bays (GIS) – 2 Nos. [for Velgaon (MH) end]
	8	LILO of Babhaleswar – Padghe (M) 400 kV D/c line at Boisar-II (Sec-I) using twin HTLS conductor with a minimum capacity of 1700 MVA per ckt at	LILO route length: 65 km.

	Sl. No.	Scope of the Transmission Scheme	Capacity / Route length
		nominal voltage	
	9	80 MVAR switchable line reactors at Bosar-II end of Boisar-II – Babhaleswar 400 kV D/c line (with NGR bypass arrangement) formed after above LILO	• 80 MVAR, 420 kV switchable line reactor including switching equipment- 2 Nos.
	10	±200 MVAR STATCOM with 2x125 MVAR MSC, 1x125 MVAR MSR at 400 kV bus section-I of Boisar-II and ±200 MVAR STATCOM with 2x125 MVAR MSC, 1x125 MVAR MSR at 400 kV bus section-II of Boisar-II	• ±200 MVAR STATCOM (with MSC/MSR) on 400 kV Section-I • 400 kV bay – 1 No. on Section-I • ±200 MVAR STATCOM (with MSC/MSR) on 400 kV section-II • 400 kV bay – 1 No. on Section-II
	11	± 300 MVAR STATCOM with 3x125 MVAR MSC, 1x125 MVAR MSR at 400 kV level of Navsari (New)(PG) S/s with 1 No. of 400 kV bay (GIS)	• ±300 MVAR STATCOM (with MSC/MSR) • 400 kV bay – 1 No.

Note:

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

ii. MSETCL shall carry out reconductoring of the balance portion of Padghe (M) – Boisar-II 400 kV D/c line (i.e. from LILO point upto Padghe(M)) and shall also carry out corresponding upgradation of 400 kV bays at Padghe (M) as may be required in matching time-frame of the LILO line. MSETCL has confirmed the maximum capacity of the line which can be achieved after reconductoring considering clearances in existing towers of Babhaleswar – Padghe (M) 400 kV D/c line as 1700 MVA per ckt.

iii. MSETCL shall implement the LILO of both circuits of Boisar-II – Velgaon 220 kV D/c line at Boisar-II (ISTS) S/s along with 4 Nos. 220 kV GIS bays at Boisar-II in matching time-frame of Boisar-II (ISTS) S/s.

iv. TSP of South Olpad (GIS) S/s shall provide space for work envisaged at Sl. No. 3 & 4.

v. MSETCL shall provide space for the work envisaged at Sl. No. 7 at Velgaon S/s.

vi. TSP of the subject scheme shall implement Inter-tripping scheme on South Olpad (GIS) – Boisar-II (GIS) 765 kV D/c line (for tripping of the switchable line reactor at either end along with the main line breaker).

vii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

viii. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.2.11 **Phase-IV: Part D - Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part D Tentative Implementation timeframe: 24 months from SPV transfer and matching with Parts A, B & C of Khavda Ph-IV (7 GW)	3,455	Recommended to be implemented under TBCB route.

3.2.12 Detailed scope of Part D Scheme is given below:

	Sl. No.	**Scope of the Transmission Scheme**	**Capacity/ Route length**
	1.	Establishment of 2x1500 MVA, 765/400 kV & 3x500 MVA, 400/220 kV Pune-III (GIS) S/s with 2x330 MVAR, 765 kV bus reactor and 2x125 MVAR, 420 kV bus reactor. **Future Provisions**: Space for ➢ 765/400 kV ICT along with bays- 4 No. ➢ 765 kV line bays along with switchable line reactors – 8 Nos. ➢ 765 kV Bus Reactor along with bay: 2 No. ➢ 765 kV Sectionaliser bay: 1 -set ➢ 400 kV line bays along with switchable line reactor – 12 Nos. ➢ 400/220 kV ICT along with bays -5 Nos. ➢ 400 kV Bus Reactor along with bay: 2 No. ➢ 400 kV Sectionalization bay: 1 set ➢ 220 kV line bays: 12 Nos. ➢ 220 kV Sectionalization bay: 1 set ➢ 220 kV BC: 1 No.	765/400 kV, 1500 MVA ICT-2 Nos. (7x500 MVA including one spare unit) 400/220 kV, 500 MVA ICT – 3 Nos. 765 kV ICT bays- 2 Nos. 400 kV ICT bays- 5 Nos. 220 kV ICT bays- 3 Nos. 220 kV BC bay – 1 No. 330 MVAR, 765 kV bus reactor-2 Nos. 125 MVAR, 420 kV bus reactor-2 Nos. 765 kV reactor bay- 2 Nos.

	Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
		➢ STATCOM (±300 MVAR) along with MSC (3x125 MVAR) & MSR (1x125 MVAR): alongwith 1 No. 400 kV bay: 1 No. ➢ 80 MVAR, 765 kV, 1-ph reactor (spare unit for line reactor)-1 No.	765 kV line bay- 6 Nos. 400 kV reactor bay- 2 Nos. 400 kV line bay- 2 Nos. 110 MVAR, 765 kV, 1-ph reactor (spare unit for line/ bus reactor)-1 No.
	2.	Boisar-II – Pune-III 765 kV D/c line	Route length: 200 km
	3.	330 MVAR switchable line reactors at Pune-III end of Boisar-II – Pune-III 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. • 1x110 MVAR spare bus reactor available at Pune-III (GIS) to be used as spare
	4.	2 Nos. of 765 kV line bays at Boisar-II for termination of Boisar-II – Pune-III 765 kV D/c line	• 765 kV line bays (GIS) – 2 Nos. (for Boisar-II end)
	5.	LILO of Narendra (New) – Pune (GIS) 765 kV D/c line at Pune-III	LILO route length: 10 km.
	6.	330 MVAR switchable line reactors at Pune-III end of Narendra (New) – Pune-III(GIS) 765 kV D/c line (with NGR bypass arrangement).	• 330 MVAR, 765 kV switchable line reactor- 2. • Switching equipment for 765 kV line reactor- 2 • 1x110 MVAR spare bus reactor (1-ph) available at Pune-III (GIS) to be used as spare
	7.	LILO of Hinjewadi-Koyna 400 kV S/c line at Pune-III (GIS) S/s	LILO route length: 40 km.
	8.	80 MVAR, 420 kV switchable Line Reactors on each ckt at Pune-III (GIS) end of Pune-III (GIS) – Koyna 400 kV line formed after above LILO (with	• 80 MVAR, 420 kV switchable line reactor along with switching equipment- 2 Nos.

	Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
		NGR bypass arrangement).	

***Note**:*

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

ii. Logic for Inter-tripping scheme for tripping of the 330 MVAR switchable line reactor along with main line breaker at Pune (GIS) end of Pune (GIS) – Narendra (New) 765 kV D/c line shall be implemented by the owner of the line after LILO of Narendra (New) – Pune (GIS) 765 kV D/c line at Pune-III

iii. MSETCL shall implement the following 220 kV lines along with 5 Nos. 220 kV GIS bays at Pune-III (GIS) S/s in matching time-frame of Pune-III S/s:

a. LILO of both circuits of Jejuri-Phursungi 220 kV D/c line at Pune-III S/s with HTLS conductor (twin zebra equivalent) along with reconductoring of balance line section viz. LILO point to Phursungi and LILO points to Jejuri with HTLS conductor (twin zebra equivalent)

b. Nanded City - Pune PG III 220 kV S/c line with HTLS conductor (twin zebra equivalent)

iv. TSP of Boisar-II S/s shall provide space for work envisaged at Sl. No. 4.

v. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

vi. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.2.13 **Phase-IV: Part E1 - Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 Implementation timeframe: 24 months from the date of allocation	216	Approved to be implemented under RTM by Adani Transmission Limited (the TSP implementing KPS 1)

3.2.14 Detailed scope of Part E1 Scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
1.	Augmentation of transformation capacity at KPS1 (GIS) by 1x1500 MVA, 765/400 kV ICT (8th) on bus section-I	1500 MVA, 765/400 kV ICT – 1 No. 765 kV bays – 2 Nos. on bus Section-I (including 1 No. bay for Dia completion) 400 kV bays – 2 Nos. on bus section-I (including 1 No. bay for Dia completion)

Note:

i. The TSP shall implement one complete diameter consisting of 2 main bays & 1 Tie bay at both 765 kV & 400 kV levels of KPS1 (GIS) for completion of diameter (GIS) in one-and-half breaker scheme.

ii. Further, TSP of KPS1 shall provide space to carry out the above augmentation work.

3.2.15 **Phase-IV: Part E2 - Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E2 Tentative Implementation timeframe: 21 months from SPV transfer	697	Recommended to be implemented under TBCB route.

3.2.16 Detailed scope of Part E2 Scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
	Augmentation of transformation capacity at KPS2 (GIS) by 2x1500 MVA, 765/400 kV ICT on Bus section-I (5th & 6th) & 2x1500 MVA, 765/400 kV ICT on Bus section-II (7th & 8th) & 2 Nos. 400 kV bays at Bus Section-I for RE interconnection and 3 Nos. 400 kV bays at Bus Section-II for RE interconnection	1500 MVA, 765/400 kV ICT – 4 Nos. 765 kV bays – 4 Nos. [2 Nos. complete Dia for 2 ICTs (one on each bus section) and balance 2 ICTs to be terminated in spare bays (one on each section)] 400 kV bays– 10 Nos. [4 Nos. ICT bays (2 on each section) & 5 Nos. line bays (2 on bus section-I & 3 on bus section-II) along with 1 No. bay on Bus Section-II for Dia completion]

Note:

i. The TSP shall implement two complete diameters (1 on Bus Section-I & 1 on bus section-II) at 765 kV level of KPS2 (GIS) consisting of 2 Main Bays & 1 Tie Bay required for completion of diameter (GIS) in one-and-half breaker scheme.

ii. The TSP shall implement five complete diameters (2 on Bus Section-I & 3 on Bus Section-II) at 400 kV level of KPS2 (GIS) consisting of 2 Main Bays & 1 Tie bay required for completion of diameter (GIS) in one-and-half breaker scheme.

iii. Further, TSP of KPS2 shall provide space to carry out the above augmentation work.

iv. 2 Nos. 400 kV bays at Bus Section-I for RE interconnection and 1 No. 400 kV bays at Bus Section-II for RE interconnection are already under implementation at KPS2.

v. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.2.17 **Phase-IV: Part E3 - Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E3	216	Approved to be implemented under RTM by the TSP implementing KPS 3.

	Implementation timeframe: 24 months from date of allocation		

3.2.18 Detailed scope of Part E3 Scheme is given below:

	Scope of the Transmission Scheme No.	Capacity/ Route length
	Augmentation of transformation capacity at KPS3 (GIS) by 1x1500 MVA, 765/400 kV ICT (7th) on Bus section-I	1500 MVA, 765/400 kV ICT – 1 No. 765 kV bays – 2 Nos. on Bus Section-I (including 1 No. bay for Dia completion) 400 kV bays – 2 Nos. on Bus section-I (including 1 No. bay for Dia completion)

Note:

1. The TSP shall implement one complete diameter consisting of 2 Main Bays & 1 Tie Bay at both 765 kV & 400 kV levels of KPS3 (GIS) required for completion of diameter (GIS) in one-and-half breaker scheme.
2. Further, TSP of KPS3 shall provide space to carry out above augmentation work.

3.2.19 **Phase-IV: Part E4 - Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E4 Implementation timeframe: 24 months from date of allocation	235	Approved to be implemented under RTM route by POWERGRID

3.2.20 Detailed scope of Part E4 Scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
1.	Augmentation of transformation capacity at Padghe (PG) (GIS) by 1x1500 MVA,	1500 MVA, 765/400 kV ICT – 1

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
	765/400 kV ICT (4th)	No. 765 kV bays – 2 Nos. (including 1 No. bay for Dia completion) 400 kV bays – 2 Nos. (including 1 No. bay for Dia completion) 765 kV GIB Duct (single phase) – 510 m (approx.) for three phases 400 kV GIB Duct (single phase) – 500 m (approx.) for three phases

Note:

i. POWERGRID shall implement one complete diameter consisting of 2 main bays & 1 Tie bay at both at 765 kV & 400 kV levels Padghe (PG)(GIS) required for completion of diameter (GIS) in one-and-half breaker scheme.

3.3 **Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW)**

3.3.1 The Phase V (HVDC) transmission scheme has been planned for evacuation of additional 8 GW RE power from Khavda RE park.

3.3.2 Member Secretary, NCT, stated that the modified scheme as per deliberations in 12th NCT meeting held on 28.03.2023 and meetings held on 20.04.2023 & 09.05.2023 amongst CEA, CTUIL & GRID-INDIA had been by CTUIL to WRPC vide letter dated 12.05.2023 for views/observations within 10 days. However, no views were received from WRPC in this regard.

3.3.3 After detailed deliberations, the following was agreed w.r.t. the transmission schemes, subject to views/observations of WRPC. Subsequently, in the 47th WRPC meeting held on 15.06.2023, the subject scheme was deliberated. Minutes of WRPC meeting is to be issued.

Sl. No.	Name of the scheme	Mode of implementation
1.	Part A	TBCB

2.	Part A1	RTM
3.	Part B	To be reviewed.
4.	Part C	TBCB

3.3.4 **Phase-V: Part A- Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part A Tentative Implementation timeframe: 48 months for Bipole-1 (2x1500 MW) and 54 months for Bipole-2 (2x1500 MW)	24,819	Recommended to be implemented through TBCB route.

3.3.5 Detailed scope of Part A Scheme is given below:

Sl. No.	**Scope**	**Capacity/ Route length**
1.	Establishment of 6000 MW, ± 800 kV KPS2 (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard*.	6000 MW, ± 800 kV KPS2 (HVDC) [LCC] Terminal station
2.	Establishment of 6000 MW, ± 800 kV Nagpur (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard*	6000 MW, ± 800 kV Nagpur (HVDC) [LCC] terminal station
3.	±800 kV HVDC Bipole line (Hexa lapwing) between KPS2 (HVDC) and Nagpur (HVDC) (1200 km) (with Dedicated Metallic Return) (capable to evacuate 6000 MW with overload as specified)	Route length: 1200 km.
4.	Establishment of 6x1500 MVA, 765/400 kV ICTs at Nagpur-S/s along with 2x330 MVAR (765 kV) & 2x125 MVAR, 420 kV bus reactors along with associated interconnections with HVDC Switchyard*. The 400 kV bus shall be established in 2 sections through 1 set of 400 kV bus sectionaliser so that 3x1500 MVA ICTs are placed in each section. The bus sectionaliser shall be normally closed and may be opened based on Grid	○ 765/400 kV, 1500 MVA ICT-6 (3 on each 400 kV section) (19 single phase units including one spare unit) ○ 765 kV ICT bays- 6 Nos. ○ 400 kV ICT bays- 6 Nos. (3 on each section) ○ 330 MVAR 765 kV bus reactor-2 Nos. ○ 125 MVAR 420 kV bus

Sl. No.	Scope	Capacity/ Route length
	requirement. **Future Provisions at Nagpur:** **Space for:** ○ 765/400 kV, 1500 MVA ICT- 4 (1 on 400 kV bus section-II & 3 on future 400 kV bus section-III) ○ 765 kV line bays along with switchable line reactors – 10 Nos. ○ 765 kV Bus Reactor along with bay: 2 No. ○ 765 kV Sectionaliser bay: 1 -set ○ 400 kV line bays along with switchable line reactor – 12 Nos. ○ 400 kV Bus sectionaliser- 1 Set ○ 400/220 kV ICT along with bays -9 Nos. (3 Nos. on 400 kV bus sections II & 6 Nos. on future bus section-III) ○ 400 kV Bus Reactor along with bay: 4 No. (1 each on 400 kV bus sections I & II and 2 on future 400 kV bus section-III) ○ 220 kV line bays: 16 Nos. ○ 220 kV Sectionalization bay: 2 set ○ 220 kV BC & TBC: 3 Nos. ○ 80 MVAR, 765 kV, 1-ph reactor (spare unit for line reactor)-1	reactor-2 Nos. (one on each section) ○ 765 kV reactor bay- 2 Nos. ○ 765 kV line bay- 4 Nos. ○ 400 kV reactor bay- 2 Nos. (one on each section) ○ 400 kV Bus sectionaliser - 1 Set ○ 110 MVAR, 765 kV, 1-ph reactor (spare unit for line/bus reactor) - 1 No.
5.	LILO of Wardha – Raipur 765 kV one D/c line (out of 2xD/c lines) at Nagpur	LILO route length: 30 km.
6.	Installation of 240 MVAR switchable line reactor at Nagpur end on each ckt of Nagpur – Raipur 765 kV D/c line	• 240 MVAR, 765 kV switchable line reactors- 2 Nos. (at Nagpur end) • Switching equipment for 765 kV line reactor- 2 Nos. (at Nagpur end) • 80 MVAR, 765 kV, 1-ph reactor (spare unit for line reactor)-1 No.

* The 400 kV interconnections (along with all associated equipment/ bus extension, etc.) between HVDC & HVAC switchyards shall be implemented by the TSP

Note:

i. The 2x1500 MW poles shall emanate from 400 kV bus section 1 of KPS2 and terminate at bus section 1 of Nagpur. Similarly, the other 2x1500 MW poles shall emanate from 400 kV bus section 2 of KPS2 and terminate at bus section 2 of Nagpur.

ii. HVDC System will be designed considering 100% power reversal capability. The rated power transmission capacity as well as the rated transmission voltage shall be defined and guaranteed at the rectifier end of the AC yard.

iii. TSP of KPS2 shall provide space for the establishment of the HVDC system as per above scope.

iv. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

v. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.3.6 **Phase-V: Part A1- Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part A1 Implementation timeframe: Matching with implementation of Khavda Phase-V Part A scheme viz. Bipole-1 (2x1500 MW) ± 800 kV Nagpur (HVDC) [LCC] which is 48 months from SPV transfer.	21	Approved to be implemented under RTM by POWERGRID i.e. owner of Wardha S/s.

3.3.7 Detailed scope of Part A1 is given below:

Sl. No.	**Scope**	**Capacity/ Route length**
1.	Conversion of 330 MVAR Fixed LR at Wardha (on each ckt of Wardha – Raipur 765 kV D/c line being LILOed at Nagpur) into Bus Reactors at Wardha S/s	765 kV reactor bays- 2 Nos. & Conversion of 330 MVAR Fixed LR at Wardha (on each ckt of Wardha – Raipur 765 kV D/c line being LILOed at Nagpur) into Bus Reactors through creation of 2 new diameters and shifting of Reactors

Note:

i. POWERGRID shall implement two new diameters consisting of 1 main bay & 1 Tie bay at 765 kV level of Wardha S/s required in one-and-half breaker AIS scheme for termination of 2 Nos. of 330 MVAR Bus reactors & the same shall be extended in future for integration of 2nd main bay (future line with switchable line reactor) for diameter completion.

3.3.8 **Phase-V: Part B:** Augmentation of transformation capacity at KPS2 (GIS) by 1x1500 MVA, 765/400 kV ICT on Bus Section I (9th) and at KPS 3 (GIS) by 1x1500 MVA, 765/400 kV ICT on Bus Section-II (8th)

It was deliberated that the above ICTs would be required in the matching timeframe of VSC based HVDC (Part C) and hence would be reviewed and taken up subsequently.

3.3.9 CTUIL had proposed ±525 kV VSC based HVDC system. It was deliberated that ±500 kV HVDC systems are already existing in the country and tested tower design for ±500 kV systems are already available. In order to reduce the time involved in engineering and testing, it was opined that already proven design of ±500 kV may be adopted in this case also. Hence, the rating of HVDC system was revised to ±500 kV, 2500 MW.

3.3.10 Summary of Phase-V: Part C scheme is given below:

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part C Tentative Implementation timeframe: 48 months from SPV transfer	12,000	Recommended to be implemented through TBCB route.

3.3.11 Detailed scope of Part C is given below:

Sl. No.	**Scope**	**Capacity/ Route length**
1.	Establishment of 2500 MW, ± 500 kV KPS3 (HVDC) [VSC] terminal station (2x1250 MW) at a suitable location near KPS3 substation with associated interconnections with 400 kV HVAC Switchyard*	2500 MW, ± 500 kV KPS3 (HVDC) [VSC] Terminal station
2.	Establishment of 2500 MW, ± 500 kV South Olpad (HVDC) [VSC] terminal station (2x1250 MW) along with associated interconnections with 400 kV HVAC Switchyard of South Olpad S/s*	2500 MW, ± 500 kV South Olpad (HVDC) [VSC] terminal station
3.	Establishment of KPS3 (HVDC) S/s along with 2x125 MVAR, 420 kV bus reactors along with associated interconnections with HVDC Switchyard*. The 400 kV bus shall be established in 2 sections through 1 set of 400 kV bus sectionaliser to be kept normally OPEN. 400/33 kV, 2x50 MVA transformers for	○ 400/33 kV, 1x50 MVA ICT along with bays- 2 Nos. ○ 125 MVAR 420 kV bus reactor-2 Nos. (one on each section) ○ 400 kV reactor bay- 2 Nos. (one on each section)

Sl. No.	Scope	Capacity/ Route length
	exclusively supplying auxiliary power to HVDC terminal. MVAR **Future Provisions at KPS3 (HVDC) S/s** **Space for:** o 400 kV line bays – 6 Nos. (3 on each section) o 400 kV reactor bay- 2 Nos. (one on each section)	o 400 kV Bus sectionaliser- 1 Set
4.	KPS3 – KPS3 (HVDC) 400 kV 2xD/c (Quad ACSR/AAAC/AL59 moose equivalent) line along with the line bays at both substations	Route length- 2 km 400 kV GIS line bays - 4 Nos. at KPS3 (2 Nos. on each bus section) 400 kV GIS line bays - 4 Nos at KPS3 (HVDC) (2 Nos. on each bus section)
5.	±500 kV HVDC Bipole line between KPS3 (HVDC) and South Olpad (HVDC) (with Dedicated Metallic Return) (capable to evacuate 2500 MW)	Route length: 600 km

* The 400 kV interconnections (along with all associated equipment/ bus extension, etc.) between HVDC & HVAC switchyards shall be implemented by the TSP

Note:

i. The 1250 MW pole-1 shall emanate from 400 kV bus section 1 of KPS3 (HVDC) and terminate at South Olpad S/s. Similarly, the 1250 MW pole-2 shall emanate from 400 kV bus section 2 of KPS3 (HVDC) and terminate at South Olpad S/s.

ii. HVDC System will be designed with 100% power reversal capability as well as black start, automatic grid restoration & dynamic reactive power support capability.

iii. The rated power transmission capacity as well as the rated transmission voltage shall be defined and guaranteed at the rectifier end of the AC yard.

iv. TSP of KPS3 shall provide space for scope at Sl. No. 4 as per the above scope

v. TSP of South Olpad S/s shall provide space for scope at Sl. No. 2 as per above scope

vi. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

vii. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.4 **400 kV Western Region Network Expansion scheme in Kallam area of Maharashtra**

3.4.1 Transmission System for evacuation of power from RE Projects in Osmanabad area (1 GW) in Maharashtra is presently under implementation by Kallam Transmission Ltd. (expected by Oct'23). Further, augmentation of transformation capacity at Kallam PS by 2x500 MVA, 400/220 kV ICTs (3rd& 4th) along with 220 kV bays for RE interconnection is also under implementation which shall enable injection of additional 1 GW at 220 kV level of Kallam PS.

Additional connectivity has also been granted to M/s Torrent at 400 kV level (1 No. bay) and hence there is a cumulative requirement of evacuation of about 3.25 GW (2 GW at 220 kV level and 1.25 GW at 400 kV level) from Kallam PS. The subject Transmission system shall enable evacuation of upto 3.25 GW power from Kallam PS.

3.4.2 CTUIL stated that generally a minimum implementation schedule of 24 months is specified for transmission schemes. However, as a special case, considering the small length of LILO line and no visible forest/wildlife involvement, reduced implementation time-frame of 18 months may be specified in this case in order to match the commissioning of transmission scheme and associated RE generation.

3.4.3 After detailed deliberations, it was decided that the transmission scheme Western Region Network Expansion scheme in Kallam area of Maharashtra, will be implemented under TBCB route with an implementation timeframe of 18 months.

3.4.4 Summary of the scheme is as given below:

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Western Region Network Expansion scheme in Kallam area of Maharashtra. Tentative Implementation timeframe: 18 months from SPV transfer	160	Approved to be implemented through TBCB route.

3.4.5 Detailed scope of the scheme is given below:

	Sl. No.	**Scope of the Transmission Scheme**	**Capacity/ Route length**
	1	LILO of both circuits of Parli(M) – Karjat(M)/Lonikand-II (M) 400 kV D/c	LILO route length~ 15 km.

	line (twin moose) at Kallam PS	
2	4 Nos. 400 kV line bays at Kallam PS for LILO of both circuits of Parli(M) – Karjat(M)/Lonikand-II(M) 400 kV D/c line (twin moose) at Kallam PS	400 kV line bays (AIS) – 4 Nos. (for Kallam PS end)
3	63 MVAR, 420 kV switchable line reactor (with NGR bypassing arrangement) on each ckt at Kallam PS end of Karjat – Kallam 400 kV D/c line (~140km.)	• 63 MVAR, 420 kV switchable line reactor including Switching equipment - 2 Nos. (at Kallam end)

Note:

i. TSP of Kallam PS (Kallam Transmission Ltd.) shall provide requisite space at Kallam PS for above scope of work

ii. The 50 MVAR fixed line reactor on each ckt at Parli (M) end of Kallam – Parli (M) 400 kV D/c line shall be converted into switchable (with NGR bypass arrangement & provision of inter-tripping scheme to trip the line reactors along with the main line breakers) by MSETCL in matching time-frame of the above scheme. MSETCL vide email dated 08.06.2023 has informed that conversion of fixed 50 MVAR line reactor at 400 kV Parli (M) (Girwali) end into switchable reactor is feasible.

iii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

iv. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5 Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex)

3.5.1 The transmission scheme was earlier proposed for evacuation of about 7.5 GW power from Jaisalmer/Barmer Complex. The scheme was deliberated in the 12th NCT meeting held on 24.03.23. In the meeting, various issues like system strength (SCR), requirement of Barmer-I PS as well as high angular separation in the proposed 765 kV Jalore-Mandsaur D/C (length 320 kms) inter-regional transmission line were raised. Subsequently, various joint study meetings were held for review and phasing of transmission scheme among CEA, CTUIL and GRID-INDIA and revised studies were carried out.

3.5.2 Accordingly, revised studies were carried out incorporating the increased electricity demand of Rajasthan as suggested by Grid-India, and it was observed that the transmission system was adequate for evacuation of about 5.5 GW RE power (solar) in summer & winter scenario.

3.5.3 The modified transmission scheme was discussed and agreed in the 65th NRPC meeting held on 21.04.23. The scheme was further agreed in the 46th WRPC meeting held on 03.02.23.

3.5.4 Further, transmission scheme for evacuation of power from Neemuch/Mandsaur 2 GW WEZ was proposed as transmission system in Western Region whereas creation of Mandsaur 765 kV S/s was envisaged as a part of Rajasthan REZ Ph-IV (Part-2) Scheme. As deliberated in the 12th NCT meeting, it was decided to combine the transmission scheme for Neemuch/Mandsaur with Rajasthan Ph-IV Part- C Scheme which involves the creation of 765 kV Mandsaur S/s.

3.5.5 GRID-INDIA requested to review the reactive compensation of Sirohi PS - Rishabdeo 765 kV D/c line (170 km) and Rishabdeo - Mandsaur 765 kV D/c (160 km) line as reactive compensation seemed to be on the higher side. CTUIL stated that with the proposed line length reactive compensation on Sirohi PS- Rishabdeo 765 kV D/c line is about 73% and Rishabdeo-Mandsaur 765 kV D/c is about 78%. CTUIL also mentioned that in view of high voltages in night off-peak scenario specially for RE evacuation lines, reactive compensation is to be kept adequate to address reactive management issues, however, it was observed that the reactive compensation on Rishabdeo-Mandsaur 765 kV D/c line is about 78% which has some scope for reduction. Grid-India stated that if possible, reactive compensation of Rishabdeo-Mandsaur 765 kV D/c line may be reduced. Hence, it was decided that 330 MVAR line reactor at Rishabdeo end on above line may be replaced with 240 MVAR reactor.

3.5.6 After detailed deliberations, the following was decided w.r.t. the transmission schemes:

Sl. No.	Scheme	Remarks
1.	Part A	TBCB
2.	Part B	TBCB

3.	Part C	Scheme of 2 GW Neemuch / Mandsaur to be merged with Part C. Combined scheme to be implemented under TBCB.
4.	Part D	TBCB
5.	Part E	TBCB
6.	Part F1	Part F1 and F2 to be combined. Combined scheme (Part F i.e. Part F1+F2) to be implemented under TBCB.
7.	Part F2	
8.	Part G	Deferred. To be taken up based on GIB clearance of dedicated transmission line associated with RE generation at Fatehgarh-II PS along with GIB clearance of Fatehgarh-II PS- Bhadla-III PS 400 kV D/C line
9.	Part H1	TBCB
10.	Part H2	RTM

3.5.7 **Part A: Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex): Part A Tentative Implementation timeframe: 24 months from SPV transfer	2,206	Recommended to be implemented through TBCB route.

3.5.8 Detailed scope of Part A scheme is given below:

Sl. No.	**Scope of the Transmission Scheme**	**Capacity/ Route length**
1	Establishment of 4x1500 MVA, 765/400 kV & 5x500 MVA, 400/220 kV Fatehgarh-IV (Section-2) Pooling Station along with 2x240 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420 kV) Bus Reactor [Future space provisions already approved at Fatehgarh-IV in 8th NCT meeting dated 25.03.22 would be utilized for the present scheme]	• 765/400 kV, 1500 MVA ICT- 4 Nos. (13x500 MVA including one spare unit) • 765 kV ICT bays- 4 Nos. • 240 MVAR, 765 kV Bus Reactor- 2 Nos. (7x80 MVAR including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 765 kV line bays - 4 Nos. [for LILO of Fatehgarh-III - Beawer 765 kV D/c (2nd) line at Fatehgarh-IV (Section-2) PS] • 400/220 kV, 500 MVA ICT -5 Nos. • 400 kV ICT bays- 9 Nos. • 400 kV line bays - 2 Nos. [For Fatehgarh-IV (Sec-2) - Bhinmal (PG) D/c line] • 125 MVAR, 420 kV Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos.

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
		• 400 kV Sectionalisation bay: 1 set • 220 kV ICT bays- 5 Nos. • 220 kV line bays: 6 Nos. (for RE connectivity) • 220 kV BC (2 Nos.) and 220 kV TBC (2 Nos.) • 220 kV Sectionalisation bay: 1 set
2	Fatehgarh-IV (Section-2) PS – Bhinmal (PG) 400 kV D/c line (Twin HTLS) along with 50 MVAR switchable line reactor on each ckt at each end	Route Length: 200 km • 50 MVAR, 420 kV switchable line reactors at Fatehgarh-IV (Section-2) PS – 2 Nos. • 50 MVAR, 420 kV, switchable line reactors at Bhinmal (PG) – 2 Nos. • Switching equipment for 420 kV, 50 MVAR switchable line reactors at Fatehgarh-IV (Section-2) PS – 2 Nos. • Switching equipment for 420 kV, 50 MVAR switchable line reactors at Bhinmal (PG) – 2 Nos.
3	LILO of both ckts of 765 kV Fatehgarh-III- Beawar D/c line (2nd) at Fatehgarh-IV (Section-2) PS along with 330 MVAR switchable line reactor at Fatehgarh-IV PS end of each ckt of 765 kV Fatehgarh-IV-Beawar D/c line (formed after LILO)	LILO length: 15 km • 330 MVAR, 765 kV switchable line reactors at Fatehgarh-IV (Section-2) PS – 2 Nos. • Switching equipment for 330 MVAR, 765 kV switchable line reactors at Fatehgarh-IV (Section-2) PS – 2 Nos. • 110 MVAR (765 kV) spare reactor single phase unit at Fatehgarh-IV (Section-2) PS end – 1 No.
4	2 Nos. of 400 kV line bays at Bhinmal (PG)	400 kV line bays - 2 Nos.

Note:

i. Transmission system for evacuation of about 2 GW RE power from REZ in Rajasthan (20 GW) under Phase-III Part A1 at Fatehgarh-IV (Section-1) is under bidding.
ii. Transmission system under Phase-IV (Part 2) is for evacuating 4-5 GW RE potential at Fatehgarh-IV (Section 2), which is utilising the future provision (approved in 8th NCT meeting dated 25.03.22) at Fatehgarh-IV approved under Phase-III scheme.
iii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey
iv. POWERGRID to provide space for 2 Nos. of 400 kV line bays at Bhinmal (PG) along with the space for switchable line reactors without any cost implications.
v. Implementation of A, B, C, D, E, F, H1, H2 packages shall be aligned
vi. Switchable line reactors to be implemented with NGR bypass arrangement.
vii. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5.9 **Part B: Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex): Part B Tentative Implementation timeframe: 24 months from SPV transfer	3,279	Recommended to be implemented through TBCB route.

3.5.10 Detailed scope of Part B scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
1	Establishment of 2x1500 MVA, 765/400 kV Substation at suitable location near Sirohi along with 2x240 MVAR (765 kV) & 2x125 MVAR (420 kV) Bus Reactor **Future provisions:** Space for • 765/400 kV ICT along with bays- 4 Nos. • 765 kV line bays along with switchable line reactors – 10 Nos. • 765 kV Bus Reactor along with bay: 1 Nos. • 400 kV line bays along with switchable line reactor –4 Nos. • 400 kV line bays –4 Nos. • 400 kV Bus Reactor along with bay: 1 No. • 400 kV Sectionalization bay: 2 sets • 400/220 kV ICT along with bay - 6 Nos. • 220 kV line bays -10 Nos. • 220 kV Sectionalization bay: 2 sets • 220 kV BC (3 Nos.) & TBC (3 Nos.) • STATCOM (2x±300 MVAR) along with MSC (4x125 MVAR) & MSR (2x125 MVAR) along with two number 400 kV bays.	• 765/400 kV, 1500 MVA ICT- 2 Nos. (7x500 MVA including one spare unit) • 765 kV ICT bays-2 Nos. • 240 MVAR, 765 kV Bus Reactor-2 Nos. (7x80 MVAR including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 765 kV line bays- 2 Nos. [for D/c line to Fatehgarh-IV (Section-2) PS] • 400 kV ICT bays- 2 Nos. • 400 kV line bays - 2 Nos. [for D/c line to Chittorgarh (PG) S/s] • 125 MVAR, 420 kV Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos.
2	Fatehgarh-IV (Section-2) PS – Sirohi PS 765 kV D/c line along with 240 MVAR switchable line reactor for each circuit at each end	Route Length – 240 km • 765 kV, 240 MVAR switchable line reactors at Fatehgarh-IV (Section-2) PS – 2 Nos. • 765 kV, 240 MVAR switchable line reactors

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
		at Sirohi PS– 2 Nos. • Switching equipment for 765 kV, 240 MVAR switchable line reactors at Fatehgarh-IV (Section-2) PS – 2 Nos. • Switching equipment for 765 kV, 240 MVAR switchable line reactors at Sirohi PS – 2 Nos.
3	Sirohi PS-Chittorgarh (PG) 400 kV D/c line (Quad) along with 80 MVAR switchable line reactor for each circuit at Sirohi PS end	Route Length ~160 km • 420 kV, 80 MVAR switchable line reactors at Sirohi PS – 2 Nos. • Switching equipment for 420 kV, 80 MVAR switchable line reactors at Sirohi PS – 2 Nos.
4	2 No. of 400 kV line bays at Chittorgarh (PG) S/s	400 kV line bays at Chittorgarh (PG) S/s - 2 Nos.
5	2 No. of 765 kV line bays at Fatehgarh-IV (Section-2) PS	765 kV line bays at Fatehgarh-IV (Section-2) PS – 2 Nos.

Note:

i. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.
ii. POWERGRID to provide space for 2 Nos. of 400 kV line bays at Chittorgarh (PG).
iii. Developer of Fatehgarh-IV S/s (Section-2) to provide space for 2 Nos. of 765 kV line bays at Fatehgarh-IV(Section-2) PS along with the space for switchable line reactor
iv. Implementation of A, B, C, D, E, F, H1, H2 packages shall be aligned
v. Switchable line reactors to be implemented with NGR bypass arrangement.
vi. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5.11 Part C: Summary

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex): Part C Tentative Implementation timeframe: 24 months from SPV transfer	2,708	Recommended to be implemented through TBCB route.

3.5.12 Detailed scope of Part C scheme is given:

	Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
	1	Establishment of 3x1500 MVA, 765/400 kV & 5x500 MVA, 400/220 kV Mandsaur Pooling Station along with 2x330 MVAR (765 kV) Bus Reactors & 2x125 MVAR, 420 kV Bus Reactor **Future Provisions**: Space for: • 765/400 kV ICT along with bays- 3 No. • 765 kV line bays along with switchable line reactors – 12 Nos. • 765 kV Bus Reactor along with bay: 2 No. • 765 kV Sectionaliser bay: 1 -set • 400 kV line bays along with switchable line reactor – 12 Nos. • 400/220 kV ICT along with bays -5 Nos. • 400 kV Bus Reactor along with bay: 2 No. • 400 kV Sectionalization bay: 1- set • 220 kV line bays: 11 Nos. • 220 kV Sectionalization bay: 1 set • 220 kV BC and TBC: 1 Nos. • STATCOM (± 300 MVAR) along with MSC (2x125 MVAR) & MSR (1x125 MVAR) along with one 400 kV bay.	765/400 kV, 1500 MVA ICT – 3 Nos. (10x500 MVA single phase units including one spare unit) 400/220 kV, 500 MVA ICT – 5 Nos. (3 Nos. on 220 kV bus section-1 & 2 Nos. on 220 kV bus section-2) 765 kV ICT bays – 3 Nos. 400 kV ICT bays – 8 Nos. 330 MVAR 765 kV bus reactor-2 Nos. (7x110 MVAR single phase units including one spare unit) 765 kV bus reactor bay- 2 Nos. 765 kV line bay- 2 Nos. (for Indore line) 80 MVAR, 765 kV, 1-ph reactor (spare unit)-1 No. 125 MVAR, 420 kV bus reactor-2 Nos. 400 kV reactor bay- 2 Nos. 220 kV ICT bays – 5 Nos. 220 kV line bays – 7 Nos. (4 Nos. on bus section-1 and 3 Nos. on bus section-2) 220 kV Bus Sectionaliser – 1 set 220 kV TBC bay – 2 Nos. 220 kV BC bay – 2 Nos.
	2	Mandsaur PS – Indore(PG) 765 kV D/c Line	Route Length ~ 200 km
	3	1x330 MVAR switchable line reactor (SLR) on each ckt at Mandsaur end of Mandsaur PS – Indore(PG) 765 kV D/c Line	• 330 MVAR, 765 kV switchable line reactor- 2 Nos. • Switching equipment for 765 kV line reactor- 2 Nos.
	4	2 Nos. of 765 kV line bays at Indore(PG) for termination of Mandsaur PS – Indore(PG) 765 kV D/c Line	• 765 kV line bays – 2 Nos. (for Indore (PG) end)

Note:

i. The line lengths mentioned above are approximate as the exact length shall be obtained after detailed survey

ii. POWERGRID to provide space for 2 Nos. of 765 kV line bays at Indore S/s

iii. Implementation of A, B, C, D, E, F, H1, H2 packages shall be aligned
iv. Switchable line reactors to be implemented with NGR bypass arrangement
v. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5.13 **Part D: Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex): Part D Tentative Implementation timeframe: 24 months from SPV transfer	2,227	Recommended to be implemented through TBCB route.

3.5.14 Detailed scope of Part D scheme is given below:

S. No.	Scope of the Transmission Scheme	Capacity/ Route length
1	Beawar- Mandsaur PS 765 kV D/c line along with 240 MVAR switchable line reactor for each circuit at each end	Route Length – 260 km • 765 kV, 240 MVAR switchable line reactors at Beawar – 2 Nos. • 765 kV, 240 MVAR switchable line reactors at Mandsaur PS – 2 Nos. • Switching equipment for 765 kV, 240 MVAR switchable line reactors at Beawar – 2 Nos. • Switching equipment for 765 kV, 240 MVAR switchable line reactors at Mandsaur PS – 2 Nos.
2	2 No. of 765 kV line bays each at Beawar S/s & Mandsaur S/s	765 kV line bays - 4 Nos. (2 Nos. each at Beawer S/s and Mandsaur PS)

Note:

i. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey
ii. Developer of Mandsaur PS to provide space for 2 Nos. of 765 kV line bays at Mandsaur S/s along with the space for switchable line reactor.
iii. Developer of Beawar S/s to provide space for 2 Nos. of 765 kV line bays at Beawar S/s along with the space for switchable line reactor.
iv. Implementation of A, B, C, D, E, F, H1, H2 packages shall be aligned
v. Switchable line reactors to be implemented with NGR bypass arrangement
vi. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5.15 **Part E: Summary**

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part E Tentative Implementation timeframe: 24 months from SPV transfer	3,251	Recommended to be implemented through TBCB route.

3.5.16 Detailed scope of Part E scheme is given below:

Sl. No.	**Scope of the Transmission Scheme**	**Capacity/ Route length**
1	Establishment of 765 kV Substation at suitable location near Rishabdeo (Distt. Udaipur) along with 2x240 MVAR (765 kV) Bus Reactor **Future Provisions:** **Space for** ➢ 765/400 kV ICT along with bays- 5 No. along with spare unit ➢ 765 kV line bays along with switchable line reactors – 6 Nos. ➢ 765 kV Bus Reactor along with bay: 1 No. ➢ 400 kV line bays along with switchable line reactor – 4 Nos. ➢ 400 kV line bays – 4 Nos. ➢ 400 kV Bus Reactor along with bay: 3 Nos. ➢ 400 kV Sectionalization bay: 2 sets ➢ 400/220 kV ICT along with bay - 6 Nos. ➢ 220 kV line bays -10 Nos. ➢ 220 kV Sectionalization bay: 2 sets ➢ 220 kV BC (3 Nos.) & TBC (3 Nos.) ➢ STATCOM (2 x ±300MVAR) along with MSC (4x125 MVAR) & MSR (2x125 MVAR) along with two number 400 kV bays.	• 240 MVAR, 765 kV Bus Reactor- 2 Nos. (7x80 MVAR including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 765 kV line bays - 6 Nos. [for 765 kV Sirohi PS- Rishabdeo – Mandsaur D/c line and LILO of one circuit of 765 kV Chittorgarh-Banaskanta D/c line at Rishabdeo S/s]
2	Sirohi PS- Rishabdeo 765 kV D/c line along with 330 MVAR switchable line reactor for each circuit at Sirohi end	Route Length – 170 km • 765 kV, 330 MVAR switchable line reactors at Sirohi PS– 2 Nos. • Switching equipment for 765 kV, 330 MVAR switchable line reactors at Sirohi PS– 2 Nos. • 110 MVAR (765 kV) spare reactor single phase unit at Sirohi PS – 1 No.
3	Rishabdeo - Mandsaur PS 765 kV D/c line along with 240 MVAR switchable line reactor	Route Length – 160 km

	for each circuit at Rishabdeo end	• 765 kV, 240 MVAR switchable line reactors at Rishabdeo – 2 Nos. • Switching equipment for 765 kV, 240 MVAR switchable line reactors at Rishabdeo – 2 Nos.
4	LILO of one circuit of 765 kV Chittorgarh-Banaskanta D/c line at Rishabdeo S/s (20 km)	LILO route length~ 20 km
5	2 No. of 765 kV line bays each at Sirohi PS & Mandsaur S/s	• 765 kV line bays – 4 Nos. (2 Nos. each at Sirohi PS & Mandsaur PS)

Note:

i. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey
ii. Developer of Sirohi PS to provide space for 2 Nos. of 765 kV line bays at Sirohi PS along with the space for switchable line reactors, including spare unit.
iii. Developer of Mandsaur PS to provide space for 2 Nos. of 765 kV line bays at Mandsaur PS.
iv. Implementation of A, B, C, D, E, F, H1, H2 packages shall be aligned
v. Switchable line reactors to be implemented with NGR bypass arrangement.
vi. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5.17 **Part F: Summary** (by clubbing F1 & F2 Schemes)

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex): Part F Tentative Implementation timeframe: 24 months from SPV transfer	2,735	Recommended to be implemented through TBCB route.

3.5.18 Detailed scope of Part F scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
1	Establishment of 3x1500 MVA, 765/400 kV & 2x500 MVA, 400/220 kV Barmer-I Pooling Station along with 2x240 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420 kV) Bus Reactor **Future provisions:** Space for ➢ 765/400 kV ICT along with bays- 3 No. ➢ 765 kV line bays along with switchable	• 765/400 kV, 1500 MVA ICT- 3 Nos. (10x500 MVA including one spare unit) • 765 kV ICT bays-3 Nos. • 240 MVAR, 765 kV Bus Reactor-2 Nos. (7x80 MVAR, including one spare unit) • 765 kV Bus reactor bays-2 Nos. • 765 kV line bays- 2 Nos. (for D/c line to Sirohi PS) • 400/220 kV, 500 MVA ICT -2 Nos. • 400 kV ICT bays- 5 Nos.

Sl. No.	Scope of the Transmission Scheme	Capacity/ Route length
	line reactors – 4 Nos. ➢ 765 kV Bus Reactor along with bay: 1 No. ➢ 400 kV line bays –4 ➢ 400 kV line bays along with switchable line reactor –4 Nos. ➢ 400/220 kV ICT along with bays -8 Nos. ➢ 400 kV Bus Reactor along with bay: 1 No. ➢ 400 kV Sectionalization bays: 2 sets ➢ 220 kV line bays for connectivity of RE Applications -10 Nos. ➢ 220 kV Sectionalization bay: 3 sets ➢ 220 kV BC (3 Nos.) & TBC (3 Nos.) ➢ STATCOM (2x±300 MVAR) along with MSC (4x125 MVAR) & MSR (2x125 MVAR) along with two number 400 kV bays	• 125 MVAR, 420 kV Bus Reactor-2 Nos. • 400 kV Bus reactor bays- 2 Nos. • 400 kV line bays - 2 Nos. [for D/c line to Fatehgarh-III(Section-2) PS] • 220 kV ICT bays- 2 Nos. • 220 kV line bays: 4 Nos. (for RE connectivity) • 220 kV BC (1 No.) & TBC (1 No.)
2	Fatehgarh-III (Section-2) PS – Barmer-I PS 400 kV D/c line (Quad)	Route Length ~50 km
3	Barmer-I PS– Sirohi PS 765 kV D/c line along with 240 MVAR switchable line reactor for each circuit at each end	Route Length ~ 200 km • 765 kV, 240 MVAR switchable line reactors at Barmer-I PS – 2 Nos. • 765 kV, 240 MVAR switchable line reactors at Sirohi PS – 2 Nos. • Switching equipment for 765 kV 240 MVAR switchable line reactors at Barmer-I PS – 2 Nos. • Switching equipment for 765 kV 240 MVAR switchable line reactors at Sirohi PS – 2 Nos.
4	2 No. of 400 kV line bays at Fatehgarh-III (Section-2) PS	400 kV line bays at Fatehgarh-III (Section-2) PS - 2 Nos.
5	2 No. of 765 kV line bays at Sirohi PS	765 kV line bays at Sirohi PS – 2 Nos.

Note:

i. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey
ii. Developer of Sirohi PS to provide space for 2 Nos. of 765 kV line bays at Sirohi PS along with the space for switchable line reactor.
iii. Developer of Fatehgarh-III PS (Section-2) to provide space for 2 Nos. of 400 kV line bays at Fatehgarh-III PS (Section-2).
iv. Switchable line reactors to be implemented with NGR bypass arrangement
v. Implementation of A, B, C, D, E, F, H1, H2 packages shall be aligned.

vi. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5.19 Part G: Summary

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part G Augmentation by 1x1500 MVA, 765/400 kV ICT at Fatehgarh-II PS	132	The scheme was agreed to be deferred and it was decided that the scheme would be taken up for implementation in the matching timeframe of Fatehgarh-II PS- Bhadla 3 PS 400 kV D/c line, once the transmission line is approved by the GIB Committee constituted by Hon'ble Supreme Court Committee.

3.5.20 Part H1: Summary

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex): Part H1 Tentative Implementation timeframe: 24 months from SPV transfer	3,674	Recommended to be implemented through TBCB route.

3.5.21 Detailed scope of Part H1 scheme is given below:

	Sl. No.	Scope of the Transmission Scheme	Capacity / line length km
	1.	Establishment of 765/400 kV (2x1500 MVA), 400/22 kV (2x500 MVA) & 220/132 kV (3x200 MVA) Kurawar S/s with 2x330 MVAR 765	• 765/400 kV, 1500 MVA ICT – 2 (7 single units of 500 MVA including one spare unit) • 400/220 kV, 500 MVA ICT – 2

	Sl. No.	Scope of the Transmission Scheme	Capacity / line length km
		kV bus reactor and 1x125 MVAR, 420 kV bus reactor. **Future Provisions**: Space for • 765/400 kV ICT along with bays- 4 no. • 765 kV line bays along with switchable line reactors – 8 nos. • 765 kV Bus Reactor along with bay: 2 no. • 765 kV Sectionaliser bay: 1 -set • 400 kV line bays along with switchable line reactor – 8 nos. • 400/220 kV ICT along with bays -6 nos. • 420 kV Bus Reactor along with bay: 3no. • 400 kV Sectionalization bay: 1- set • 220 kV line bays: 12 nos. • 220 kV Sectionalization bay: 1set • 220 kV BC and TBC: 1 no. • 220/132 kV ICT along with bays: 5 Nos. • 132 kV line bays: 16 nos. • 132 kV Sectionalization bay: 1 set • 132 kV TBC– 1 no. • STATCOM (±300 MVAR) along with MSC (2x125 MVAR) & MSR (1x125 MVAR) along with 400 kV bay.	• 220/132 kV, 200 MVA ICT – 3 • 765 kV ICT bays- 2 • 400 kV ICT bays- 4 • 220 kV ICT bays – 5 • 132 kV ICT bays - 3 • 330 MVAR 765 kV bus reactor-2 • 125 MVAR 420 kV bus reactor-1 • 765 kV reactor bay- 2 • 765 kV line bays- 4 • 400 kV line bays- 4 • 400 kV reactor bay- 1 • 220 kV BC – 1 • 220 kV TBC – 1 • 132 kV TBC – 1 • 110 MVAR, 765 kV, 1-ph reactor (spare unit)-1 • 80 MVAR, 765 kV, 1-ph reactor (spare unit)-1
	2.	Mandsaur – Kurawar 765 kV D/c line	Route length: 235 km
	3.	240 MVAR switchable line reactors on each ckt at both ends of Mandsaur – Kurawar 765 kV D/c line	• 240 MVAR, 765 kV switchable line reactor- 4 (2 for Mandsaur end and 2 for Kurawar end) • Switching equipment for 765 kV line reactor- 4 (2 for Mandsaur end and 2 for Kurawar end)
	4.	2 nos. of 765 kV line bays at Mandsaur S/s for termination of Mandsaur – Kurawar 765 kV D/c line	• 765 kV line bays – 2 Nos. (for Mandsaur end)
	5.	LILO of Indore – Bhopal 765 kV S/c line at Kurawar	LILO route length: 15 km.
	6.	Kurawar – Ashtha 400 kV D/c (Quad	Route length: 65 km

	Sl. No.	Scope of the Transmission Scheme	Capacity / line length km
		ACSR/AAAC/AL59 moose equivalent) line	
	7.	2 nos. of 400 kV line bays at Ashtha (MP) S/s for termination of Kurawar – Ashtha 400 kV D/c line	400 kV line bays – 2 Nos. [for Ashtha (MP) end]
	8.	LILO of one circuit of Indore – Itarsi 400 kV D/c line at Astha	LILO route length: 30 km
	9.	2 nos. of 400 kV line bays at Ashtha (MP) S/s for LILO of one circuit of Indore – Itarsi 400 kV D/c line at Astha	400 kV line bays – 2 Nos. [for Ashtha (MP) end]
	10.	Shujalpur – Kurawar 400 kV D/c (Quad ACSR/ AAAC/AL59 moose equivalent) line	Route length: 40 km
	11.	2 nos. of 400 kV line bays at Shujalpur(PG) S/s for termination of Shujalpur – Kurawar 400 kV D/c line	400 kV line bays – 2 Nos. [for Shujalpur (PG) end]

Note:

i. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey.

ii. MPPTCL has confirmed availability of space for 2 nos. 400 kV bays at Ashta (MP) S/s and for 2 nos. additional bays, MPPTCL has informed that adjacent land is private land and may be purchased by the project developer at their cost as per requirement.

iii. Implementation of A,B,C,D, E ,F, H1 & H2 packages shall be aligned

iv. TSP of the subject scheme shall implement Inter-tripping scheme on Mandsaur – Kurawar 765 kV D/c line (for tripping of the switchable line reactor at Mandsaur/Kurawar end along with the main line breaker).

v. Switchable line reactors to be implemented with NGR bypass arrangement

vi. Developer of Mandsaur S/s to provide space for 2 Nos. 765 kV line bays for Mandsaur – Kurawar 765 kV D/c line.

vii. POWERGRID to provide space for 2 Nos. 400 kV line bays at Shujalpur S/s for Shujalpur – Kurawar 400 kV D/c line.

viii. The implementation timeline mentioned above is tentative. Final Timeline would be indicated in the RfP Document.

3.5.22 **Part H2: Summary**

Sl. No.	Name of the scheme and	Estimated Cost	Remarks

	implementation timeframe	(₹ Crores)	
1.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part H2 Provision of NGR bypass arrangement and inter tripping scheme on 240 MVAR SW LR at Bhopal end of Kurawar – Bhopal 765 kV S/c line (~60 km.): Part H2 Implementation timeframe: In matching timeframe of H1 Scheme	0.45	To be awarded under RTM to BDTCL i.e. the TSP owing the Indore – Bhopal 765 kV S/c line .

3.5.23 Detailed scope of Part H2 scheme is given below:

	Sl. No.	**Scope of the Transmission Scheme**	**Capacity/ Route length**
	1.	Provision of NGR bypass arrangement and inter tripping scheme on 240 MVAR Switchable Line Reactor at Bhopal end of Kurawar – Bhopal 765 kV S/c line (~Route length: 60 km)	NGR bypass arrangement and inter tripping scheme (Bhopal end)

3.6 **Requirement of additional FOTE of STM-16 capacity at Bhuj PS to cater to connectivity of RE Gencos.**

3.6.1 To connect 6 number of RE generators (Inox, Vadava Desalpar, Narayanpar, Adani Ratadia, Renew Power, Alfanar Energy**)** directly to existing FOTE at Control Room of Bhuj PS maintaining MSP (1+1) and for making independent connectivity for upcoming generators at this station, Additional STM-16 capacity SDH equipment is required

3.6.2 The "Requirement of additional FOTE of STM-16 capacity at Bhuj PS to cater connectivity of RE Gencos", has been deliberated in 46th TCC/ WRPC meeting. WRPC concurred the proposal of "Requirement of additional FOTE of STM-16 capacity at Bhuj PS to cater connectivity of RE Gencos" at an estimated cost of Rs 60 Lacs.

3.6.3 After detailed deliberations, the scheme was approved to be implemented under RTM route by POWERGRID.

3.6.4 Summary of the scheme is given below:

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Requirement of additional FOTE of STM-16 capacity at Bhuj PS to cater to connectivity of RE Gencos Implementation timeframe: 12 months from date of allocation	0.6	Approved to be implemented under RTM route by POWERGRID

3.6.5 Detailed Scope of the Scheme is given below:

Sl. No.	**Scope of the Scheme**	**Estimated Cost**
1.	Supply and installation of 01 number 10 MSP (1+1) FOTE or 02 No. 5 MSP (1+1) FOTE (STM-16 capacity) at Bhuj PS.	Rs. 60 Lakhs

3.7 **Requirement of additional FOTE of STM-16 capacity at Bhuj-II substation to cater connectivity of RE Gencos.**

3.7.1 To connect 6 number of RE generators (Inox, Vadava Desalpar, Narayanpar, Adani Ratadia, Renew Power, Alfanar Energy**)** directly to existing FOTE at Control Room of Bhuj PS maintaining MSP (1+1) and for making independent connectivity for upcoming generators at this station, Additional STM-16 capacity SDH equipment is required

3.7.2 The "Requirement of additional FOTE of STM-16 capacity at Bhuj II to cater connectivity of RE Gencos", has been deliberated in 46th TCC/ WRPC meeting. WRPC concurred the proposal of "Requirement of additional FOTE of STM-16 capacity at Bhuj II to cater connectivity of RE Gencos" at estimated cost of Rs 30 Lacs.

3.7.3 After detailed deliberations, the scheme was approved to be implemented under RTM mode by M/s PBTL.

3.7.4 Summary of the scheme is given below:

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Requirement of additional FOTE of STM-16 capacity at Bhuj-II substation to cater connectivity of RE Gencos Implementation timeframe: 12 months from date of allocation	0.3	Approved to be implemented under RTM mode by M/s PBTL

3.7.5 Detailed Scope of the Scheme is given below:

Sl. No.	**Scope of the Scheme**	**Estimated Cost**
1.	Supply and installation of 01 number 5 MSP (1+1) FOTE (STM-16 capacity) at Bhuj-II station.	Rs. 30 Lakhs

3.8 Congestion in ISTS communication link via Dehgam- Ranchhodpura- Santhalpur-Bhachau- Mundra

3.8.1 The communication link via Dehgam-Ranchhodpura-Santhalpur-Bhachau-Mundra was at STM-4 level. Further, this link was extended through Mundra-Bhuj-Santhalpur Repeater-Banaskantha at STM-16 level. The owner of these stations is POWERGRID. This communication network is being used for routing the data Bhuj-PS, Bhuj-II, Lakadia, CGPL Mundra and various RE generators connected to these stations to WRLDC/NLDC. Communication link via Dehgam-Ranchhodpura-Santhalpur repeater-Banaskantha is also used for routing inter regional data between WR-NR.

As on date, the STM-4 level bandwidth on Dehgam-Ranchhodpura-Santhalpur Repeater is almost 100% utilized and on Santhalpur repeater-Bhachau-Mundra is 75% utilized. Outage of these lines affects the telemetry of the entire Bhuj location and CGPL Mundra.

3.8.2 The "Upgradation of STM-4 communication link of Dehgam, Ranchhodpura, Santhalpur Repeater, Bhachau and CGPL Mundra to STM-16 capacity", has been deliberated in 46th TCC/ WRPC meeting held on 02-03 Feb 2023. WRPC concurred the proposal of "Upgradation of STM-4 communication link of Dehgam, Ranchhodpura, Santhalpur Rep, Bhachau and CGPL Mundra to STM-16 capacity" at estimated cost of Rs 1.5 Cr.

3.8.3 After detailed deliberations, the scheme was approved to be implemented under RTM route by POWERGRID.

3.8.4 Summary of the scheme is given below:

Sl. No.	Name of the scheme and implementation timeframe	Estimated Cost (₹ Crores)	Remarks
1.	Upgradation of STM-4 communication link of Dehgam, Ranchhodpura, Santhalpur Rep, Bhachau and CGPL Mundra to STM-16 capacity. Implementation timeframe: 12 months from date of allocation	1.5	Approved to be implemented under RTM route by POWERGRID

3.8.5 Detailed Scope of the Scheme is given below:

Scope of the Scheme	**Estimated Cost**

1. Supply and installation of 5 No. STM-16 SDH, 5 MSP (1+1) for all the below mentioned stations- a) Dehgam b) Ranchhodpura c) Santhalpur Repeater d) Bhachau e) CGPL Mundra	Rs. 1.5 Cr.

3.9 Transmission scheme for evacuation of power from Neemuch/Mandsaur 2 GW WEZ

3.9.1 SECI vide letter dated 23.06.2022 has informed that in order to provide round the clock (RTC) Power (with wind, solar and storage components), they have identified certain locations with high solar and wind potential where work on RE evacuation system may be taken up immediately. 2 GW Wind Potential at Neemuch/Mandsaur is one such prioritized RE Zone.

3.9.2 Accordingly, scheme was evolved to cater to the evacuation of power from Neemuch/Mandsaur 2 GW WEZ and was discussed in the 12th NCT meeting held on 24.03.2023. During the meeting, the establishment of 765 kV Mandsaur Pooling Station [Under Transmission system for Rajasthan REZ Phase-IV Part-2 (5.5 GW)] was agreed to be reviewed and it was decided that the proposal of creation of 400 kV and 220 kV levels at Mandsaur PS (under the subject scheme), would also be reviewed along with 765 the kV Pooling Station at Mandsaur.

3.9.3 After detailed deliberations, it was decided that the scheme shall be merged with Part C of the Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/Barmer Complex) and would be implemented under TBCB route. Please refer para 3.5.

3.10 Change in implementation timeline of STATCOM and HVDC

3.10.1 Siemens and TATA Power had requested to increase the timeline of commissioning of STATCOMs from 24 months to 30 months on account of increased delivery period of Power Electronics, Control Cards, Air Core Reactors, Valve Cooling systems etc. globally e.g. for ±2x300 MVAR STATCOM at any sub-station, time frame for implementation of STATCOMs to be as given below, in place of 24 months:

- ± 300 MVAR (1st): 24 months
- ± 300 MVAR (2nd): 30 months

3.10.2 After detailed deliberations, it was agreed that the base time shall remain 24 months for 1st STATCOM unit. For further STATCOM units, additional 3 months of time for each unit e.g. 27 months (for 2nd STATCOM unit) will be given.

3.10.3 Chairperson, CEA, stated that the list of components of STATCOM, not being manufactured in India, may be prepared and put up to the Technical Scoping Committee (TSC) Committee under Chairperson, CEA, constituted to inter-alia identify the identify the potential technologies that can be considered for indigenous development in the country, bring out the relevance of the technology for the future power sector. The Committee would in turn make recommendations to the Apex Committee, the High Level Committee under Hon'ble Minister of Power.

3.10.4 Similarly, Hitachi had requested to increase the timeline of commissioning of Bhadla-Fatehpur HVDC from 42 months to 49 months for Bipole I and 54 months for Bipole II, considering the present global uncertainties on supplies of components and their lead time.

After detailed deliberations, it was agreed that the timeline of commissioning of HVDC shall be increased by 06 months for Bipole-II i.e. if implementation timeline is 48 months for Bipole I, it should be 54 months for Bipole-II.

3.10.5 However, the changed timelines for implementation of HVDC & SATCOM schemes would be applicable only to the new schemes brought up in NCT henceforth.

3.10.6 Chairperson, CEA, also stated that rating of HVDC transmission system must be standardised by CEA so that delivery time is reduced.

4 Modification in the earlier approved/notified transmission schemes:

4.1 Transmission system for evacuation of power from Shongtong Karcham HEP (450 MW) and Tidong HEP (150 MW)

4.1.1 A comprehensive transmission scheme (400 kV Jhangi-Wangtoo-Panchkula D/c Corridor) for evacuation of power from two Hydro Electric Projects (HEPs) viz Tidong (150 MW) of Tidong Power Generation Private Limited (STATKRAFT) and Shongtong Karcham HEP (450 MW) of HPPCL in Himachal Pradesh was evolved. The transmission scheme was approved by MoP based on the recommendation by NCT for implementation through TBCB route. Subsequently, HPPCL had intimated that the commissioning date of Shongtong Karcham HEP (STKHEP) had been revised (preponed) from July'26 to July'25 and requested to review the timelines of the transmission system for evacuation of power from Shongtong Karcham HEP (STKHEP) in Himachal Pradesh due to the revised timeline of commissioning of STKHEP.

4.1.2 The revised scheme was also discussed in the 65th NRPC meeting held on 21.04.2023. During the NRPC meeting, MS, NRPC stated that all efforts may be made to reduce the time frame of the interim part to ensure that the generation is not stranded. Therefore, NRPC Forum recommended NCT to give consideration to generation project schedule and accordingly transmission system may be developed.

4.1.3 In the NCT meeting, CTUIL informed that based on the preliminary survey report for 400 kV Wangtoo-Panchkula D/c line, conductor in certain portion of the transmission line may need to be of different configuration (due to very high altitude encountered in certain sections) in order to avoid Corona inception gradient. The cost of the transmission scheme may also increase. Accordingly, CTUIL was requested to confirm change in conductor configuration if any along with revised cost of the scheme based on the survey report and submit the same within two weeks.

4.2 Revised timeframe of the transmission scheme "Transmission system for evacuation of power from Luhri Stage-I HEP"

4.2.1 The transmission system for evacuation of power from Luhri Stage-I HEP was agreed in the 8th meeting of NCT held on 25.03.2022 with the following scope of works:

Sl. No.	*Scope of the Transmission Scheme*	**Capacity/ Route length**
1.	Establishment of 7x105 MVA, 400/220 kV Nange GIS Pooling Station along with125 MVAR (420kV) Bus Reactor at Nange (GIS) PS (1-Ph units along with one spare unit) Future provisions: Space for • 400/220 kV ICTs (315 MVA with single phase units) along with associated bays: 3 Nos. • 400 kV line bays along with switchable line reactor: 3 Nos. • 220 kV line bays: 10 nos	315 MVA, 400/220 kV ICT: 2 Nos. (7x105 MVA including 1 spare ICT) 400 kV ICT bays: 2 Nos. 220 kV ICT bays: 2 Nos. 400 kV, 125 MVAR Bus Reactor-1 No. 400 kV Bus Reactor bay- 1 No. 400 kV Line Bays- 2 Nos.
2.	Nange (GIS) Pooling Station – Koldam 400 kV D/c line (Triple snowbird) (*only one circuit is to be terminated at Kol Dam while second circuit would be connected to bypassed circuit of Kol Dam – Ropar/Ludhiana 400 kV D/c line)*	Route length: 40 km
3.	1 No. of 400 kV line bay at Koldam S/s for termination of Nange (GIS) Pooling Station – Koldam 400 kV linealongwith125 MVAR (420kV) Bus Reactor at Koldam S/s (1-Ph units along with one spare unit)	400 kV Line Bays- 2 Nos. 400 kV, 125 MVAR Bus Reactor-1 No. 400 kV Bus Reactor bay- 1 No.
4.	Bypassing one ckt of Koldam –	

Sl. No.	*Scope of the Transmission Scheme*	**Capacity/ Route length**
	Ropar/Ludhiana 400 kV D/c line (Triple snowbird) at Koldam and connecting it with one of the circuit of Nange- Koldam 400 kV D/c line(Triple snowbird), thus forming Nange- Ropar/ Ludhiana one line (Triple snowbird)	
5.	1x50 MVAR switchable line reactor at Ropar end of Nange- Ropar/ Ludhiana 400 kV line	400 kV, 50 MVAR Line Reactor- 1 No. 400 kV Reactor Bay- 1 No.

4.2.2 The above mentioned transmission scheme was notified in Gazette dated 02.06.2022 and RECPDCL was appointed as the BPC of the transmission scheme. The transmission scheme is currently under bidding with the implementation timeframe of 24.04.2025 (in matching timeframe of Luhri Stage-I HEP).

4.2.3 SJVNL vide letter dated 17.02.2023 informed that Luhri Stage-I HEP is likely to be commissioned by August, 2026, hence the time frame of Luhri Stage-I may be considered as 31.08.2026. The same was acknowledged in a meeting convened by CEA on 07.03.2023. Accordingly, it was decided that the timeframe of the transmission scheme "Transmission system for evacuation of power from Luhri Stage-I HEP", would be revised to 31st August, 2026.

4.2.4 NCT noted the same.

4.3 **Delinking of 400 kV Fatehgarh-II- Bhadla-III D/c line from transmission scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part B1"**

4.3.1 The transmission scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part B1" was agreed in the 5th meeting of the NCT held on 25.08.2021 and 02.09.2021, with the following scope of works:

- Establishment of 2x1500 MVA 765/400 kV & 3x500 MVA 400/220 kV pooling station at Bhadla-3
- Fatehgarh-2 PS – Bhadla-3 PS 400 kV D/c line
- Bhadla-3 PS – Sikar-II S/s 765 kV D/c line

4.3.2 The above mentioned transmission scheme was notified in the Gazette dated 06.12.2022 and PFCCL was appointed as the BPC of the transmission scheme. As the transmission scheme is falling under core GIB area, PFCCL approached the Committee formed by Hon'ble Supreme Court for obtaining the necessary GIB clearance.

4.3.3 Subsequently, a meeting was held on 01.05.2023 under the chairmanship of Secretary, MoP, to review the progress of under construction/ under bidding/ planned Transmission Projects for evacuation of Renewable Energy (RE) projects, wherein it was highlighted that the GIB clearance for Fatehgarh-2 PS – Bhadla-3 PS 400 kV D/c line has not been received due to which the bidding process for the transmission scheme is getting delayed. Considering that, Secretary, MoP, directed that the process of delinking of 400 kV Fatehgarh-II- Bhadla-III D/c line from Phase-III Part-B1 may be carried out at the earliest and a separate package may be formed comprising 400 kV Fatehgarh-II- Bhadla III D/c line.

4.3.4 The same was deliberated in a meeting convened by CEA on 10.05.2023, wherein PFCCL (BPC) was requested to delink the 400 kV Fatehgarh-II- Bhadla-III D/c line as directed by Secretary, MoP. Further, it was recommended that for timely completion of the bidding process, bidders may be given 4 weeks of time for bid submission by the BPC, since the transmission scheme (Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part B1) is already under the bidding process for the past few months and also linked with other transmission schemes under Phase-III.

4.3.5 In view of above, the modification in the scope of the transmission scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part B1" is as follows:

Sl. No.	Existing Scope	Revised Scope
1.	Establishment of 2x1500 MVA 765/400 kV & 3x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420kV) Bus Reactor • 765/400 kV 1500 MVA ICTs: 2 Nos. (7x500 MVA including one spare unit) • 765 kV ICT bays - 2 Nos. • 400/220 kV, 500 MVA ICT – 3 Nos. • 765 kV line bays -2 Nos. • 400 kV ICT bays – 5 Nos. • 220 kV ICT bays - 3 Nos. • **400 kV line bays - 2 Nos.** • 220 kV line bays: 5 Nos. • 330 MVAR Bus Reactor-2 Nos. (7x110 MVAR, including one spare unit)	Establishment of 2x1500 MVA, 765/400 kV & 3x500 MVA, 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420 kV) Bus Reactor • 765/400 kV 1500 MVA ICTs: 2 Nos. (7x500 MVA including one spare unit) • 765 kV ICT bays - 2 Nos. • 400/220 kV, 500 MVA ICT – 3 Nos. • 765 kV line bays -2 Nos. • 400 kV ICT bays – 5 Nos. • 220 kV ICT bays - 3 Nos. • 220 kV line bays: 5 Nos. • 330 MVAR Bus Reactor-2 Nos. (7x110 MVAR, including one spare unit) • 765 kV reactor bay- 2 Nos. • 125 MVAR, 420 kV bus reactor - 2 Nos.

Sl. No.	Existing Scope	Revised Scope
	• 765 kV reactor bay- 2 Nos. • 125 MVAR, 420kV bus reactor - 2 Nos. • 420 kV reactor bay - 2 Nos. Future provisions: Space for • 765/400 kV ICTs along with bays: 2 Nos. • 765 kV line bay along with switchable line reactor: 6 Nos. • 765 kV line bay: 4 Nos. • 765 kV Bus Reactor along with bays: 2 Nos. • 400/220 kV ICTs along with bays: 10 Nos. • 400 kV line bays: 8 Nos. • **400 kV line bays along with switchable line reactor: 6 Nos.** • 400 kV Bus Reactor along with bays: 2 Nos. • 400 kV Sectionalization bay: 2 sets • 220 kV line bays: 12 Nos. • 220 kV sectionalization bay: 2 sets	• 420 kV reactor bay - 2 Nos. Future provisions: Space for • 765/400 kV ICTs along with bays: 2 Nos. • 765 kV line bay along with switchable line reactor: 6 Nos. • 765 kV line bay: 4 Nos. • 765 kV Bus Reactor along with bays: 2 Nos. • 400/220 kV ICTs along with bays: 10 Nos. • 400 kV line bays: 8 Nos. • **400 kV line bays along with switchable line reactors: 8 Nos.** • 400 kV Bus Reactor along with bays: 2 Nos. • 400 kV Sectionalization bay: 2 sets • 220 kV line bays: 12 Nos. • 220 kV Sectionalization bay: 2 sets
2.	Fatehgarh-2 PS – Bhadla-3 PS 400 kV D/c line (Quad moose) along with 63 MVAR Switchable line reactor for each circuit at both ends of Fatehgarh 2-Bhadla-3 400 kV D/c line • 400 kV 63 MVAR switchable line reactor – 4 Nos. • Switching equipment for 400 kV 63 MVAR switchable line reactor – 4 Nos.	**Deleted**
3.	400 kV line bays at Fatehgarh-2 PS for Fatehgarh-2 PS – Bhadla-3 PS 400 kV D/c line • 400 kV line bays - 2 Nos.	**Deleted**
4.	Bhadla-3 PS – Sikar-II S/s 765 kV D/c line along with 330 MVAR Switchable line reactor for each circuit at each end of	Bhadla-3 PS – Sikar-II S/s 765 kV D/c line along with 330 MVAR Switchable line reactor for each circuit at each end of Bhadla-

Sl. No.	Existing Scope	Revised Scope
	Bhadla-3 PS – Sikar-II S/s 765 kV D/c line • Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 Nos. • 765 kV, 330 MVAR Switchable line reactor- 4 Nos.	3 PS – Sikar-II S/s 765 kV D/c line • Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 Nos. • 765 kV, 330 MVAR Switchable line reactor- 4 Nos.
5.	765 kV line bays at Sikar-II • 765 kV line bays – 2 Nos.	765 kV line bays at Sikar-II • 765 kV line bays – 2 Nos.
	Note: i. *Provision of suitable sectionalization shall be kept at Bhadla-3 at 400 kV & 220 kV level to limit short circuit level.* ii. *POWERGRID to provide space for 2 Nos. of 400 kV line bays along with space for switchable line reactors at Fatehgarh-2 S/s.* iii. *Developer of Sikar-II S/s to provide space for 2 Nos. of 765 kV line bays at Sikar-II S/s along with space for switchable line reactors.* iv. *Space provision for future 2 Nos. 220 kV Bus Coupler bay and 2 Nos. Transfer Bus Coupler Bay shall be kept for bus switching scheme requirement.*	**Note:** i. *Provision of suitable sectionalization shall be kept at Bhadla-3 at 400 kV & 220 kV level to limit short circuit level.* **ii. *Deleted*** iii. *Developer of Sikar-II S/s to provide space for 2 Nos. of 765 kV line bays at Sikar-II S/s along with space for switchable line reactors.* iv. *Space provision for future 2 Nos. 220 kV Bus Coupler bay and 2 Nos. Transfer Bus Coupler Bay shall be kept for bus switching scheme requirement.*

4.3.6 After detailed deliberations, the revised scope of the scheme was approved by NCT. Revised scope of the scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part B1" is as follows:

Revised Scope
Establishment of 2x1500 MVA 765/400 kV & 3x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420 kV) Bus Reactor • 765/400 kV 1500 MVA ICTs: 2 Nos. (7x500 MVA including one spare unit) • 765 kV ICT bays - 2 Nos. • 400/220 kV, 500 MVA ICT – 3 Nos. • 765 kV line bays -2 Nos. • 400 kV ICT bays – 5 Nos. • 220 kV ICT bays - 3 Nos. • 220 kV line bays: 5 Nos. • 330 MVAR Bus Reactor-2 Nos. (7x110 MVAR, including one spare unit)

Revised Scope
• 765 kV reactor bay- 2 Nos. • 125 MVAR, 420kV bus reactor - 2 Nos. • 420 kV reactor bay - 2 Nos. Future provisions: Space for • 765/400 kV ICTs along with bays: 2 Nos. • 765 kV line bay along with switchable line reactor: 6 Nos. • 765 kV line bay: 4 Nos. • 765 kV Bus Reactor along with bays: 2 Nos. • 400/220 kV ICTs along with bays: 10 Nos. • 400 kV line bays: 8 Nos. • **400 kV line bays along with switchable line reactor: 8 Nos.** • 400 kV Bus Reactor along with bays: 2 Nos. • 400 kV Sectionalization bay: 2 sets • 220 kV line bays: 12 Nos. • 220 kV Sectionalization bay: 2 sets
Bhadla-3 PS – Sikar-II S/s 765 kV D/c line along with 330 MVAR Switchable line reactor for each circuit at each end of Bhadla-3 PS – Sikar-II S/s 765 kV D/c line • Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 Nos. • 765 kV, 330 MVAR Switchable line reactor- 4 Nos.
765 kV line bays at Sikar-II • 765 kV line bays – 2 Nos.
Note: i. *Provision of suitable sectionalization shall be kept at Bhadla-3 at 400 kV & 220 kV level to limit short circuit level.* ii. *Developer of Sikar-II S/s to provide space for 2 Nos. of 765 kV line bays at Sikar-II S/s along with space for switchable line reactors.* iii. *Space provision for future 2 Nos. 220 kV Bus Coupler bay and 2 Nos. Transfer Bus Coupler Bay shall be kept for bus switching scheme requirement.*

5 Comprehensive presentation by CTU apprising NCT of measures taken for ensuring development of an efficient, co-ordinated and economical ISTS for smooth flow of electricity.

CTUIL has prepared the rolling plan for 2027-28, which will be presented in the next NCT meeting.

6 Five-year rolling plan for ISTS capacity addition.

CTUIL has prepared the rolling plan for 2027-28, which will be presented in the next NCT meeting.

7 Any other issues, with permission of chair

The meeting ended with thanks to the chair.

Summary of the deliberations of the 14th meeting of NCT held on 09th June, 2023

I. ISTS communication schemes approved by NCT for implementation under RTM Route:

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Implementing Agency	Estimated Cost (Rs Cr)
1.	Requirement of additional FOTE of STM-16 capacity at Bhuj PS to cater to connectivity of RE Gencos	RTM	12 months	POWER GRID	0.6
2.	Requirement of additional FOTE of STM-16 capacity at Bhuj-II substation to cater to connectivity of RE Gencos	RTM	12 months	M/s PBTL	0.3
3.	Upgradation of STM-4 communication link of Dehgam, Ranchhodpura, Santhalpur Rep, Bhachau and CGPL Mundra to STM-16 capacity	RTM	12 months	POWER GRID	1.5

II. ISTS schemes costing less than Rs. 100 Crs. approved by NCT:

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Allocated to	Estimated Cost (Rs Crs)
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part A1 **Brief Scope:** Conversion of 330 MVAR Fixed LR at Wardha (on each ckt of Wardha – Raipur 765 kV D/c line	RTM	Matching with implementation of Khavda Phase-V Part A scheme viz. Bipole-1 (2x1500 MW) ±	POWER GRID	21

Sl. No.	Name of Transmission Scheme	Implement ation Mode	Implement ation timeframe	Allocated to	Estimated Cost (Rs Crs)
	being LILOed at Nagpur) into Bus Reactors at Wardha S/s		800 kV Nagpur (HVDC) [LCC] which is 48 months from SPV transfer.		
2.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part H2 **Brief Scope:** Provision of NGR bypass arrangement and inter tripping scheme on 240 MVAR SW LR at Bhopal end of Kurawar – Bhopal 765 kV S/c line (~60 km.):	RTM	In matching timeframe of H1 Scheme	BDTCL i.e. the TSP owing the Indore – Bhopal 765 kV S/c line	0.45

III. ISTS Transmission schemes, costing between Rs 100 Crore to Rs 500 Crore, approved by NCT:

(a) The transmission schemes approved by NCT under RTM route is given below:

Sl. No.	Name of Transmission Scheme	Impleme ntation Mode	Implement ation timeframe	Allocated to	Estimated Cost (Rs. Crs)
1.	Augmentation of transformation capacity by 1x1500 MVA (3rd), 765/400 kV ICT at Maheshwaram (PG) substation in Telangana	RTM	21 months	POWERGRID	123.12

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Allocated to	Estimated Cost (Rs. Crs)
2.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1	RTM	24 months	Khavda – Bhuj Transmission Ltd. (Subsidiary of Adani Transmission limited)	216
3.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E3	RTM	24 months	KPS3 Transmission Limited (Subsidiary of POWERGRID)	216
4.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E4	RTM	24 months	POWERGRID	235

(b) The transmission schemes approved by NCT to be implemented through TBCB route is given below:

Sl. No.	Name of Transmission Scheme	Implementation Mode	Tentative Implementation timeframe	Allocated to	Estimated Cost (Rs. Crs)	Survey Agency
1.	Western Region Network Expansion scheme in Kallam area of Maharashtra	TBCB	18 months	RECPDCL	160	RECPDCL

The broad scope of above ISTS scheme, approved by NCT for implementation through TBCB route to be notified in Gazette of India is as given below:

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
1.	Western Region Network Expansion scheme in Kallam area of Maharashtra Tentative Implementation Timeframe: 18 months from transfer of SPV	i. LILO of both circuits of Parli(M) – Karjat(M)/Lonikand-II(M) 400 kV D/c line (twin moose) at Kallam PS ii. 4 Nos. 400 kV line bays at Kallam PS for LILO of both circuits of Parli(M) – Karjat(M)/Lonikand-II(M) 400 kV D/c line (twin moose) at Kallam PS iii. 63 MVAR, 420 kV switchable line reactor (with NGR bypassing arrangement) on each ckt at Kallam PS end of Karjat – Kallam 400 kV D/c line (~140 km) **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	RECPDCL

IV. ISTS Transmission schemes, costing greater than Rs 500 Crore recommended by NCT to MoP:

(a) The ISTS transmission schemes recommended by NCT to MoP are given below:

Sl. No.	Transmission Scheme	Implementation Mode	Tentative Implementation timeframe	Survey Agency	BPC	Estimated Cost (Rs. Crs)
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part A	TBCB	24 months from SPV Transfer	RECPDCL	RECPDCL	4,091
2.	Transmission System for Evacuation of Power from potential renewable	TBCB	24 months from	PFCCL	PFCCL	4,766

Sl. No.	Transmission Scheme	Implementation Mode	Tentative Implementation timeframe	Survey Agency	BPC	Estimated Cost (Rs. Crs)
	energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part B		SPV Transfer			
3.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part C	TBCB	24 months from SPV Transfer	RECPDCL	RECPDCL	5,340
4.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part D	TBCB	24 months from SPV Transfer	PFCCL	PFCCL	3,455
5.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E2	TBCB	21 months from SPV Transfer	RECPDCL	RECPDCL	697
6.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part A	TBCB	48 months for Bipole-1 and 54 months for Bipole-2 from SPV Transfer	RECPDCL	RECPDCL	24,819
7.	Transmission System for Evacuation of Power	TBCB	48 months	PFCCL	PFCCL	12,000

Sl. No.	Transmission Scheme	Implementation Mode	Tentative Implementation timeframe	Survey Agency	BPC	Estimated Cost (Rs. Crs)
	from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part C		from SPV Transfer			
8.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part A	TBCB	24 months from SPV Transfer	RECPDCL	RECPDCL	2,206
9.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part B	TBCB	24 months from SPV Transfer	PFCCL	PFCCL	3,279
10.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part C	TBCB	24 months from SPV Transfer	CTUIL	RECPDCL	2,708
11.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part D	TBCB	24 months from SPV Transfer	CTUIL	PFCCL	2,227
12.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part E	TBCB	24 months from SPV Transfer	RECPDCL	RECPDCL	3,251

Sl. No.	Transmission Scheme	Implementation Mode	Tentative Implementation timeframe	Survey Agency	BPC	Estimated Cost (Rs. Crs)
13.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part F (By clubbing Part F1 & F2)	TBCB	24 months from SPV Transfer	PFCCL	PFCCL	2,735
14.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part H1	TBCB	24 months from SPV Transfer	RECPDCL	RECPDCL	3,674

(b) The broad scope of ISTS schemes recommended by NCT to MoP for implementation through TBCB mode, to be notified in Gazette of India is as given below:

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7GW): Part A Tentative Implementation Timeframe: 24 months	i. Creation of 765 kV bus section-II at KPS3 (GIS) along with 765 kV Bus Sectionaliser & 1x330MVAR, 765 kV Bus Reactors on Bus Section-II Bus section – II shall be created at 765 kV & 400 kV level both with 3x1500 MVA, 765/400 kV ICTs at Bus Section-II ii. Creation of 400 kV bus section-II at KPS3 (GIS) along with 400 kV Bus Sectionaliser & 1x125MVAR, 400 kV Bus Reactors on Bus Section-II and 3 Nos. 400 kV bays at Bus Section-II for RE interconnection	RECPDCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		iii. KPS3 (GIS) – Lakadia (AIS) 765 kV D/C line iv. 2 Nos. of 765 kV line bays each at KPS3 (GIS) & Lakadia (AIS) for KPS3 (GIS) – Lakadia (AIS) 765 kV D/C line v. ±300 MVAR STATCOM with 1x125 MVAR MSC, 2x125 MVAR MSR at KPS3 400 kV Bus section-2 vi. KPS1 (GIS)– Bhuj PS 765 kV 2nd D/C line vii. 2 Nos. of 765 kV line bays each at KPS1 (GIS) & Bhuj PS for KPS1 (GIS) – Bhuj PS 765 kV D/C line viii. 330 MVAR, 765 kV switchable line reactors at KPS3 end of KPS3 (GIS) – Lakadia 765 kV D/C line (with NGR bypass arrangement) **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
2.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part B Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of 2x1500 MVA, 765/400 kV & 2x500 MVA, 400/220 kV GIS S/s at a suitable location South of Olpad (between Olpad and Ichhapore) with 2x330 MVAR, 765 kV & 1x125 MVAR, 420 kV bus reactors. ii. Vadodara(GIS) – South Olpad (GIS) 765 kV D/C line iii. 240 MVAR switchable line	PFCCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		reactors on each ckt at Vadodara(GIS) end of Vadodara(GIS) –South Olpad(GIS) 765 kV D/C line (with NGR bypass arrangement) iv. 2 Nos. of 765 kV line bays at Vadodara(GIS) for Vadodara(GIS) – South olpad(GIS) 765 kV D/C line v. LILO of Gandhar – Hazira 400 kV D/c line at South Olpad (GIS) using twin HTLS conductor with minimum capacity of 1700MVA per ckt at nominal voltage vi. Ahmedabad – South Olpad(GIS) 765 kV D/c line vii. 240 MVAR switchable line reactors on each ckt at Ahmedabad & South Olpad (GIS) end of Ahmedabad – South Olpad(GIS) 765 kV D/c line (with NGR bypass arrangement) viii. 2 Nos. of 765 kV line bays at Ahmedabad S/s for Ahmedabad – South Olpad(GIS) 765 kV D/c line **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
3.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part C	i. Establishment of 4x1500 MVA 765/400 kV & 2x500 MVA 400/220 kV Boisar-II (GIS) with 2x330 MVAR, 765 kV bus reactor and 2x125 MVAR, 420 kV bus reactor. [2x1500 MVA, 765/400 kV ICTs shall be on each 400 kV section and	RECPDCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
	Tentative Implementation timeframe: 24 months from SPV transfer	2x500MVA, 400/220 kV ICTs shall be on 400 kV bus section-II. 2x125MVAR Bus reactors shall be such that one bus reactor is placed on each 400 kV bus section. 400 kV Bus Sectionaliser to be kept under normally OPEN condition.] ii. South Olpad (GIS) – Boisar-II (GIS) 765 kV D/c line iii. 2 Nos. of 765 kV line bays at South Olpad (GIS) for termination of South Olpad (GIS) – Boisar-II (GIS) 765 kV D/c line iv. 240 MVAR switchable line reactors on each ckt at South Olpad(GIS) & Boisar-II(GIS) end of South Olpad(GIS) – Boisar-II(GIS) 765 kV D/c line (with NGR bypass arrangement) v. LILO of Navsari(New) – Padghe(PG) 765 kV D/c line at Boisar-II vi. Boisar-II (Sec-II) – Velgaon(MH) 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line vii. 2 Nos. of 400 kV line bays at Velgaon(MH) for termination of Boisar-II – Velgaon(MH) 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line viii. LILO of Babhaleswar – Padghe (M) 400 kV D/c line at Boisar-II (Sec-I) using twin HTLS	

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		conductor with minimum capacity of 1700 MVA per ckt at nominal voltage ix. 80 MVAR switchable line reactors at Bosar-II end of Boisar-II – Babhaleswar 400 kV D/c line (with NGR bypass arrangement) formed after above LILO x. ±200MVAR STATCOM with 2x125 MVAR MSC, 1x125 MVAR MSR at 400 kV bus section-I of Boisar-II and ±200MVAR STATCOM with 2x125 MVAR MSC, 1x125 MVAR MSR at 400 kV bus section-II of Boisar-II xi. ± 300 MVAR STATCOM with 3x125 MVAR MSC, 1x125 MVAR MSR at 400 kV level of Navsari(New)(PG) S/s with 1 No. of 400 kV bay (GIS) **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
4.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part D Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of 2x1500 MVA 765/400 kV & 3x500 MVA 400/220 kV Pune-III (GIS) S/s with 2x330 MVAR, 765 kV bus reactor and 2x125 MVAR, 420 kV bus reactor. ii. Boisar-II – Pune-III 765 kV D/c line iii. 330 MVAR switchable line reactors at Pune-III end of Boisar-II – Pune-III 765 kV D/c line (with NGR bypass	PFCCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		arrangement). iv. 2 Nos. of 765 kV line bays at Boisar-II for termination of Boisar-II – Pune-III 765 kV D/c line v. LILO of Narendra (New) – Pune(GIS) 765 kV D/c line at Pune-III vi. 330 MVAR switchable line reactors at Pune-III end of Narendra (New) – Pune-III (GIS) 765 kV D/c line (with NGR bypass arrangement). vii. LILO of Hinjewadi - Koyna 400 kV S/c line at Pune-III(GIS) S/s viii. 80 MVAR, 420 kV switchable Line Reactors on each ckt at Pune-III (GIS) end of Pune-III (GIS) – Koyna 400 kV line formed after above LILO (with NGR bypass arrangement). **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
5.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E2 Tentative Implementation timeframe: 21 months from SPV transfer	i. Augmentation of transformation capacity at KPS2 (GIS) by 2x1500 MVA, 765/400 kV ICT on Bus Section-I (5th & 6th) & 2x1500 MVA, 765/400 kV ICT on Bus section-II (7th & 8th) & 2 Nos. 400 kV bays at Bus Section-I for RE interconnection and 3 Nos. 400 kV bays at Bus Section-II for RE interconnection **(Detailed scope as approved by 14th NCT and subsequent**	RECPDCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		amendments thereof)	
6.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part A Tentative Implementation timeframe: 48 months for Bipole-1 (2x1500MW) and 54 months for Bipole-2 (2x1500MW)	i. Establishment of 6000 MW, ±800 kV KPS2 (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard ii. Establishment of 6000 MW, ±800 kV Nagpur (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard iii. ±800 kV HVDC Bipole line (Hexa lapwing) between KPS2(HVDC) and Nagpur (HVDC) (1200 km) (with Dedicated Metallic Return) (capable to evacuate 6000 MW with overload as specified) iv. Establishment of 6x1500 MVA, 765/400 kV ICTs at Nagpur S/s along with 2x330 MVAR (765 kV) & 2x125 MVAR, 420 kV bus reactors along with associated interconnections with HVDC Switchyard. The 400 kV bus shall be established in 2 sections through 1 set of 400 kV bus sectionaliser so that 3x1500 MVA ICTs are placed in each section. The bus sectionaliser shall be normally CLOSED and may be opened based on Grid requirement. v. LILO of Wardha – Raipur 765 kV one D/c line (out of 2xD/c	PFCCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		lines) at Nagpur. vi. Installation of 240 MVAR switchable line reactor at Nagpur end on each ckt of Nagpur – Raipur 765 kV D/c line. **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
7.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8GW): Part C Tentative Implementation timeframe: 48 months from SPV transfer	i. Establishment of 2500 MW, ±500 kV KPS3 (HVDC) [VSC] terminal station (2x1250 MW) at a suitable location near KPS3 substation with associated interconnections with 400 kV HVAC Switchyard ii. Establishment of 2500 MW, ±500 kV South Olpad (HVDC) [VSC] terminal station (2x1250 MW) along with associated interconnections with 400 kV HVAC Switchyard of South Olpad S/s iii. Establishment of KPS3 (HVDC) S/s along with 2x125MVAR, 420kV bus reactors along with associated interconnections with HVDC Switchyard. The 400 kV bus shall be established in 2 sections through 1 set of 400 kV bus sectionaliser to be kept normally OPEN. 400/33 kV, 2x50 MVA transformers for exclusively supplying auxiliary power to HVDC terminal. iv. KPS3 – KPS3 (HVDC) 400 kV 2xD/c (Quad ACSR /AAAC /	RECPDCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		AL59 moose equivalent) line along with the line bays at both substations v. ±500 kV HVDC Bipole line between KPS3(HVDC) and South Olpad (HVDC) (with Dedicated Metallic Return) (capable to evacuate 2500 MW) **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
8.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part A Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of 4x1500 MVA, 765/400 kV & 5x500 MVA, 400/220 kV Fatehgarh-IV (Section-2) Pooling Station along with 2x240 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420 kV) Bus Reactor ii. Fatehgarh-IV (Section-2) PS – Bhinmal (PG) 400 kV D/c line (Twin HTLS) along with 50 MVAR switchable line reactor on each ckt. at each end iii. LILO of both ckts of 765 kV Fatehgarh-III- Beawar D/c line (2nd) at Fatehgarh-IV (Section-2) PS along with 330 MVAR switchable line reactor at Fatehgarh-IV PS end of each ckt of 765 kV Fatehgarh-IV- Beawar D/c line (formed after LILO) iv. 2 Nos. of 400 kV line bays at Bhinmal (PG) **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	PFCCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
9.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part B Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of 2x1500 MVA, 765/400 kV Substation at suitable location near Sirohi along with 2x240 MVAR (765 kV) & 2x125 MVAR (420 kV) Bus Reactor ii. Fatehgarh-IV (Section-2) PS – Sirohi PS 765 kV D/c line along with 240 MVAR switchable line reactor for each circuit at each end iii. Sirohi PS-Chittorgarh (PG) 400 kV D/c line (Quad) along with 80 MVAR switchable line reactor for each circuit at Sirohi PS end. iv. 2 No. of 400 kV line bays at Chittorgarh (PG) S/s v. 2 No. of 765 kV line bays at Fatehgarh-IV (Section-2) PS **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	RECPDCL
10.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part C Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of 3x1500 MVA, 765/400 kV & 5x500 MVA, 400/220 kV Mandsaur Pooling Station along with 2x330 MVAR (765 kV) Bus Reactors & 2x125 MVAR, 420 kV Bus Reactor. ii. Mandsaur PS – Indore(PG) 765 kV D/c Line iii. 1x330 MVAR, 765 kV switchable line reactor (SLR) on each ckt at Mandsaur end of Mandsaur PS – Indore (PG) 765	PFCCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		kV D/c Line iv. 2 Nos. of 765 kV line bays at Indore(PG) for termination of Mandsaur PS – Indore(PG) 765 kV D/c Line **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
11.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part D Tentative Implementation timeframe: 24 months from SPV transfer	i. Beawar- Mandsaur PS 765 kV D/c line along with 240 MVAR switchable line reactor for each circuit at each end ii. 2 Nos. of 765 kV line bays each at Beawar S/s & Mandsaur S/s **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	RECPDCL
12.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part E Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of, 765 kV Substation at suitable location near Rishabdeo (Distt. Udaipur) along with 2x240 MVAR (765 kV) Bus Reactor ii. Sirohi PS- Rishabdeo 765 kV D/c line along with 330 MVAR switchable line reactor for each circuit at Sirohi end iii. Rishabdeo - Mandsaur PS 765 kV D/c line along with 240 MVAR switchable line reactor for each circuit at Rishabdeo end iv. LILO of one circuit of 765 kV Chittorgarh-Banaskanta D/c line at Rishabdeo S/s v. 2 Nos. of 765 kV line bays each	PFCCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		at Sirohi PS & Mandsaur S/s **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	
13.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part F [by clubbing Part F1 & F2] Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of 3x1500 MVA, 765/400 kV& 2x500 MVA, 400/220 kV Barmer-I Pooling Station along with 2x240 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420 kV) Bus Reactor ii. Fatehgarh-III (Section-2) PS – Barmer-I PS 400 kV D/c line (Quad) iii. Barmer-I PS– Sirohi PS 765 kV D/c line along with 240 MVAR switchable line reactor for each circuit at each end iv. 2 Nos. of 400 kV line bays at Fatehgarh-III (Section-2) PS v. 2 Nos. of 765 kV line bays at Sirohi PS **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	RECPDCL
14.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part H1 Tentative Implementation timeframe: 24 months from SPV transfer	i. Establishment of 765/400 (2x1500 MVA), 400/220 (2x500 MVA) & 220/132 kV (3x200 MVA) Kurawar S/s with 2x330 MVAR, 765 kV bus reactor and 1x125 MVAR, 420 kV bus reactor. ii. Mandsaur – Kurawar 765 kV D/ c line. iii. 240 MVAR switchable line	PFCCL

Sl. No.	Name of Scheme & Implementation timeframe	Broad Scope	Bid Process Coordinator
		reactors on each ckt at both ends of Mandsaur – Kurawar 765 kV D/c line. iv. 2 Nos. of 765 kV line bays at Mandsaur S/s for termination of Mandsaur – Kurawar 765 kV D/ c line. v. LILO of Indore – Bhopal 765 kV S/c line at Kurawar. vi. Kurawar – Ashtha 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line. vii. 2 Nos. of 400 kV line bays at Ashtha (MP) S/s for termination of Kurawar – Ashtha 400 kV D/ c line. viii. LILO of one circuit of Indore – Itarsi 400 kV D/c line at Astha ix. 2 Nos. of 400 kV line bays at Ashtha (MP) S/s for LILO of one circuit of Indore – Itarsi 400 kV D/c line at Astha x. Shujalpur – Kurawar 400 kV D/ c (Quad ACSR/AAAC/AL59 moose equivalent) line xi. 2 Nos. of 400 kV line bays at Shujalpur(PG) S/s for termination of Shujalpur – Kurawar 400 kV D/c line **(Detailed scope as approved by 14th NCT and subsequent amendments thereof)**	

V. Modification in the earlier approved/notified transmission schemes:

(a) Revised timeframe of the transmission scheme "Transmission system for evacuation of power from Luhri Stage-I HEP"

The timeframe of the transmission scheme "Transmission system for evacuation of power from Luhri Stage-I HEP", would be revised to 31st August, 2026, in the matching timeframe of Luhri Stage-I HEP.

(b) Delinking of Fatehgarh-II- Bhadla-III 400 kV D/c line from transmission scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part B1":

Revised scope of the scheme "Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part B1" is as follows:

Revised Scope
Establishment of 2x1500 MVA 765/400 kV & 3x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAR (765 kV) Bus Reactor & 2x125 MVAR (420 kV) Bus Reactor • 765/400 kV 1500 MVA ICTs: 2 Nos. (7x500 MVA including one spare unit) • 765 kV ICT bays - 2 Nos. • 400/220 kV, 500 MVA ICT – 3 Nos. • 765 kV line bays -2 Nos. • 400 kV ICT bays – 5 Nos. • 220 kV ICT bays - 3 Nos. • 220 kV line bays: 5 Nos. • 330 MVAR Bus Reactor-2 Nos. (7x110 MVAR, including one spare unit) • 765 kV reactor bay- 2 Nos. • 125 MVAR, 420kV bus reactor - 2 Nos. • 420 kV reactor bay - 2 Nos. Future provisions: Space for

Revised Scope
• 765/400 kV ICTs along with bays: 2 Nos. • 765 kV line bay along with switchable line reactor: 6 Nos. • 765 kV line bay: 4 Nos. • 765 kV Bus Reactor along with bays: 2 Nos. • 400/220 kV ICTs along with bays: 10 Nos. • 400 kV line bays: 8 Nos. • **400 kV line bays along with switchable line reactor: 8 Nos.** • 400 kV Bus Reactor along with bays: 2 Nos. • 400 kV Sectionalization bay: 2 sets • 220 kV line bays: 12 Nos. • 220 kV sectionalization bay: 2 sets
Bhadla-3 PS – Sikar-II S/s 765 kV D/c line along with 330 MVAR Switchable line reactor for each circuit at each end of Bhadla-3 PS – Sikar-II S/s 765 kV D/c line • Switching equipment for 765 kV 330 MVAR switchable line reactor – 4 Nos. • 765 kV, 330 MVAR Switchable line reactor- 4 Nos.
765 kV line bays at Sikar-II • 765 kV line bays – 2 Nos.
Note: iv. *Provision of suitable sectionalization shall be kept at Bhadla-3 at 400 kV & 220 kV level to limit short circuit level.* v. *Developer of Sikar-II S/s to provide space for 2 Nos. of 765 kV line bays at Sikar-II S/s along with space for switchable line reactors.* vi. *Space provision for future 2 Nos. 220 kV Bus Coupler bay and 2 Nos. Transfer Bus Coupler Bay shall be kept for bus switching scheme requirement.*

***

Annex-I

List of Participants of the 14th meeting of NCT

CEA:

1. Sh. Ghanshyam Prasad, Chairperson, CEA and Chairman, NCT
2. Sh. A. K. Rajput, Member (Power Systems)
3. Sh. Ajay Talegaonkar, Member (E&C)
4. Sh. Ishan Sharan, Chief Engineer (PSPA-I)
5. Sh. Upendra Kumar, Chief Engineer (PCD)
6. Sh. B.S. Bairwa, Director (PSPA-II)
7. Sh. Deepanshu Rastogi, Deputy Director (PSPA-II)
8. Sh. Manish Maurya, Deputy Director (PSPA-II)
9. Sh. Pranay Garg, Deputy Director (PSPA-II)
10. Sh. Kanhaiya Singh Kushwaha, Assistant Director (PSPA-I)
11. Sh. Ajay Malav, Assistant Director (PSPA-II)

MoP:

1. Sh. Om Kant Shukla, Director (Trans.)

MNRE:

1. Sh. Tarun Singh, Scientist D

SECI:

1. Sh. Sanjay Sharma, Director
2. Sh. R.K. Agarwal, Consultant

CTUIL:

1. Sh. P.C. Garg, COO
2. Sh. Ashok Pal, Deputy COO
3. Sh. Jasbir Singh, CGM
4. Sh. Sourov Chakraborty, CGM
5. Sh. P.S Das, Senior GM
6. Sh. V Thiagarajan, Senior GM
7. Sh. Kashish Bhambhani, GM
8. Sh. Sandeep Kumawat, DGM
9. Sh. Chinmay Sharma, Chief Manager
10. Sh. Pratyush Singh, Chief Manager

GRID India:

1. Sh. Rajiv Porwal, ED
2. Sh. Surajit Banerjee, CGM
3. Sh. Vivek Pandey, GM
4. Sh. Priyam Jain, Manager

Expert Member:

1. Ms. Seema Gupta
2. Dr. Radheshyam Saha

Annexure - 3

No.15/3/2018-Trans-Pt(5)
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi
Dated, the 28h October 2021

OFFICE ORDER

Subject: - Re-constitution of the "National Committee on Transmission" (NCT) - reg.

In super-session of this Ministry's Office Order No. 15/3/2017-Trans dated 04.11.2019, regarding constitution of the National Committee on Transmission (NCT) and subsequent amendment issued vide this Ministry's Office Order No. 15/3/2018-Trans Pt(5) dated 20.05.2021, the undersigned is directed to state that the composition and terms of reference of the existing NCT are amended as mentioned below:

1. Composition of NCT

1	Chairperson, Central Electricity Authority (CEA)	Chairman
2	Member(Power System), CEA	Member
3	Member(Economic & Commercial), CEA	Member
4	Joint Secretary level officer nominated by Secretary, MNRE	Member
5	Director(Trans), M/o Power, Govt. of India	Member
6	Chief Operating Officer, Central Transmission Utility	Member
7	CMD POSOCO	Member
8	Advisor(Energy) , NITI Aayog	Member
9	Two experts from Power Sector to be nominated by MoP*	Members
10	Chief Engineer (from Power System Wing), CEA	Member Secretary

* Will be nominated for a maximum period of two years from the date of their nomination.

2. Terms of Reference (ToR) of the NCT are as under:

i. The NCT shall evaluate the functioning of the National Grid on a quarterly basis.

ii. The Central Transmission Utility (CTU), as mandated under the Electricity Act, 2003, is to carry out periodic assessment of transmission requirement under Inter-State Transmission System (ISTS). The CTU shall also make a comprehensive presentation before the NCT every quarter for ensuring development of an efficient, co-ordinated and economical ISTS for smooth flow of electricity. The CTU, in the process, may also take inputs from the markets to identify constraints and congestion in the transmission system.

28/10/2021

Khavda - Bhuj Transmission Limited

iii. The CTU after consulting Regional Power Committee(s) [RPC(s)] shall submit the proposal for expansion of ISTS to the NCT for their consideration. For proposal upto Rs. 500 crores, prior consultation with RPC would not be required.

iv. As per provision of Electricity (Planning, Development and Recovery of ISTS charges) Rules 2021, the CTU shall also prepare a five-year rolling plan for ISTS capacity addition every year. The Annual Plan shall be put up to the NCT six months in advance, e.g. The Annual Plan for FY 2023-24 will be put up before the NCT by 30th September 2022..

v. After considering the recommendations of the CTU and views of the RPCs, the NCT shall propose expansion of ISTS after assessing the trend of growth in demand and generation in various regions, constraints, if any, in the inter- State, inter- Region transfer of power, which are likely to arise in the near term/ medium term, so that transmission does not constrain the growth.

vi. The NCT shall formulate the packages for the proposed transmission schemes for their implementation.

vii. The NCT shall estimate the cost of transmission packages and may constitute a cost committee for this purpose.

viii. The NCT shall recommend to Ministry of Power (MoP) for implementation of the ISTS for projects with cost more than Rs 500 crore, along with their mode of implementation i.e. Tariff Based Competitive Bidding (TBCB) / Regulated Tariff Mechanism (RTM), as per the existing Tariff Policy. However, the NCT shall approve the ISTS costing between Rs 100 crore to Rs.500 crore or such limit as prescribed by MoP from time to time, along with their mode of implementation under intimation to MoP. The ISTS costing less than or equal to Rs. 100 crores, or such limit as prescribed by MoP from time to time, will be approved by the CTU along with their mode of implementation under intimation to the NCT and MoP. After approval of the ISTS by the NCT or the CTU (as the case may be), the TBCB project shall be allocated to Bid Process Coordinators through Gazette Notification, while the RTM project shall be allocated to CTU.

ix. The NCT shall allocate the task of carrying out survey amongst the CTU and Bid Process Coordinators by maintaining a roster.

3. The NCT meetings shall be held every quarter, and on monthly basis, if required.

4. While making their recommendations,

i. the NCT shall keep in mind the relevant Act, Rules, Regulation, policies and guidelines such as but not limited to - Electricity Act 2003, National Electricity Policy, Tariff Policy, Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules, 2021, Guidelines for Encouraging Competition in Development of Transmission Projects, Tariff based Competitive Bidding Guidelines for Transmission Service and any specific advice received from MoP.

ii. For enabling growth of Renewable Energy (RE) capacity, areas which have high solar/wind energy potential, as identified by Ministry of New and Renewable Energy

28/10/2021.

Khavda - Bhuj Transmission Limited

(MNRE), need to be connected to ISTS, so that the RE capacity can come up there. This is a national mission as a part of our energy transition goal.

5. This issues with the approval of the Hon'ble Minister of Power and New & Renewable Energy.

28/10/2021

(Bihari Lal)
Under Secretary to the Govt. of India
Telefax: 23325242
Email: transdesk-mop@nic.in

To

1. All Members of NCT.
2. Secretary, Ministry of New & Renewable Energy, Govt. of India.
3. Chairperson, CEA, New Delhi.
4. Secretary, CERC
5. CMDs of all CPSUs under the Ministry of Power, Govt. of India.
6. Heads of all autonomous bodies under the Ministry of Power, Govt. of India.
7. Finance/ Budget Section, Ministry of Power.
8. Power/ Energy Secretaries of all States/UTs.
9. Chief Executives of all State Power Transmission Utilities.
10. CEO, NITI Aayog, New Delhi.

Copy to:

i. PS to Hon'ble MoP/ PS to Hon'ble MoSP/Sr PPS/ PPS/ PS to Secretary(Power)/ AS&FA/ AS(SKGR)/ AS(VKD)/ all Joint Secretaries/ Economic Advisor/ Chief Engineer(Th)/ all Directors/ Dy. Secretaries, Ministry of Power.

ii. Technical Director, NIC, M/o Power, for publishing this order on the website of M/o Power.

28/10/2021

Khavda - Bhuj Transmission Limited

Annexure - 4

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

सेवा में / To

Chief Operating Officer, CTUIL
Saudamini, Plot No. 2,
Sector-29, Gurgaon-122001

विषय/Subject: Implementation of ISTS Transmission Schemes approved by NCT in its 14th meeting held on 09.06.2023- regarding

महोदय/Sir,

The undersigned is directed to inform that NCT has approved implementation of the following ISTS Transmission Schemes in its 14th meeting held on 09.06.2023, in line with MoP office order dated 28.10.2021, to be implemented through Regulated Tariff Mechanism (RTM) route by agency as indicated below:

I. ISTS schemes costing less than Rs. 100 Crs. approved by NCT::

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Allocated to	Estimated Cost (Rs Crs)
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part A1 **Brief Scope:** Conversion of 330 MVAR Fixed LR at Wardha (on each ckt of Wardha – Raipur 765 kV D/c line being LILOed at Nagpur)	RTM	Matching with implementation of Khavda Phase-V Part A scheme viz. Bipole-1 (2x1500 MW) ± 800 kV	POWER GRID	21

Sl. No.	Name of Transmission Scheme	Implement ation Mode	Implement ation timeframe	Allocated to	Estimated Cost (Rs Crs)
	into Bus Reactors at Wardha S/s		Nagpur (HVDC) [LCC] which is 48 months from SPV transfer.		
2.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-2 :5.5 GW) (Jaisalmer/Barmer Complex): Part H2 **Brief Scope:** Provision of NGR bypass arrangement and inter tripping scheme on 240 MVAR SW LR at Bhopal end of Kurawar – Bhopal 765 kV S/c line (~60 km.):	RTM	In matching timeframe of H1 Scheme	BDTCL i.e. the TSP owing the Indore – Bhopal 765 kV S/ c line	0.45

II. ISTS Transmission schemes, costing between Rs 100 Crore to Rs 500 Crore, approved by NCT:

Sl. No.	Name of Transmission Scheme	Impleme ntation Mode	Implement ation timeframe	Allocated to	Estimated Cost (Rs. Crs)
1.	Augmentation of transformation capacity by 1x1500 MVA (3rd), 765/400 kV ICT at Maheshwaram (PG) substation in Telangana	RTM	21 months	POWERGRID	123.12
2.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV	RTM	24 months	Khavda – Bhuj Transmission Ltd. (Subsidiary	216

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Allocated to	Estimated Cost (Rs. Crs)
	(7GW): Part E1			of Adani Transmission limited)	
3.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7GW): Part E3	RTM	24 months	KPS3 Transmission Limited (Subsidiary of POWERGRID)	216
4.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7GW): Part E4	RTM	24 months	POWERGRID	235

III. COMMUNICATION SCHEMES APPROVED BY NCT:

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Implementing Agency	Estimated Cost (Rs Crs)
1.	Requirement of additional FOTE of STM-16 capacity at Bhuj PS to cater to connectivity of RE Gencos	RTM	12 months	POWER GRID	0.6
2.	Requirement of additional FOTE of STM-16 capacity at Bhuj-II substation to cater to connectivity of RE Gencos	RTM	12 months	M/s PBTL	0.3
3.	Upgradation of STM-4 communication link of Dehgam, Ranchhodpura, Santhalpur Rep, Bhachau and CGPL Mundra to STM-16 capacity	RTM	12 months	POWER GRID	1.5

File No.CEA-PS-12-13/3/2019-PSPA-II Division 919

I/28786/2023

The above schemes are awarded to CTUIL for implementation under RTM mode. CTUIL is requested to take necessary action for entering into a concession agreement with the respective agency for implementation of the above schemes.

Detailed scope of the schemes are as per minutes of the meeting. Copy of the minutes are enclosed.

07.07.2023

Encl.: As above.

(ईशान शरण/Ishan Sharan)
मुख्य अभियंता /Chief Engineer &
Member Secretary (NCT)

Copy to:
Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001

Khavda - Bhuj Transmission Limited

सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड
(पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्व में)
(भारत सरकार का उद्यम)
CENTRAL TRANSMISSION UTILITY OF INDIA LTD.
(A wholly owned subsidiary of Power Grid Corporation of India Limited)
(A Government of India Enterprise)

Ref. No.: CTUIL/OM/09/052023

10th July 2023

1. The Chairman & Managing Director Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001.	**2. CGM (TBCB)** POWERGRID Bhuj Transmission Ltd. (a subsidiary of Power Grid Corporation of India Ltd.) Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001.
3. CGM (TBCB) KPS3 Transmission Ltd. (a subsidiary of Power Grid Corporation of India Ltd.) Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001.	**4. Shri Bhavesh Kundalia** Authorized Signatory Khavda-Bhuj Transmission Ltd., (a subsidiary of Adani Transmission Ltd.) Adani Corporate House, Shantigram, S.G. Highway, Ahmedabad 382 421
1. Shri Lokendra Singh Ranawat Head (Regulatory) Bhopal Dhule Transmission Co. Ltd. (a subsidiary of India Grid Trust) Unit No. 101, First Floor, Windsor, Village Kolekalyan, Off CST Road, Vidyanagari Marg, Kalina, Santacruz (East), Mumbai – 400 098	

Sub: Implementation of ISTS Transmission/Communication Schemes approved by NCT in its 14th meeting held on 09-06-2023 under Regulated Tariff Mechanism (RTM).

NCT vide letter dated 07-07-2023 has awarded the following ISTS Transmission/Communication Scheme for its implementation under RTM mode by implementing agencies as indicated in the table below:

Sl. No.	Transmission/Communication Schemes	Implementing Agency
I.	**ISTS costing less than Rs. 100Crs.:**	
1.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8GW): Part A1.	POWERGRID
2.	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2: 5.5GW) (Jaisalmer/Barmer Complex): Part H2.	BDTCL i.e., the TSP owing the Indore-Bhopal 765kV S/c line.

Khavda - Bhuj Transmission Limited

Sl. No.	Transmission/Communication Schemes	Implementing Agency
II.	**ISTS costing between Rs. 100Crs. To Rs. 500 Crs.:**	
1.	Augmentation of transformation capacity by 1x1500MVA (3rd), 765/400kV ICT at Maheshwaram (PG) substation in Telangana.	POWERGRID
2.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7GW): Part E1.	Khavda- Bhuj Transmission Ltd. (Subsidiary of Adani Transmission Ltd.)
3.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7GW): Part E3.	KPS3 Transmission Ltd. (Subsidiary of POWERGRID)
4.	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7GW): Part E4.	POWERGRID
III.	**Communication schemes approved by NCT:**	
1.	Requirement of additional FOTE of STM-16 capacity at Bhuj PS to cater to connectivity of RE Gencos.	POWERGRID
2.	Requirement of additional FOTE of STM-16 capacity at Bhuj-II substation to cater to connectivity of RE Gencos.	M/s PBTL
3.	Upgradation of STM-4 communication link of Dehgam, Ranchhodpura, Santhalpur Rep, Bhachau and CGPL Mundra to STM-16 capacity.	POWERGRID

Copy of NCT letter dated 07-07-2023 in this regard is enclosed at **Annexure-I**. The detailed scope of work along with implementation time frame for the above Transmission/Communication Schemes shall be as per the enclosed letter of NCT.

The implementing agency shall enter into a concession agreement with CTUIL for implementation of aforementioned Transmission/Communication Schemes. However, pending finalization of Concession Agreement, it is requested to initiate necessary actions for implementation of the aforementioned Transmission/Communication Schemes.

This is for your kind information and necessary action, please.

Yours faithfully,

(Jasbir Singh) 10/7/23
Chief General Manager

Encl.: as stated.

Khavda - Bhuj Transmission Limited

(पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्व में)
(भारत सरकार का उद्यम)
CENTRAL TRANSMISSION UTILITY OF INDIA LTD.
(A wholly owned subsidiary of Power Grid Corporation of India Limited)
(A Government of India Enterprise)

Annexure - 6

Ref: CTU/W/00/25th CMETS-WR

Date: 15.02.2024

As per distribution list

Subject: Minutes of the 25th Consultation Meeting for Evolving Transmission Schemes in Western Region held on 29.01.2024 -reg.

Sir,

Please find enclosed the minutes of 25th Consultation Meeting for Evolving Transmission Schemes in Western Region held on 29.01.2024 through video conferencing.

The minutes are also available at our website (www.ctuil.in>>ISTS Planning and Coordination>>Consultation Meetings for ISTS).

Thanking you,

Yours faithfully,

(Partha Sarathi Das)
Sr. General Manager

Encl.: As stated above

Khavda-Bhuj Transmission Limited

Distribution List:

1. Chief Engineer (PSP&A – I) Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi-110 066.	**2. Director (Transmission/GEC)** Ministry of New and Renewable Energy, Block 14, CGO Complex, Lodhi Road, New Delhi-110003
3. Member Secretary Western Regional Power Committee MIDC area, Marol, Andheri East, Mumbai 400 093	**4. Director (Power System)** Solar Energy Corporation of India Ltd. D-3, 1st Floor, A wing, Religare Building, District Centre, Saket, New Delhi-110017
5. Managing Director Gujarat Energy Transmission Corp. Ltd, Sardar Patel Vidyut Bhawan, Race Course, Vadodara -390 007	**6. Director (Operation)** Maharashtra State Electricity Transmission Co. Ltd., 4th Floor, "Prakashganga", Plot No. C-19, E-Block, Bandra – Kurla Complex, Bandra (East), Mumbai- 400051
7. Managing Director Chhattisgarh State Power Transmission Co. Ltd., Dangania, Raipur- 492 013	**8. Chairman & Managing Director** Madhya Pradesh Power Transmission Co. Ltd., Block No. 3, Shakti Bhawan, Rampur, Jabalpur-482 008
9. Executive Engineer Administration of Union Territory of Dadra & Nagar Haveli and Daman & Diu Secretariat, Moti Daman - 395 220	**10.Chief Engineer** Electricity Department The Government of Goa, Panaji
11.Executive Director Western Regional Load Despatch Centre Grid Controller of India Ltd. F-3, M.I.D.C. Area, Marol, Andheri East, Mumbai-400 093	**12.Director (SO)** Grid Controller of India Ltd. 9th Floor, IFCI Towers, 61, Nehru Place, New Delhi - 110019

Khavda-Bhuj Transmission Limited

Applicants/Participants:

1. **Shri Kura Ravi Kumar** Addl. GM (PE Electrical) NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, Delhi kuraravikumar@ntpc.co.in; abhishekkhanna@ntpc.co.in;	2. **Shri Parish Gupta** Malaren Solar Pvt. Ltd. 5th Floor, North Tower, M3M Tee Point, Sector-65, Gurgoan-122018 Malarensolar@ibvogt.com; Ravinderkumar.rana@ibvogt.com;
3. **Shri Goyal** Director Kutch Chemical Industries Ltd. 20-21, "Sara Niwas", Harinagar Co Society, Gotri Road, Vadodara – 390021; jpg@kcil.co.in; rohitchawre@kcil.co.in; M: 93272 26696; 9970122292;	4. **DEVENDRA KUMAR PATEL** DIRECTOR PROJECT VEDANTA LIMITED 2X600MW (ATHENA CHHATTISGARH POWER LIMITED) , VILLAGE, SINGHITARAI, TEHSIL-DABHARA,DISTRICT-SAKTI CG-495695 venkat.reddy@vedanta.co.in devendra.patel@vedanta.co.in
5. **Shri AMIT** Associate Manager MAHAN ENERGEN LIMITED Adani Corporate House, 3rd South, Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad-382421, Gujarat Amitkumar.singh3@adani.com deepdutt.shukla@adani.com	6. **Mukesh Rathod** Vice President RELIANCE CHEMICALS AND MATERIALS LIMITED SSO B-3, VILLAGE MOTIKHAVDI, P.O. DIGVIJAYGRAM, GSFC Reliance Complex, Jamnagar, Gujarat mukesh.rathod@ril.com ashok3.singh@ril.com
7. **Ms. Poorva Pitke** Senior Manager SPRNG ENERGY PRIVATE LIMITED Upper Ground, Office A-001, Pentagon 5, Magarpatta City, Hadapsar Pune, Maharashtra 411013. poorvapitke@sprngenergy.com abhinavbhansali@sprngenergy.com 9545659577	8. SOUMYA **AVP SALES AND REGULATORY** CGE RENEWABLES PRIVATE LIMITED 402 & 404, Delphi, C Wing, Hiranandani Business Park, Orchard Avenue, Powai, Mumbai - 400076 soumya.parida@continuumenergy.in santosh.khirmode@continuumenergy.in 7718888167
9. **Yogesh Kumar Sanklecha** AVP ACME CLEANTECH SOLUTIONS PRIVATE LIMITED Plot No. 152, Sector-44, Gurugram, Haryana 122002, India rajesh.sodhi@acme.in yogesh@acme.in	10. **Sh. Prashanth Kudva** Group Head Project Development TATA POWER RENEWABLE ENERGY LIMITED C/o The Tata Power Company Limited, Corporate Center B, 34 Sant Tukaram Road, Carnac Bunder, Mumbai 400 009 prashanthkudva@tatapower.com narayans@tatapower.com
11. **Shri KRISHNENDRA RAJPOOT** Director BHOJRAJ DEVELOPERS PRIVATE LIMITED 11-12, Meena Colony, Belaka, Alwar-301001 (Rajasthan) bdpl4700@gmail.com tarbiyacorporate@gmail.com 6263387889	12. **Deepak Khare Vice President Projects** Solarcraft Power India 7 Pvt. Ltd. 109, First Floor, Rishabh IPEX Mall IP Extension, Patparganj, Near Max Hospital, East Delhi - 110092. Email: deeppak.kharre@blupineenergy.com swapnil.bhardwaj@blupineenergy.com

13. Shri Vishal Sankar Soni Head Project Development Arcelormittal Nippon Steel India Ltd. 27km, Surat-Hazira Road, Hazira, Surat – 394270, Gujarat, India. Vishal.soni@arcelormittal.com; Pankaj.chourasia@amns.in; sjbhujade@gmail.com	**14. Shri Pranav Shah** Vice President Torrent Power Ltd. (SUGEN) Sugen Mega Power Project, Off N.H. 48, Taluka-Kamrej, Gujarat jigishmehta@torrentpower.com pranavshah@torrentpower.com jaydipchudasama@torrentpower.com bd.transmission@torrentpower.com
15. Shri Amit Kumar AVP RENEW SOLAR (SHAKTI EIGHT) PRIVATE LIMITED Renew Hub, Commercial Block -1, Zone 6, Golf Course Road,DLF City, Sector 43, Gurgaon-122009 solarbidding.gm@renewpower.in rohit.singh@renewpower.in amit.kumar1@renewpower.in	**16. Shri K A Vishwanath** GM (Project Development) TEQ Green Power XI Pvt. Ltd. 8th Floor, DLF Square, DLF Phase 2, Sector-26, Gurugram 122002 ka.vishwanath@o2power.in pe6@o2power.in
17. Shri PRADEEP CHAUHAN Director GANEKO SOLAR PRIVATE LIMITED LEVEL 1, SOUTHERN PARK BUILDING, D-2 DISTRICT CENTRE SAKET, NEW DELHI 110017 pradeep.chauhan@solarpack.es rohit.ahuja@solarpack.es	**18. Shri Angshuman** Dy General Manager Avaada Energy Pvt. Ltd. C-11, Sector-65, Noida angshuman.rudra@avaada.com vivek.jain@avaada.com +91 7835004673
19. Shri Jigish Mehta Director Torrent Solar Power Private Limited SUGEN Mega Power Project, Torrent Power Ltd. Village: Akhakhol Dist Surat 394155 ronaknaik@torrentpower.com jaydipchudasama@torrentpower.com	**20. Shri Ankush Malik** Chief Business Officer Juniper Green Energy Private Limited (JGEPL) Plot No. 18, First Floor, Institutional Area, Sector-32, Gurgaon, Haryana. ankush.malik@junipergreenenergy.com pavan.gupta@junipergreenenergy.com 9910509744
21. Chief Electrical Distribution Engineer General Manager (Electrical), South East Central Railway, New GM office, 1st floor, Bilaspur, Chhattisgarh- 495 004 cede@secr.railnet.gov.in dyceetrd@secr.railnet.gov.in cedesecr@gmail.com	**22. Shri Arzaan Dordi** Chief Manager Serentica Renewab;es India 4 Pvt. Ltd., DLF Cyber Park, 9th Floor, Tower B, Sector-20 DLF Phase-3, Gurugram arzaan.dordi1@sterlite.com 9601775714
23. Sh. Rajmohan Director EET Future Energy Ltd. (EETFEL) (formerly Renjoules International Ltd.) 16th Floor Essar House, 11 KK Marg Mahalaxmi, Mumbai, Maharashtra rajmohan.t@essarpower.co.in rishabh.roshan@essarpower.co.in	

Minutes of the 25th Consultation Meeting for Evolving Transmission Schemes in Western Region held on 29.01.2024

The 25th Consultation Meeting for Evolving Transmission Schemes in Western Region (CMETS-WR) was held on 29.01.2024. The list of participants is attached at **Flag-I.** Sr. GM(CTU) welcomed the participants and thereafter, the agenda was taken up for deliberations.

1) Confirmation of Minutes of the 24th CMETS-WR meeting held in Dec-23

The 24th Consultation Meeting for Evolving Transmission Schemes in Western Region (CMETS-WR) was held on 28.12.2023. The minutes have been issued vide letter dated 16.01.2024.

With respect to application no. 2200000241 of NTPC Renewable Energy Limited at Jam Khambhaliya PS, the actual start date of connectivity was mentioned as 30.06.2025. However, the same may be read as 30.04.2026 (subject to CTS) considering the present schedule of Common Transmission System Augmentation mentioned in the MoM.

The minutes were confirmed with above modification.

2) Applications discussed in 21st CMETS-WR meeting (1st sitting: 28.08.2023) and to be taken up for deliberations

i) Transition cases under Regulation 37.2 (i.e., Connectivity quantum not effective and not having LTA/MTOA)

Sl. No.	Name of Entity	Connectivity Appl. Date	Pooling Station	Connectivity Quantum (MW)	Connectivity Intimation date	Start Date of Connectivity as per Connectivity Intimation	Connectivity quantum not effective and not having LTA (MW) (as per Regulation 37.2)	Bay at ISTS Pooling Station being developed by	Transition Status	Start Date of Connectivity sought Under GNA transition	Transmission System for providing Connection to ISTS	Actual Start Date of GNA	Remarks

1.	South East Central (SEC) Railways	28/11/11	Raipur	100	29.05.2012	Apr'13 or availability of Connectivity system whichever is later.	100MW* **[Within region:---; Outside Region:---]**	Applicant	Opted for Transition for 100MW	01.04.2024 **SECR informed that they shall also inform revised start & end date of GNA**	WRES-XXVIII & WRESXXVII schemes elaborated below	Based on revised start date of GNA / System commissioning date, whichever is later	**BG requirements under GNA Regulations, 2022**: Conn-BG1: Rs.0.5Cr. Conn-BG2: Nil Conn-BG3: Rs. 2Cr.

SECR is yet to confirm

A. As per CERC Regulation, 2009, Connectivity has been granted to the Entity as per the following details:

1. Transmission System for Connectivity:

- Bhilai (SEC Railway) – Raipur 220kV D/c line along with associated line bays at both ends (under the scope of applicant)

B. Based on the option of conversion exercised by M/s SEC Railway under Regulation 37.2, it is proposed that Connectivity for 100MW granted under the Connectivity Regulations, 2009 may be converted to Connectivity under GNA Regulations, 2022 with the following transmission system and with start date as 01.04.2024.

1. Dedicated Transmission System for Connectivity:

- Bhilai (SEC Railway) – Raipur 220kV D/c line along with associated line bays at both ends (*to be constructed and maintained by a licensee at the cost of such entity)*

2. Common Transmission System Augmentation for GNA:

WRES-XXVIII

- Creation of 220 kV level (GIS) at 765/400 kV Raipur Pool S/s with Installation of 3x500 MVA, 400/220 kV ICTs along with associated ICT bays (220kV-GIS)
- 8 nos. 220kV line bays (GIS) at Raipur Pool S/s for termination of various lines planned by CSPTCL (refer Note)

Note: Downstream system associated with the scheme to be implemented by CSPTCL as an intrastate scheme :

- *Raipur Pool – Rajnandgaon 220 kV D/c line*
- *Raipur Pool – Gendpur 220 kV D/c line*

- *Raipur Pool – Bemetra 220 kV D/c line*
- *LILO of Siltara – Urla 220kV S/c line at Raipur Pool*

Exp. COD: Dec-24 (as per 41st JCC meeting held on 27.09.2023)

WRESXXVII

- Raipur Pool – Dhamtari 400kV D/c line (conductor with minimum capacity of 2100 MVA/Ckt at nominal voltage)

Exp. COD: Sep-24 (as per 41st JCC meeting held on 27.09.2023)

Liability of payment of applicable transmission charges shall as per CERC sharing Regulations, 2020.

In the 21st CMETS-WR meeting (1st sitting: 28.08.2023), it was agreed by SECR that the intimation for grant of GNA shall be issued upon receipt of Bifurcation of GNA quantum from within region and from outside region.

In the 22nd CMETS-WR (1st sitting: 23.10.2023), no representative of SECR was present. Hence, the bifurcation has not yet been received by CTU and the grant of GNA to SECR shall be done only after receipt of above information from SECR.

23rd CMETS-WR

SECR was requested to intimate the above bifurcation positively in this meeting. In case of failure to provide the bifurcation, it shall be construed that SECR is not interested in proceeding with the transition exercise and the application was proposed to be closed.

However, no representative from SECR was present in the meeting. After deliberations, it was decided that a final communication would be issued to SECR for providing the above bifurcation after the meeting. In case of failure to provide the bifurcation, it shall be construed that SECR is not interested in proceeding with the transition exercise and the application shall be closed. Subsequently, SECR vide e-mail dated 15.12.2023 was given a final communication in this respect as decided in the 23rd CMETS-WR meeting.

24th CMETS-WR

Representative of SECR stated that the bifurcation of GNA from within the region and outside the region is not readily available with them and they shall get back to CTU within a week after consulting their relevant division.

SECR was informed that they also need to inform revised start and end dates of GNA considering the time required for implementation of Bhilai (SEC Railway) – Raipur 220kV D/c line along with associated line bays at both ends.

SECR agreed to provide both the details within a week.

25th CMETS-WR

No communication from SECR has been received by CTU in this regard stating the above details [**GNA from within & outside regions and GNA start & end dates**].

SECR stated that REMCL is yet to intimate the details to SECR. It was deliberated that the application is under discussion since Aug-23 and should not be kept pending for long. After deliberations, it was decided that the above data shall be submitted by SECR latest by 10.02.2024 pending which the application shall be closed and SECR may apply afresh as and when they have clarity w.r.t. above details. SECR was also intimated of the above decision vide e-mail dated 05.02.2024.

Sl. No.	Name of Entity	Connectivity Appl. Date	Pooling Station	Connectivity Quantum (MW)	Connectivity Intimation date	Start Date of Connectivity as per Connectivity Intimation	Connectivity quantum not effective and not having LTA (MW)(as per Regulation 37.2)	Bay at ISTS Pooling Station being 4evelope d by	Transition Status	Start Date of Connectivity sought Under GNA transition	Transmission System for providing Connection to ISTS	Actual Start Date of GNA	Remarks
2.	EET Future Energy Ltd. (EETFEL) (formerly Renjoules International Ltd.)	11/10/22	Jam Khambhaliya PS	1050	13.01.2023	31.03.2026	1050 **[Within region: 200MW; Outside Region: 850MW]**	Applicant through Transmission Licensee	Opted for Transition for 1050MW	01.04.2026	Augmentation	01.04.2026 Revised: **01.09.2027**	**BG requirements under GNA Regulations, 2022**: Conn-BG1: Rs.0.5Cr. Conn-BG2: Nil Conn-BG3: Rs. 21Cr.

A. As per CERC Regulation, 2009, Connectivity has been granted to the Entity as per the following details:

1. Transmission System for Connectivity:

- EETFEL – Jam Khambhaliya (GIS) 400 kV D/c line along with associated line bays at ISTS Jam Khambhaliya (GIS) PS end shall be under the scope of ISTS transmission licensee through which EETFEL would be implementing the above Transmission System for Connectivity.
- Line bays at the Bulk Consumer end shall be under the scope of EETFEL.

B. Based on the option of conversion exercised by M/s EETFEL Ltd. Under Regulation 37.2, it was proposed that Connectivity for 1050MW granted under the Connectivity Regulations, 2009 may be converted to GNA under GNA Regulations, 2022 with the following transmission system and with start date as 30.09.2027*

1. Dedicated Transmission System for Connectivity:

- EETFEL – Jam Khambhaliya (GIS) 400 kV D/c line along with associated line bays at ISTS Jam Khambhaliya (GIS) PS end (*to be constructed and maintained by a licensee at the cost of such entity)* @
- Line bays at the Bulk Consumer end shall be under the scope of EETFEL.

@Bay(s) required for completion of diameter (GIS) in one-and-half breaker scheme shall also be implemented by the licensee.

2. Common Transmission System Augmentation for GNA:

It was informed that RIL has exercised option for transition under GNA for 800MW (500MW from Oct'24 & 300MW from Mar'26) as bulk consumer at Jam Khambhaliya PS. Further, M/s EET Future has exercised option for transition under GNA for 1050MW (from Mar'26) as bulk consumer at Jam Khambhaliya PS and M/s RNSEL has requested for transition under GNA for 50MW (from Mar'28) as bulk consumer at Jam Khambhaliya PS. This shall result in total bulk consumer connectivity (under GNA) at Jam Khambhaliya to the tune of 1900MW. Further, vide mails dated 12.01.2023 & 16.01.2023, M/s RIL/RNSEL has informed that cumulative capacity of 6000MW load is expected at Jamnagar by Dec'28. This translates to a total drawal requirement of 7GW (incl. 1.05GW of EET Future) in Jamnagar area.

The following scheme has been planned to enable evacuation of 3.6 GW load under phase-I in Jamnagar area of Gujarat and the same was discussed and agreed in 15th NCT meeting held on 25.08.2023.

- Establishment of 2X1500 MVA 765/400 kV Jamnagar (GIS)
- Halvad – Jamnagar 765kV D/c line
- LILO of Jam Khambhaliya PS – Lakadia 400kV D/c (triple snowbird) line at Jamnagar with conductor having ampacity equivalent to triple snowbird at nominal voltage]
- Jamnagar – Jam Khambhaliya 400kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line
- LILO of CGPL – Jetpur 400kV D/c (triple snowbird) line at Jamnagar with conductor having ampacity equivalent to triple snowbird at nominal voltage
- LILO of both ckts of Kalavad – Bhogat 400kV D/c line (Twin AL-59) at Jam Khambhaliya PS with Twin AL59 Moose equivalent conductor
- ±400MVAr STATCOM with 3x125 MVAr MSC & 2x125 MVAr MSR at Jamnagar 400kV Bus section

Date from which GNA granted: 30.09.2027*

**The date of commencement of Connectivity under GNA is Interim. The timeline for completion of ATS/* Common Transmission System Augmentation */Terminals bay(s) (if not under implementation) as applicable along with firm date for start of connectivity shall be intimated within 6 months of furnishing of Conn-BG 1 (in case of*

Augmentation with ATS) and Conn-BG1, Conn-BG2 & Conn-BG3, (as applicable, in case of Augmentation without ATS) in line with Regulation 8.3 b of GNA Regulations.

In the 21st CMETS-WR meeting (1st sitting: 28.08.2023), it was agreed that the intimation for grant of GNA shall be issued upon receipt of Bifurcation of GNA quantum from within region and from outside region, which is still awaited**.**

Accordingly, in the 22nd CMETS-WR (1st sitting: 23.10.2023) meeting, EETFEL was requested to provide the above bifurcation. However, representative of EETFEL stated that they require some more time to provide the bifurcation. Hence, the bifurcation has not yet been received by CTU and the grant of GNA shall be done only after receipt of above information from EETFEL, which must be informed by EETFEL in advance of the next CMETS meeting of WR.

23rd CMETS-WR

EETFEL was requested to intimate the above bifurcation positively in this meeting. In case of failure to provide the bifurcation, it shall be construed that EETFEL is not interested in proceeding with the transition exercise and the application is proposed to be closed.

Representative of M/s EET future confirmed that they shall furnished the bifurcation along with revised COD date (start date of GNA) within 15 days. It was informed that in case the data is not received before the next CMETS-WR meeting, it shall be construed that EETFEL is not interested in proceeding with the transition exercise and the application is proposed to be closed.

24th CMETS-WR

Representative of M/s EET future informed revised start date of GNA as 30.09.2027 and informed that they are having difficulty in bifurcating the GNA quantum given their power tie-up arrangements are both from WR & SR.

In this respect, M/s EET Future was informed that CERC has come out with 11/SM/2023 order which throws some light on the aspect:

Quote

24. In light of difficulties brought to our notice by CTUIL, we clarify that a drawee DIC is eligible to request a schedule from anywhere in India up to its GNA quantum, where such injection point may be "within the region " or "from outside the region". Once such entity has placed a scheduling request with RLDC and there is a constraint in the transmission system due to which a full schedule as requested by all drawee DICs in the region cannot be accommodated, RLDC shall allocate the transmission corridor as follows:
(a) In case of constraint in the transmission system "from outside the region", the transmission corridor shall be allocated in proportion to the "outside the region" bifurcation of all such drawee DICs.
(b) In case of constraint in the transmission system "within the region", the transmission corridor shall be allocated in proportion to the total GNA quantum for such drawee DICs (sum of "within the region" and "from outside the region" bifurcation)

Unquote

Based on above, M/s EET Future confirmed that they shall furnish the bifurcation along with revised COD date (start date of GNA) within a week.

Subsequently, M/s EET Future vide-mail dated 04.01.2024 informed the bifurcation of GNA of EET future (1050 MW) as follows –

- 200 MW – Western Region
- 850 MW – Outside the Region

In view of the above, GNA shall be granted to M/s EET Future with transmission system mentioned above.

25th CMETS-WR

It was informed that 1 no. 400kV bay of M/s Vaayu is already available at Jam Khambhaliya PS. Further, one additional 400kV bay is proposed to be implemented as part of dia completion with 7th 400/220kV, 500MVA ICT at JK PS. Accordingly, EET FEL shall utilise the above 2 bays for termination of EETFEL – Jam Khambhaliya (GIS) 400 kV D/c line. Hence, dedicated Transmission System for GNA of EETFEL shall stand modified as under:

- EETFEL – Jam Khambhaliya (GIS) 400 kV D/c line (*to be constructed and maintained by a licensee at the cost of such entity)*
- EET FEL shall utilize 2 nos. 400kV bays (ISTS) at Jam Khambhaliya PS (1 no. existing and 1 no. planned as part of dia. completion of 7th 400/220kV, 500MVA ICT)
- Line bays at the Bulk Consumer end shall be under the scope of EETFEL.

EETFEL noted that above. Further, EETFEL informed that they would like to be granted GNA-RE instead of GNA. It was informed that the request shall be considered upon receipt of written communication by EETFEL. In view of the above, GNA-RE was agreed to be granted to M/s EET Future with transmission system mentioned above subject to receipt of written communication by EETFEL.

Khavda-Bhuj Transmission Limited

3) Applications discussed in 22nd CMETS-WR meeting (1st sitting: 23.10.2023) and to be taken up for deliberations

I. Connectivity to ISTS under Regulation 4.1, 4.2, 5.6, and 5.7

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details
1.	2200000257 (Original Application)	Juniper Green Energy Private Limited (JGEPL)	(i) Generating station(s), including REGS(s), without ESS	19-09-2023	Wind	Land BG Route	WR	Kutch, Gujarat	Bhuj-I PS	75.0	30-09-2025 **Actual:** 30-09-2025 Subject to commissioning of CTS	**22nd CMETS-WR** • Applicant stated that they are located near to Avikiran and would like to share their DTL for injection at Bhuj PS. After deliberations, it was decided that the same shall be deliberated again in the next meeting after JGEPL discusses the matter of sharing with M/s Avikiran / signs sharing agreement for said sharing.	NIL	Augmentation of transformation capacity at Bhuj-I PS by 1x500MVA, 400/220kV ICT (9th) *CTU OM issued on 02.01.2024: 18 months schedule*	Conn-BG1: 50 Lakhs Conn-BG2: NIL in case of sharing Conn-BG3: 1.5 Cr.

23rd CMETS-WR

Applicant stated that they are still in discussions with M/s Avikiran and requested to take up the matter in the next meeting by which time they shall furnish the sharing agreement.

Applicant was requested to note that the intimation shall be issued only upon receipt of sharing agreement.

24th CMETS-WR:

Applicant stated that they are still in discussions with M/s Avikiran and that M/s Avikiran may also be intimated regarding the decision of Sharing so as to speed things up.

It was deliberated that a communication in this regard would be sent to M/s Avikiran. However, M/s JGEPL should also expedite with M/s Avikiran so that the matter of sharing can be closed.

Applicant was once again informed that the intimation shall be issued only upon receipt of sharing agreement.

25th CMETS-WR:

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details
	M/s Avikiran stated that their Co-investor / lenders are reviewing the sharing proposal. CTU as well as M/s Juniper requested M/s Avikiran to expedite in signing of sharing agreement so as to ensure optimal utilisation of 220kV bay allocated to M/s Avikiran. M/s Avikiran assured that they would make their best efforts to sign the agreement before next meeting.														

II. Application for Grant of GNA/GNARE to entities other than STU under Regulation 20.1, 20.3 and 20.4 to entities under Regulation 17.1(ii), (iii), (v) and (vi):

Sl. No.	Application ID	Name of the Applicant	Submission Date	Region	Nature of applicant	GNA within Region (MW)	GNA outside Region (MW)	Total Quantum (MW) of GNA Required	Start date of GNA	End date of GNA
1.	2200000207 (Revised Application)	South East Central Railway	01-09-2023	WR	Distribution licensee seeking to connect to ISTS	50.0	50.0	100.0	01-09-2023	31-08-2048

- Applied for GNA_{RE} : No
- Nearest ISTS sub-stations: 400/220kV Bhatapara S/s

1. Applicant has applied as 'Distribution Licensee' and against 'Copy of License issued by appropriate Commission' applicant has submitted MoP letter dated 06/05/2014 granting deemed licensee status to Railways and CERC Order dated 05.11.2015 directing that Indian Railways is a deemed licensee under third proviso to Section 14 of the Electricity Act.
2. Requested Start date of GNA is 01/09/2023. As the same has already elapsed, fresh start date may be intimated.
3. Applicant vide letter dated 30.05.2023 submitted with application has requested to include the agenda of Connectivity from PGCIL 400/220KV Grid Sub-stations at Raigarh and Bhatapara to proposed 220 kV network of SECR in ensuing meeting on Power System Planning of Western Region. Schematic given under this table has also been shared by SECR.

22nd CMETS-WR

Based on earlier request of SECR, it was agreed to grant in principle approval for connectivity to Railways for existing demand with the ISTS points (Raigarh & Bhatapara) through 220 kV D/c line along with line bays at both ends from each substation under the scope of SECR In the 42nd Meeting of Standing

Committee on Power System Planning in Western Region held on 17-11-2017 at Mumbai. Further 3rd 400/220kV ICT at Bhatapara is also expected to be completed shortly.

In view of the above, it was proposed to grant GNA for 100MW to SECR with following transmission system under scope of SECR:

- SECR – Bhatapara 220kV D/c line along with associated bays at both ends.
- Space availability at Bhatapara S/s has been sought from POWERGRID

No representative from SECR was present during the meeting. It was decided to deliberate the matter again in next meeting as the Start date of GNA is to be confirmed by SECR and space availability by POWERGRID.

23rd CMETS-WR

No representative from SECR was present during the meeting. After deliberations, it was decided that a final communication would be issued to SECR for consent to above proposal after the meeting. In case of failure to respond, it shall be construed that SECR is not interested in proceeding with the application and the application shall be closed. **Subsequently, SECR vide e-mail dated 15.12.2023 has been given a final communication in this respect as decided in the 23rd CMETS-WR meeting.**

Further, POWERGRID vide e-mail dated 15.12.2023 has confirmed the following:

"For accommodating 2 New 220kV Line Bays, 2 no. new 220kV Bays (DMT Scheme) have to be created in AIS for which Space is available."

24th CMETS-WR

No representative from SECR was present at the time of discussion of present application. It was deliberated that the Start date of GNA needs to be informed by SECR in order to process the application further. Hence, the same shall be requested from SECR separately and the application shall be finalized in the next meeting

25th CMETS-WR

SECR stated that the revised start & end dates of GNA would be intimated shortly.

It was deliberated that the application is under discussion since Oct-23 and should not be kept pending for long. After deliberations, it was decided that the above data shall be submitted by SECR latest by 10.02.2024 pending which the application shall be closed and SECR may apply afresh as and when they have clarity w.r.t. above details. SECR was also intimated of the above decision vide e-mail dated 05.02.2024.

Sl. No.	Application ID	Name of the Applicant	Submission Date	Region	Nature of applicant	GNA within Region (MW)	GNA outside Region (MW)	Total Quantum (MW) of GNA Required	Start date of GNA	End date of GNA
2.	2200000208 (Revised Application)	South East Central Railway	01-09-2023	WR	Distribution licensee seeking to connect to ISTS	50.0	50.0	100.0	01-09-2023	31-08-2048

- Applied for GNA_{RE} : No
- Nearest ISTS sub-stations: 400/220kV Raigarh S/s

1. Applicant has applied as 'Distribution Licensee' and against 'Copy of License issued by appropriate Commission' applicant has submitted MoP letter dated 06/05/2014 granting deemed licensee status to Railways and CERC Order dated 05.11.2015 directing that Indian Railways is a deemed licensee under third proviso to Section 14 of the Electricity Act.
4. Requested Start date of GNA is 01/09/2023. As the same has already elapsed, fresh start date may be intimated.
2. Applicant vide letter dated 30.05.2023 submitted with application has requested to include the agenda of Connectivity from PGCIL 400/220KV Grid Sub-stations at Raigarh and Bhatapara to proposed 220 kV network of SECR in ensuing meeting on Power System Planning of Western Region. Schematic given under this table has also been shared by SECR.

22nd CMETS-WR

Based on earlier request of SECR, it was agreed to grant in principle approval for connectivity to Railways for existing demand with the ISTS points (Raigarh & Bhatapara) through 220 kV D/c line along with line bays at both ends from each substation under the scope of SECR In the 42nd Meeting of Standing Committee on Power System Planning in Western Region held on 17-11-2017 at Mumbai. Further 3rd 400/220kV ICT at Raigarh S/s is also expected to be completed shortly.

In view of the above, it was proposed to grant GNA for 100MW to SECR with following transmission system under scope of SECR:

- SECR – Rajgarh 220kV D/c line along with associated bays at both ends.
- Space availability at Raigarh S/s has been sought from POWERGRID

No representative from SECR was present during the meeting. It was decided to deliberate the matter again in next meeting as the Start date of GNA is to be confirmed by SECR and space availability by POWERGRID.

23rd CMETS-WR

No representative from SECR was present during the meeting. After deliberations, it was decided that a final communication would be issued to SECR for

consent to above proposal after the meeting. In case of failure to respond, it shall be construed that SECR is not interested in proceeding with the application and the application shall be closed. **Subsequently, SECR vide e-mail dated 15.12.2023 has been given a final communication in this respect as decided in the 23rd CMETS-WR meeting.**

Further, POWERGRID vide e-mail dated 15.12.2023 has confirmed the following:

"For accommodating 2 New 220kV Line Bays, 2 no. new 220kV Bays (DM Scheme) have to be created in GIS for which Space is available"

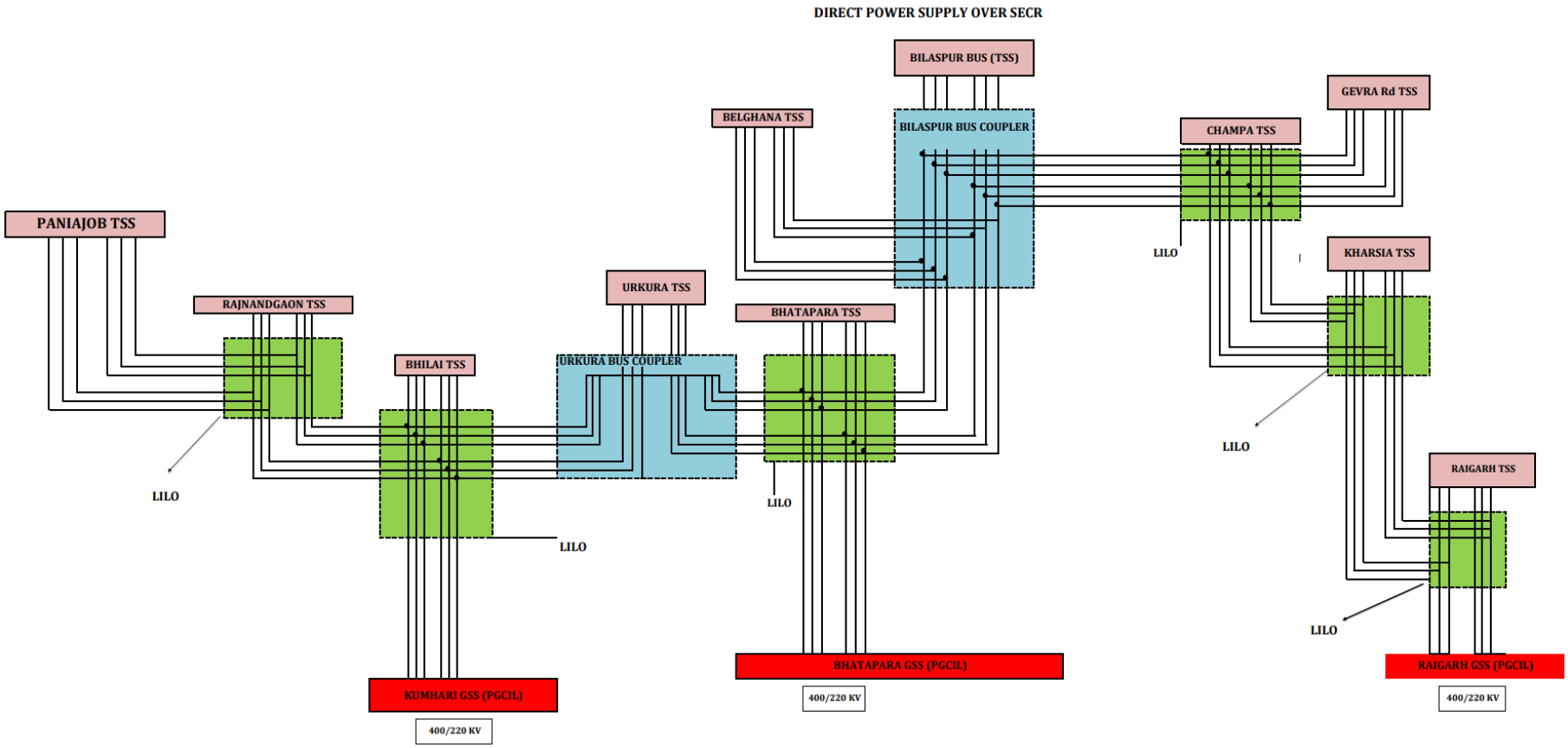
24th CMETS-WR

No representative from SECR was present at the time of discussion of present application. It was deliberated that the Start date of GNA needs to be informed by SECR in order to process the application further. Hence, the same shall be requested from SECR separately and the application shall be finalized in the next meeting.

25th CMETS-WR

SECR stated that the revised start & end dates of GNA would be intimated shortly.

It was deliberated that the application is under discussion since Oct-23 and should not be kept pending for long. After deliberations, it was decided that the above data shall be submitted by SECR latest by 10.02.2024 pending which the application shall be closed and SECR may apply afresh as and when they have clarity w.r.t. above details. SECR was also intimated of the above decision vide e-mail dated 05.02.2024.



Schematic: Power Drawal by SEC Railway from Raigarh and Bhatapara S/s (shared by SECR)

4) Applications discussed in 23rd CMETS-WR meeting (29.11.2023) and to be taken up for deliberations

I. Connectivity to ISTS under Regulation 4.1, 4.2, 5.6, and 5.7

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
1.	2200000245	NTPC Limited	(i) Generating station(s), including REGS(s), without ESS	05-10-2023	Thermal	NA	WR	Lara, Raigarh, Chhattisgarh	Raigarh Kotra	1600.0	01-05-2027	• To be finalised			Conn-BG1: 50 Lakhs Conn-BG2: As per ATS

23rd CMETS-WR

It was informed that Lara stage-I STPP (2x800 MW) of NTPC was granted connectivity through Lara STPP I – Raigarh (Kotra) PS 400kV D/c line and Long Term Access (LTA) for transfer of 1586.51 MW power from the Lara-I project to various beneficiaries in WR was granted through Lara STPP I – Champa PS 400kV D/c (quad) line (along with other transmission elements).

Earlier also, NTPC had applied for connectivity for its upcoming 2x800MW Lara STPP-II generation project which was discussed during the 31st WR Conn/LTA Meeting held on 24.10.18 wherein the following was observed:

(i) Connectivity of additional 1600MW at the existing switchyard of Lara STPP-I generation project, which is connected both to Raigarh (Kotra) and Champa pooling stations, leads to the issue of high fault current at Raigarh (Kotra) PS (i.e. beyond the design rating of 50kA).
(ii) Majority of fault contribution comes from Champa PS through Champa PS – Lara STPP (Stage-I & II) – Raigarh (Kotra) 400kV D/c line

In view of the above, after deliberations in the 2nd WRSCT held on 21.05.2019, it was agreed to grant connectivity to NTPC Ltd. for its Lara STPP-II generation project with following transmission system:

I. Connectivity system for NTPC Lara STPP 2x800MW stage-II generation project:

A. Under ISTS

(i) Reconductoring of Lara STPP I – Raigarh (Kotra) 400kV D/c line with HTLS conductor (Quad Moose capacity)

B. Under the scope of NTPC Ltd

(ii) Shifting of Lara STPP I - Raigarh (Kotra) 400kV D/c line to Lara STPP-II bus so as to form Lara STPP II – Raigarh (Kotra) 400kV D/c line along with associated bays at generation end
(iii) Lara STPP-I & Lara STPP-II buses to be kept disconnected from each other under normal operating conditions

II. Revised connectivity system for NTPC Lara STPP 2x800MW stage-I generation project:

(i) Lara STPP I – Champa PS 400kV D/c (quad) line

However, Revised studies carried out in 2027-28 time-frame indicate that the above arrangement shall lead to N-1 non compliance of Raigarh(Kotra) (Sec-A) 3x1500MVA, 765/400kV ICTs under Raigarh-Pugalur HVDC reverse power flow scenario. After deliberations, it was decided that some other scheme needs to be evolved for grant of connectivity under GNA to NTPC for 2x800MW stage-II generation project, and if required, considering quantum of power injection as well as constraints in injection of power at 400kV level, evacuation at 765kV level may be planned. The scheme was agreed to be discussed and finalised separately.

24th CMETS-WR

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
	In the meeting amongst CEA, CTU, GRID-INDIA & NTPC on 26.12.2023, Revised studies were carried out in 2028-29 time-frame in which various alternatives were studied. However, any injection at Raigarh(Kotra) S/s was leading to N-1 non compliance of 765/400kV ICTs and there are severe fault level issues at the substation. In view of the above and considering significantly high quantum of injection from 2x800MW stage-II generation project, it is preferable that injection occurs directly ay 765kV level and hence, the following transmission system is proposed: **Dedicated Transmission System for Connectivity** • Establishment of 3x1500MVA, 765/400kV Lara-II Generation Switchyard • Interconnection of 2x800MW units of Lara-II at 400kV level of 765/400kV Lara-II Generation Switchyard **Associated Transmission System for GNA** • LILO of Raipur – Jharsuguda 765kV D/c line at Lara-II Generation Switchyard (LILO route length ~ 30km.) **Note:** The Raipur – Jharsuguda 765kV D/c line is a trunk corridor between WR and ER and hence its LILO at Lara-II Generation Switchyard is proposed under ISTS in order to ensure better availability of the line after the LILO. **Common Transmission System Augmentation** • NIL Another alternative was also studied, where injection is possible at Champa PS (Bus Section A, with KSK 3x600MW Units) at 400kV level. In this case the following system would be required: **Dedicated Transmission System for Connectivity** • 400kV Lara-II Generation Switchyard – Champa (Bus Section A, with KSK 3x600MW Units) 400kV D/c (Quad) line **Associated Transmission System for GNA** • NIL **Common Transmission System Augmentation** • NIL (Considering minimum flow of ~500MW on CK HVDC Pole from Champa to Kurukshetra) Note: Lara-I – Lara-II 400kV D/c Interconnection was agreed only for the purpose of Start-up power requirement and after meeting the Start-up power requirement, the same was agreed to be kept normally open and can be closed based on system requirement. The matter was deliberated and NTPC requested to grant them connectivity at Raigarh(Kotra) S/s or with the system already deliberations in the 2nd WRSCT held on 21.05.2019. It was highlighted that the load generation scenario has completely changed and now, reverse power flow to the tune of 3000MW from SR to WR (From Pugalur to Raigarh(Kotra) S/s) is being accommodated with installation of additional ICTs at Raigarh(Kotra) S/s, after which the fault level at both 400kV sections of Raigarh(Kotra) S/s is reaching near design limit and no further margin for injection exists at Raigarh(Kotra) S/s from load flow as well as short circuit point of view. However, based on request of NTPC, alternative for injection of power at 400kV level of Champa S/s has also been evolved. GRID-INDIA stated that after considering injection of power from 3x600MW KSK units and 2x800MW Lara St-II units, cumulative installed capacity at Champa Bus Section A shall be 3400MW, hence, the 3x1500MVA 765/400kV ICTs will not be N-1 compliant in case the CK HVDC is operating in blocked mode.													

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	In this respect, it was deliberated that after reducing aux. consumption, maximum flow shall be in range of 3100-3200MW. Further, some minimum flow needs to be considered on CK HVDC Pole from Champa to Kurukshetra in order to alleviate the overloading issues. In case of requirement of further reliability, an additional 1500MVA ICT may be planned on Champa Bus Section-A in future based on requirement. Representative of NTPC requested if a 765/400kV S/s may be planned near Raigarh so that they may connect to the substation. It was clarified that in the absence of any other generating station near Raigarh(Kotra), a 765/400kV substation in the area would not be justified. **After further deliberations, it was decided that NTPC shall inform their preferred alternative within 15 days and the matter shall be finalised in the next meeting.** **25th CMETS-WR** NTPC informed the following: • A 400 kV D/C Tie line between Lara stage-I switchyard to Lara Stage-II switchyard for meeting the start-up power requirement of Lara Stage-II (2X800MW) project was discussed and agreed in the meeting amongst CEA, CTU, GRID-INDIA & NTPC on 26.12.2023. During the meeting, NTPC had also agreed that the 400KV D/c Twin moose Tie line will be extensively used for start up power requirement of Lara Stage-II(2X800MW) purpose and it will be kept normally open after start up power requirement is met. • With reference to 24th CMETS-WR discussion, NTPC informed that the option#2 i.e 400kV Lara-II Generation Switchyard – Champa (Bus Section A, with KSK 3x600MW Units) with 400KV D/C quad lineis acceptable to them in case further options are not available for Lara-II ISTS connectivity. • 125MVAr, 420kV Bus Reactor is being planned by them for Lara-II Project. Based on inputs from NTPC and deliberations in the meeting, NTPC was agreed to be granted connectivity at Champa PS (400kV Sec-A) with the following system: **Dedicated Transmission System for Connectivity** • Lara-II Generation Switchyard – Champa (Bus Section A, with KSK 3x600MW Units) 400kV D/c (Quad) line • 125MVAr, 420kV Bus Reactor at Lara-II Generation Switchyard **Associated Transmission System for GNA** • NIL **Common Transmission System Augmentation** • NIL* ** Considering minimum flow of ~500MW on CK HVDC Pole from Champa to Kurukshetra* Further, Lara-I – Lara-II 400kV D/c Interconnection was agreed only for the purpose of Start-up power requirement and after meeting the Start-up power requirement, the same was agreed to be kept normally open and can be closed based on system requirement.														
2.	2200000337 (Original Application)	Malaren Solar Private Limited (MSPL)	(i) Generating station(s), including REGS(s), without ESS	25-10-2023	Solar	Land BG Route	WR	Jamnagar, Gujarat	JAM KHAMBHALIYA PS	150.0	30-05-2026 **Actual: 31.03.2026 subject to commissioning of CTS**	**Refer details below.**	NIL	**Part A** • Establishment of 2x1500 MVA 765/400 kV Jamnagar (GIS) PS	BG1: 50 Lakhs; Conn-BG2: As per bay Conn-BG-3: 3 Cr.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
														• Halvad – Jamnagar 765 kV D/c line • LILO of Jam Khambhaliya PS – Lakadia 400 kV D/c (triple snowbird) line at Jamnagar • Jamnagar – Jam Khambhaliya 400 kV D/c (Quad ACSR/AAAC/ AL59 moose equivalent) line • LILO of CGPL – Jetpur 400kV D/c (triple snowbird) line at Jamnagar LILO of both ckts of Kalavad – Bhogat 400kV D/c line (Twin AL-59) at Jam Khambhaliya PS **Part B:** Augmentation of transformation capacity at Jam Khambhaliya PS (GIS) by 2x500MVA, 400/220kV ICT (5th& 6th)	

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
	23rd CMETS-WR MSPL informed that they are in discussions with M/s AEPL to share the connectivity system of 50MW Hybrid RHGS of AEPL (Appl. No. 2200000142) which is detailed below: • AEPL – Jam Khambhaliya PS 220kV S/c line along with associated bay at generation end • 1 no. 220kV line bay at Jam Khambhaliya PS has been implemented under ISTS as part of the pooling station. (Confirmed by M/s MSPL vide e-mail dated 08.12.2023) **It was informed that intimation shall be issued only after receipt of sharing agreement by CTU. Applicant noted the same and stated that they shall submit it immediately.** Subsequently, M/s Avaada vide e-mail dated 11.12.2023 informed that the sharing proposal of M/s Malana Solar has been taken positively at their end and they are engaging with them for further discussion. **24th CMETS-WR** Malaren/Avaada were requested to update on the sharing agreement. M/s Avaada stated that they have applied for additional 100MW connectivity at JK PS. However, they are positive for sharing their DTL with M/s Malaren. In this respect, it was informed that no further margins for injection exist at JK PS considering the applications which have already been received at JK PS in this meeting. Hence, all future applications shall be accommodated at Jamnagar S/s, which has already been approved in the 15th NCT meeting held on 25.08.2023. M/s Avaada requested the tentative location of Jamnagar S/s. CEA stated that PFCCL is the survey agency for Jamnagar S/s and the meeting to finalise the location shall be carried out as per the BPC's request within a month. M/s Avaada stated that based on location of Jamnagar S/s, they may also decide to shift to Jamnagar S/s, in which case, the sharing would no longer be required and M/s Malaren can then take up with any other developer for sharing. M/s Avaada was informed that the substation would be in the Jamnagar district only. After deliberations, it was decided that the matter shall be deliberated again in the next meeting and M/s Malren / M/s Avaada were requested to coordinate and sign the agreement at the earliest. **25th CMETS-WR** It was informed that space for an additional 500MVA, 400/220kV ICT (7th) at Jam Khambhaliya PS has been confirmed by M/s JKTL (owner of Jam Khambhaliya PS) vide e-mail dated 15.01.2024. With the proposed additional 400/220kV ICT, 500MW additional RE injection would be possible at Jam Khambhaliya PS, which may be utilized by various RE applicants based on order of priority w.r.t. date of application. M/s Avaada's application for 100MW received in Dec-23 would also be accommodated at Jam Khambhaliya PS with this 500MVA ICT. **In view of the above, M/s AEPL stated that they shall remain at Jam Khambhaliya PS only and also informed that they shall be signing Sharing agreement with Malaren shortly.**														

**The date of commencement of Connectivity under GNA is Interim. The timeline for completion of ATS/* Common Transmission System Augmentation */Terminals bay(s) (if not under implementation) as applicable along with firm date for start of connectivity shall be intimated within*

6 months of furnishing of Conn-BG 1 (in case of Augmentation with ATS) and Conn-BG1, Conn-BG2 & Conn-BG3, (as applicable, in case of Augmentation without ATS) in line with Regulation 8.3 b of GNA Regulations.

II. Application for Grant of GNA/GNARE to entities other than STU under Regulation 20.1, 20.3 and 20.4 to entities under Regulation 17.1(ii), (iii), (v) and (vi):

Sl. No.	Application ID	Name of the Applicant	Submission Date	Region	Nature of applicant	GNA within Region (MW)	GNA outside Region (MW)	Total Quantum (MW) of GNA Required	Start date of GNA	End date of GNA
1.	2200000323	Kutch Chemical Industries Limited	27-10-2023	WR	Bulk consumer seeking to connect to ISTS	60.0	40.0	100.0	01-05-2025	30-04-2050

- Applied for GNA_{RE} : No
- Nearest ISTS sub-stations: Bhachau

As per company profile submitted with the application, M/s KCIL is presently connected to PGCVL with 20MVA contract demand at 66KV Varsana Sub-Station. In this regard, applicant has submitted copy of letter to GETCO (with receiving stamp of GUVNL) informing that once their plant get connected to ISTS, the connectivity with the State grid will be disconnected and requested to issue NOC to apply to CTU. However, no NOC has been submitted with the application.

23rd CMETS-WR

In the 21st CMETS-WR (1st sitting) meeting, Welspun Living Limited (70MW) & Welspun Corp Limited (70MW) were agreed to be granted GNA for 140MW at Bhachau S/s through below system:

1. Dedicated Transmission System for Connectivity:

- Welspun Living Ltd. - Bhachau 220kV D/c line (shall be constructed and maintained by a licensee at the cost of entity)
- 220kV bus extension (AIS) of Bhachau 400/220 kV (PG) S/s along with 2 nos. 220kV AIS bays at Bhachau S/s on extended bus. *(shall be constructed and maintained by a licensee at the cost of entity)* (refer **note a)**
- 2 nos. 220kV bays at WLL end (under the scope of WLL).

Note:

a. WLL/WCL have agreed that additional adjacent private land (as per requirement) for 220kV bus extension & bays will be provided by WCL / WLL and all the costs (as per actual) , required for 220 kV bay extension, will be borne by WLL /WCL.
b. Scheduling & metering will be done at 400kV Bhachau S/s with separate identification/tagging of schedules for both WLL & WCL However, single DSM will be prepared by WRLDC and it shall be the responsibility of M/s WIL to bifurcate the same internally between WLL & WCL. M/s WLL shall perform all operational and commercial responsibilities (incl. scheduling and commercial accounting) on behalf of M/s WCL & WLL under the Grid Code and CERC DSM Regulations for which M/s WLL needs to enter into an agreement with WCL for bifurcation of metering / DSM and any loss apportionment of 400kV lines, and transformers, etc.

WCL shall share Dedicated Transmission System for Connectivity granted to WLL for Bulk load of 70MW. (Stage-II appl. no. 030700011)

2. Common Transmission System Augmentation for GNA:

- Augmentation of Transformation capacity at Bhachau S/s by 1x500MVA, 400/220kV ICT (3rd) along with associated bays at both ends *(already agreed in 20th CMETS meeting of WR held on 04.08.2023 for complying with the requirements of N-1 Contingency condition at Bhachau S/s)*

Tentative Commissioning Schedule: 30.04.2025.

Date from which Connectivity under GNA was agreed to be granted: 30.04.2025*

**The date of commencement of Connectivity under GNA is Interim. The timeline for completion of ATS/* Common Transmission System Augmentation */Terminals bay(s) (if not under implementation) as applicable along with firm date for start of connectivity shall be intimated within 6 months of furnishing of Conn-BG 1 (in case of Augmentation with ATS) and Conn-BG1, Conn-BG2 & Conn-BG3, (as applicable, in case of Augmentation without ATS) in line with Regulation 8.3 b of GNA Regulations.*

During the meeting, it was informed to Applicant that after considering the drawal of power of 140 MW by WLL & WCL, minimal margins for drawal shall exist at 220kV level of Bhachau S/s. Accordingly, applicant was advised to procure additional land for installation of 1x500MVA, 400/220kV ICT (4th), in case, they envisage any future additional load drawl requirement from ISTS.

In view of the above, in case M/s Kutch Chemical Industries Limited desires GNA at Bhachau S/s, KCIL shall have to procure additional land adjacent to Bhachau S/s and install 1x500MVA, 400/220kV ICT (4th) at Bhachau S/s along with bus extension and ICT bays (shall be constructed and maintained by a licensee at the cost of entity). (**1st option**)

Alternatively, as a **2nd option**, M/s KCIL may be granted GNA at 765/400(/220kV) Lakadia S/s, which would be located nearly 50km. from KCIL plant. In such case, following system shall be required:

- KCIL – Lakadia 220kV D/c line along with bays at Lakadia S/s (shall be constructed and maintained by a licensee at the cost of entity)
- 2 nos. bays at KCIL end shall be under the scope of KCIL

400/220kV ICTs at Lakadia S/s are being proposed for injection of power by REGS and shall be taken up for implementation upon completion of formalities by respective REGS with minimum implementation schedule of 18 months from award.

M/s KCIL stated that they will not go for option 2 and require few clarifications regarding option 1 which they shall discuss with CTU separately. After deliberations, it was decided that the matter shall be deliberated again in the next meeting, by which time M/s KCIL should also coordinate with M/s WLL for sharing proposed under option-1.

24th CMETS-WR

M/s KCIL stated that they are in discussions with M/s WLL for sharing of Welspun Living Ltd. - Bhachau 220kV D/c line under Reg. 17.3 of GNA Regulations, 2022 and requested that the matter be taken up again in the next meeting.

M/s KCIL was informed that in addition to above sharing, KCIL shall have to procure additional land adjacent to Bhachau S/s and install 1x500MVA, 400/220kV ICT (4th) at Bhachau S/s along with bus extension and ICT bays (to be constructed and maintained by a licensee at the cost of KCIL). Hence, the same may also be assessed before attending the next meeting. **M/s KCIL noted the same.**

25th CMETS-WR

No representative of M/s KCIL was present in the meeting.

Subsequently, M/s KCIL vide e-mail dated 30.01.2024 informed that that they are under discussion with Welspun and anticipate reaching a conclusion within a month or sooner.

In view of the above, the matter shall be deliberated in the next meeting.

5) Applications discussed in 24th CMETS-WR meeting (28.12.2023) and to be taken up for deliberations

I. Connectivity to ISTS under Regulation 4.1, 4.2, 5.6, and 5.7

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
1.	2200000328 (Revised Application)	Vedanta Limited	(i) Generating station(s), including REGS(s), without ESS	22-11-2023	Thermal	NA	WR	Sakti, Chhattisgarh	Raigarh (Kotra) PS	1200.0	04-06-2024	Deliberated below.	NIL	NIL	BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3: 24 Cr.

24th CMETS-WR:

M/s Vedanta stated that they already have their 400kV D/c line ready upto Raigarh(Kotra) S/s and would like to get connected at the same substation.

It was informed that there is no margin for injection left at Raigarh(Kotra) Substation as also highlighted while discussing the case of Lara-II project. Hence, connectivity is proposed at Raigarh(PG) S/s either through Vedanta – Raigarh (PG) 400kV D/c line along with associated bays at Raigarh(PG) S/s (subject to space availability at the S/s which is being sought from POWERGRID). Alternatively, a portion of Raigarh (Kotra) – Raigarh (PG) 400kV D/c line may be utilised for termination at Raigarh (PG) S/s. In this case, the ampacity of 400kV bays at Raigarh (PG) would need to be checked by M/s Vedanta in coordination with POWERGRID site.

After further deliberations, it was decided to finalise the matter in the next meeting.

Further, in the meeting, it was informed that 55MW quantum granted to CSPTCL for transfer of power ACPL to CSPTrdCL is still existing under Regulation 37.6(2) of GNA Regulations on the name of ACPL. Accordingly, it was informed that the same needs to be surrendered towards the earlier grant, for enabling to process the subject application i.r.o. fresh grant of Connectivity for 1200MW under GNA Regulations. Subsequently, Vedanta vide letter dated 09.01.2024 informed that the subject PPA with CSPTCL has been cancelled by CSPTrdCL.

Considering the above developments & receipt of new Connectivity application for 1200MW, Vedanta's request dated 05.10.2023 for processing of transition request under GNA Regulations, 2022 is not tenable.

25th CMETS-WR

It was informed that as communicated by POWERGRID vide e-mail dated 25.01.2024, space is not available at Raigarh(PG) S/s for additional 2 nos. 400kV Line Bays. Further the Bays are rated for 2000A only and may not be suitable to carry Current for Quad Line.

M/s Vedanta informed that they have done the route survey and they can utilise a part of Raigarh (Kotra) – Raigarh (PG) 400kV D/c line near Raigarh(PG) S/s so as to terminate at Raigarh(PG) S/s. Further, M/s Vedanta proposed that Start-up power requirement for Unit-1 (600MW) may be allowed from Raigarh(Kotra) S/s through 400kV D/c (quad) line which is existing.

M/s Vedanta was requested to intimate the exact length of Raigarh (Kotra) – Raigarh (PG) 400kV D/c line which shall be utilised by them for termination at Raigarh(PG) S/s. Also, considering that the 400kV bays at Raigarh (PG) are rated at 2000A (i.e. 1385MVA), they shall be sufficient to cater to 1200MW capacity of Vedanta's Athena project, without the need for upgradation. In view of the above, following was agreed:

- Vedanta – Raigarh(PG) 400kV D/c line to be established as per below details:
  Dedicated Part (Under applicant scope):
- Vedanta – Termination Point* near Raigarh(PG) 400kV D/c (quad) line (terminated into Raigarh (Kotra) – Raigarh (PG) 400kV D/c line)
  Associated Transmission System (Under ISTS):
- Reconductoring of Raigarh(PG) – Termination point (at which Vedanta's 400kV D/c line is being terminated)* near Raigarh(PG) 400kV D/c line portion with twin HTLS conductor*

**The point of termination as well as capacity of twin HTLS conductor (for reconductoring) to be informed by M/s Vedanta in co-ordination with POWERGRID within 15 days*

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
	Regarding star-up power requirement, the proposal of M/s Vedanta for drawing start-up power through Vedanta – Raigarh Kotra (PG) 400kV D/c line (existing) was agreed. However, it shall not be utilised for any injection of power into Grid and shall be disconnected after interconnection with Raigarh (PG) S/s and the 400kV bays at Raigarh(Kotra) shall also be dismantled thereafter failing which CTU may utilise the bays as per requirement in future.														
2.	2200000347 (Revised Application)	Mahan Energen Limited	(i) Generating station(s), including REGS(s), without ESS	10-11-2023	Thermal	NA	WR	SINGRAULI, Madhya Pradesh	Not mentioned	280.0	25-12-2026	Refer deliberations at Section B Sl. 3.			
3.	2200000379 (Original Application)	Juniper Green Energy Private Limited	(i) Generating station(s), including REGS(s), without ESS	23-11-2023	Wind	Land BG Route	WR	Devbhoomi Dwarka, Gujarat	Jam Khambhaliya PS	200.0	30-06-2028	Refer deliberations below.	-	**Part A** • Establishment of 2x1500 MVA 765/400 kV Jamnagar (GIS) PS • Halvad – Jamnagar 765 kV D/c line • LILO of Jam Khambhaliya PS – Lakadia 400 kV D/c (triple snowbird) line at Jamnagar • Jamnagar – Jam Khambhaliya 400 kV D/c (Quad ACSR/AAAC/ AL59 moose equivalent) line • LILO of CGPL – Jetpur 400kV D/c (triple snowbird) line at Jamnagar LILO of both ckts of Kalavad – Bhogat 400kV D/c line (Twin	Conn-BG1: 50 Lakhs Conn-BG2: NIL Conn-BG3: 4 Cr.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
														AL-59) at Jam Khambhaliya PS **Part B:** Augmentation of transformation capacity at Jam Khambhaliya PS (GIS) by 3x500MVA, 400/220kV ICT (5th, 6th & 7th)	
	24th CMETS-WR: It was informed that the applicant has already been granted 400 MW Connectivity at Jam Khambhaliya PS [300MW (app. no. 2200000190 & 2200000209) at one bay and 100MW (app. no. 2200000253) at another bay at 220kV level]. As per letter attached with application, present application is for enhancement of 200 MW to the already granted 100 MW (app. no. 2200000253) Connectivity. However, margin for injection at Jam Khambhaliya PS exists only for 61MW. Hence, M/s JGEPL may be accommodated only at Jamnagar S/s for entire 200MW, which is presently under tendering process and expected COD is Apr-26. M/s JGEPL stated that their application may be deliberated again in the next meeting. The request was agreed. **25th CMETS-WR** It was informed that space for an additional 500MVA, 400/220kV ICT (7th) at Jam Khambhaliya PS has been confirmed by M/s JKTL (owner of Jam Khambhaliya PS) vide e-mail dated 15.01.2024. With the proposed additional 400/220kV ICT, 500MW additional RE injection would be possible at Jam Khambhaliya PS, which may be utilized by various RE applicants based on order of priority w.r.t. date of application. Hence, 200MW connectivity was agreed for JGEPL on sharing basis with JGEPL: 100MW (app. no. 2200000253).													

I. Application for Grant of GNA/GNARE to entities other than STU under Regulation 20.1, 20.3 and 20.4 to entities under Regulation 17.1(ii), (iii), (v) and (vi):

Sl. No.	Application ID	Name of the Applicant	Submission Date	Region	Nature of applicant	GNA within Region (MW)	GNA outside Region (MW)	Total Quantum (MW) of GNA	Start date of GNA	End date of GNA

								Required		
1.	2200000367 (Original Application)	Reliance Chemicals And Materials Limited (RCML)	10-11-2023	WR	Bulk consumer seeking to connect to ISTS	374.0	0.0	374.0	01-12-2025	30-11-2030

- Applied for $GNA_{RE:}$ Yes
- Nearest ISTS sub-stations: South Olpad S/s (Upcoming)

24th CMETS-WR:

Proposed System for GNA at South Olpad S/s:

Dedicated Transmission System for GNA:

- RCML – South Olpad 220kV D/c line along with associated bays at South Olpad S/s (shall be constructed and maintained by a licensee at the cost of entity)
- Creation of 220kV switchyard along with installation of 2x500MVA 400/220kV ICTs at South Olpad S/s (shall be constructed and maintained by a licensee at the cost of entity)
- 2 nos. 220kV bays at RCML end (under the scope of RCML).

Common Transmission System Augmentation for GNA:

- Establishment of 2x1500MVA, 765/400kV GIS S/s at a suitable location South of Olpad (between Olpad and Ichhapore)
- Vadodara (GIS) –South Olpad(GIS) 765 kV D/C line
- LILO of Gandhar – Hazira 400kV D/c line at South Olpad (GIS) using twin HTLS conductor with minimum capacity of 1700MVA per ckt at nominal voltage
- Ahmedabad – South Olpad (GIS) 765kV D/c line
- Establishment of 4X1500 MVA 765/400 kV & 2x500MVA 400/220kV Boisar-II (GIS)
- South Olpad(GIS) – Boisar-II(GIS) 765kV D/c line
- LILO of Navsari (New) – Padghe(PG) 765kV D/c line at Boisar-II
- Boisar-II (Sec-II) – Velgaon(MH) 400kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line
- LILO of Babhaleshwar – Padghe(M) 400kV D/c line at Boisar-II (Sec-I) using twin HTLS conductor with minimum capacity of 1700MVA per ckt at nominal voltage
- Establishment of 2X1500 MVA 765/400 kV & 3x500MVA 400/220kV Pune-III (GIS)
- Boisar-II – Pune-III 765kV D/c line

- LILO of Narendra (New) – Pune (GIS) 765kV D/c line at Pune-III
- LILO of Hinjewadi–Koyna 400kV S/c line at Pune-III(GIS) S/s

Tentative Commissioning Schedule: Jan-2026

Date from which Connectivity under GNA was agreed to be granted: 31.01.2026*

**The date of commencement of Connectivity under GNA is Interim. The timeline for completion of ATS/* Common Transmission System Augmentation */Terminals bay(s) (if not under implementation) as applicable along with firm date for start of connectivity shall be intimated within 6 months of furnishing of Conn-BG 1 (in case of Augmentation with ATS) and Conn-BG1, Conn-BG2 & Conn-BG3, (as applicable, in case of Augmentation without ATS) in line with Regulation 8.3 b of GNA Regulations.*

The representative of M/s RIL stated that possibility of grant of GNA to RIL through LILO of one ckt of DGEN – Navsari 400kV D/c line may also be explored.

It was informed that DGEN – Navsari 400kV D/c line is the dedicated line of M/s TPL (DGEN Project) and hence RIL must consult TPL for sharing of the same. Further, prima-facie, no issues are envisaged from power flow point of view. After deliberations, it was decided to deliberate the matter again in the next meeting in presence of RIL & TPL, after RIL discusses the sharing proposal with TPL.

25th CMETS-WR

TPL vide e-mail dated 19.01.2024 has been requested to share their views / comments on the sharing arrangement proposed by RCML as well as on proposal of GETCO to use DGEN switchyard for 220kV GETCO drawal at Suva & Dahej substations by 26.01.2024 so that the matter can be discussed with RCML / GETCO in the ensuing CMETS-WR meeting proposed in month end.

M/s RIL & M/s TPL informed that discussions are going on amongst them for sharing and are expected to be finalised within 2-3 weeks. M/s RIL informed that the ultimate capacity for drawal would be 500MW for which connectivity at 400kV level would be required. The matter was agreed to be deliberated in the next meeting based on feedback from M/s RIL.

Sl. No.	Application ID	Name of the Applicant	Submission Date	Region	Nature of applicant	GNA within Region (MW)	GNA outside Region (MW)	Total Quantum (MW) of GNA Required	Start date of GNA	End date of GNA
2.	2200000368 (Original Application)	Reliance Chemicals And Materials Limited (RCML)	10-11-2023	WR	Bulk consumer seeking to connect to ISTS	73.0	0.0	73.0	01-12-2025	30-11-2030

- Applied for $GNA_{RE:}$ Yes
- Nearest ISTS sub-stations: Navi Mumbai (PG) S/s

24th CMETS-WR

No margins for drawal of power exist at existing 400/220kV Navi Mumbai S/s. If additional 500MVA ICT is installed, it would aggravate loading on Navi Mumbai – Kalwa 220kV line, which is N-1 non-compliant under outage of Navi Mumbai – Taloja 220kV line. Hence, GNA is proposed to be granted at Murbad S/s (Proposed) or at Pune(PG) (AIS) (Talegaon) S/s (subject to space confirmation from POWERGRID), both of which are located around 70km. from RCML's Nagothane facility.

RIL stated that this facility is a New Facility adjacent to existing facility.

M/s RIL requested to share the proposed location of Murbad S/s as well as space availability at Pune(PG) S/s so that they can finalise the point of connectivity.

It was decided that the details would be shared with M/s RIL after the meeting, based on inputs from POWERGRID regarding space at Pune(PG) S/s and the matter shall be finalized in the next meeting.

25th CMETS-WR

RCML vide e-mail dated 18.01.2024 has been informed that the tentative location of substation planned to cater to Pumped storage potential near Talegaon(Pune) has been finalized as South of Kalamb (refer Sl. 6 of MoM). The tentative coordinates would be known after approval of the scheme in NCT forum. Further, POWERGRID has informed that there is no space available for construction of additional 2 no's 220 kV bays at Pune-Talegaon S/s.

M/s RIL stated that route survey is to be carried out upto South of Kalamb and the ultimate capacity for drawal would be 150-200MW. Hence, the application was agreed to be deliberated again in next meeting.

A. Processing of New applications received under GNA Regulations, 2022

It was informed that a no. of applications for Connectivity and GNA to ISTS in Western Region have been received in the Month of **Dec'23** in conformity with the GNA Regulations, 2022. Necessary system studies have been conducted and the details of the applications are tabulated below.

I. Applications for Connectivity to ISTS under Regulation 4.1, 4.2, 5.6, and 5.7

Following applications for Connectivity to ISTS under Regulation 4.1, 4.2, 5.6, and 5.7 have been received in the month of Dec'23 and the proposal for grant of connectivity as per feedback from developers and based on discussions in the meeting is given below:

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
1.	2200000460 (Original Application)	Sprng Energy Pvt. Ltd. (SEPL)	Generating station(s), including REGS(s), without ESS	29.12.2023	Solar	Land BG Route	WR	Banaskantha, Gujarat	Banaskantha (Radhanesda) PS	150	30.06.2027 **Actual: 30.06.2027 Subject to CTS**	• SEPL shall share the DTL identified for its own SPP of 100MW as detailed in below table.	Nil	Augmentation of transformation capacity at Banaskantha PS by 1x500MVA, 400/220kV ICT (3rd)	Conn-BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3: 3 Cr.
2.	2200000461 (Original Application)	Sprng Energy Pvt. Ltd. (SEPL)	Generating station(s), including REGS(s), without ESS	29.12.2023	Solar	Land BG Route	WR	Banaskantha, Gujarat	Banaskantha (Radhanesda) PS	100	31.12.2026 **Actual: 31.12.2026 Subject to CTS**	• SEPL – Radhanesda PS 220kV S/c line (on D/c tower) along with associated line bay at generating station (under the scope of applicant) • **1 no. bay out of 2 nos. spare bays which were originally constructed for GPCL's Radhanesda solar**	Nil	Augmentation of transformation capacity at Banaskantha PS by 1x500MVA, 400/220kV ICT (3rd)	Conn-BG1: 50 Lakhs Conn-BG2: 3 Cr. Conn-BG-3: 2 Cr.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
												park and remain unutilised till date may be utilised for subject applicant. (subject to GPCL comments, if any). Comments of GPCL have been sought vide e-mail dated 05.02.2024.			
	It was deliberated that with the above, cumulative RE injection at Radhanesda shall reach 1200MW and the existing Radhanesda – Banaskantha 400kV D/c line (Twin AL-59) would be sufficient for evacuation of the same. Further, planning for the Substation had been done considering 700MW RUMS(Banaskantha) & 500MW Halvad Solar Parks and N-1 was not considered as per the planning criteria prevalent at that time. Further, under N-1 criterion, additional margin in the existing Radhanesda – Banaskantha 400kV D/c line (twin AL-59), beyond 1250MW would remain permanently unutilized(as space has not been kept for ICTs beyond 3x500MVA at Radhanesda) S/s Hence, it was decided that N-1 criterion may not be applied for grant of the above connectivity. Further, with the above grant, the S/s is proposed to be closed for any further applications (beyond another 50MW). Also, considering that estimated total potential of 12-15GW had been intimated by GPCL to MOP (along with potential area map) vide letter dated 27.10.2023, the 3rd ICT at Radhanesda was decided to be implemented under Common Transmission system augmentation considering this capacity as a part of the RE potential in the area. After deliberations, the above proposal was agreed and it was decided that for balance potential identified in the area, a new Pooling Station and associated system may be planned at Raghanesda.														
3.	2200000445 (Original Application)	Avaada Energy Pvt. Ltd. (AEPL)	Generating station(s), including REGS(s), without ESS	21.12.2023	Hybrid (Solar: 50; Wind:50)	Land BG Route	WR	Dev Bhoomi Dwarka, Gujarat	Jam Khambhaliya PS	100	30.09.2025 **Actual: 30.04.2026 subject to CTS**	M/s AEPL shall share the dedicated transmission system for Connectivity proposed to M/s AEPL against application No. **2200000142** as given below. • AEPL – Jam Khambhaliya PS 220kV S/c line along with associated bay at generation end (Under scope of M/s AEPL) • 1 no. 220kV line bay at Jam Khambhaliya PS has been implemented under ISTS as part of the pooling station.	Nil	**Part A** • Establishment of 2x1500 MVA 765/400 kV Jamnagar (GIS) PS • Halvad – Jamnagar 765 kV D/c line • LILO of Jam Khambhaliya PS – Lakadia 400 kV D/c (triple snowbird) line at Jamnagar • Jamnagar – Jam Khambhaliya 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line	Conn-BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3: 2 Cr.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
														• LILO of CGPL – Jetpur 400kV D/c (triple snowbird) line at Jamnagar LILO of both ckts of Kalavad – Bhogat 400kV D/c line (Twin AL-59) at Jam Khambhaliya PS **Part B:** Augmentation of transformation capacity at Jam Khambhaliya PS (GIS) by 3x500MVA, 400/220kV ICT (5th, 6th & 7th)	
	It was informed that space for an additional 500MVA, 400/220kV ICT (7th) at Jam Khambhaliya PS has been confirmed by M/s JKTL (owner of Jam Khambhaliya PS) vide e-mail dated 15.01.2024. With the proposed additional 400/220kV ICT, 500MW additional RE injection would be possible at Jam Khambhaliya PS, which may be utilized by various RE applicants based on order of priority w.r.t. date of application. M/s Avaada's application for 100MW received in Dec-23 would also be accommodated at Jam Khambhaliya PS with this 500MVA ICT.														
4.	2200000389 (Original Application)	CGE Renewables Pvt. Ltd. (CGERPL)	Generating station(s), including REGS(s), without ESS	06.12.2023	Hybrid (Solar: 60; Wind:30)	Land Route	WR	Bhuj, Gujarat	Bhuj-II PS	90	01.01.2024 **Actual 30.04.2026 subject to CTS.**	M/s CGERPL shall share the dedicated transmission system for Connectivity granted to M/s Srijan Energy Systems Pvt. Ltd. (SESPL) against appl No. **1200002419** (St-II Conn) as given below. • SESPL-Bhuj-II PS 220kV S/c line along with associated bays at generation end (under the scope of the applicant).	Nil	Augmentation of transformation capacity at Bhuj-II PS by 4x500MVA, 400/220kV ICT (5th, 6th, 7th & 8th) and by 2x1500MVA, 765/400kV ICT (3rd & 4th) **(considering cumulative capacity at Bhuj-II PS has reached**	Conn-BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3: 1.8 Cr.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
												• Bay at ISTS is existing which was implemented as a part of the PS. • **The above line was implemented on D/c Towers (Approx. 25Kms) & M/c Towers (Approx. 2Kms near the ISTS S/s end).**		**3324.5MW as on Dec-23.)**	
	Applicant has opted "Yes" for sharing under both Regulations 5.6 & 5.7 and submitted sharing agreement signed with M/s Srijan Energy Systems Pvt. Ltd. for sharing its dedicated line/terminal bays/switchyard of its 148.5 MW wind project granted connectivity at Bhuj-II PS. However, as M/s Srijan Energy Systems Pvt. Ltd. is already a connectivity grantee, Regulation 5.7 is not applicable in this case and application may be treated under Reg. 5.6 only.														
5.	2200000431 (Original Application)	ACME Cleantech Solutions Pvt. Ltd. (ACSPL)	Generating station(s), including REGS(s), without ESS	16.12.2023	Wind	LOA (SJVN)	WR	Kutch, Gujarat	Bhuj-II PS	50	31.03.2026 **Actual start date: 30.04.2026 subject to CTS**	• ACSPL- Bhuj II PS (Section-II) 220kV S/c line along with associated bays at generation end (under the scope of applicant). • Bay at Bhuj II shall be implemented under ISTS (currently under approval)	Nil	Augmentation of transformation capacity at Bhuj-II PS by 4x500MVA, 400/220kV ICT (5th, 6th, 7th & 8th) and by 2x1500MVA, 765/400kV ICT (3rd & 4th) **(considering cumulative capacity at Bhuj-II PS has reached 3324.5MW as on Dec-23.)**	Conn-BG1: 50 Lakhs; Conn-BG2: 3 Cr. Conn-BG-3: 1 Cr.
6.	2200000444 (Original Application)	Avaada Energy Pvt. Ltd. (AEPL)	Generating station(s), including REGS(s), without ESS	21.12.2023	Solar	Land BG route	WR	Kutch, Gujarat	Bhuj-II PS	100	31.03.2026 **Actual start date: 30.04.2026 subject to CTS**	• AEPL - Bhuj II PS (Section-II) 220kV S/c line along with associated bays at generation end (under the scope of applicant). • Bay at Bhuj II shall be implemented under ISTS	Nil	Augmentation of transformation capacity at Bhuj-II PS by 4x500MVA, 400/220kV ICT (5th, 6th, 7th & 8th) and by 2x1500MVA, 765/400kV ICT (3rd & 4th)	Conn-BG1: 50 Lakhs; Conn-BG2: 3 Cr. Conn-BG-3: 2 Cr.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
												(currently under approval)		**(considering cumulative capacity at Bhuj-II PS has reached 3324.5MW as on Dec-23.)**	
	Some text in the land BG No. 16090100020516 dated 19th December 2023 submitted along with application was unreadable. So, mail was sent to the applicant regarding the submission of the clear and readable Bank Guarantee in original. Intimation shall be issued upon receipt of physical copy of BG in conformity with Regulations.														
7.	2200000395 (Revised Application)	Tata Power Renewable Energy Limited (TPREL)	Generating station(s), including REGS(s), without ESS	12.12.2023	Wind	Land Route	WR	Osmanabad, Maharashtra	Kallam PS	101	01.03.2026 **Revised: 01.03.2026 (subject to CTS)**	M/s TPREL shall share the Dedicated Transmission System for Connectivity granted to M/s TSPPL for its another WPP of 66MW with St-II Connectivity appl. No. **1670224223993**. • TSPPL – Kallam PS 400kV S/c line along with associated bay at generation end (under the scope of applicant). • 1 nos. 400kV line bay at ISTS substation end (under the scope of ISTS). (**Expected SCOD:30.12.2024**)	Nil	LILO of both circuits of Parli(M) – Karjat(M)/ Lonikand-II(M) 400kV D/c line (twin moose) at Kallam PS. **(Expected SCOD: 31.08.2025 considering implementation timeframe of 18 months from SPV transfer).**	Conn-BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3: 2.02 Cr.
8.	2200000415 (Revised Enh Application)	Torrent Solar Power Pvt. Ltd. (TSPPL)	Generating station(s), including REGS(s), without ESS	27.12.2023 1309 Hrs	Hybrid	Land BG Route	WR	Osmanabad, Maharashtra	Kallam PS	192	31.05.2025 **Revised: 31.08.2025**	M/s TSPPL shall share the Dedicated Transmission System for Connectivity granted	Nil	LILO of both circuits of Parli(M) – Karjat(M)/ Lonikand-II(M) 400kV D/c line (twin	Conn-BG1: 50 Lakhs; Conn-BG2: NIL

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
											(subject to CTS)	to M/s TSPPL for its another WPP of 66MW with St-II Connectivity appl. No. **1670224223993**. • TSPPL – Kallam PS 400kV S/c line along with associated bay at generation end (under the scope of applicant). • 1 nos. 400kV line bay at ISTS substation end (under the scope of ISTS). (**Expected SCOD:30.12.2024**)		moose) at Kallam PS. **(Expected SCOD: 31.08.2025 considering implementation timeframe of 18 months from SPV transfer).**	Conn-BG-3: 3.84 Cr.
9.	2200000450 (Original Application)	Tata Power Renewable Energy Limited (TPREL)	Generating station(s), including REGS(s), without ESS	27.12.2023 1654 Hrs	Wind	LOA (SJVN)	WR	Osmanabad, Maharashtra	Kallam PS	100.8	01.03.2026 **Revised: 01.03.2026 (subject to CTS)**	M/s TPREL shall share the Dedicated Transmission System for Connectivity granted to M/s TSPPL for its another WPP of 66MW with St-II Connectivity appl. No. **1670224223993**. • TSPPL – Kallam PS 400kV S/c line along with associated bay at generation end (under the scope of applicant).	Nil	LILO of both circuits of Parli(M) – Karjat(M)/ Lonikand-II(M) 400kV D/c line (twin moose) at Kallam PS. **(Expected SCOD: 31.08.2025 considering implementation timeframe of 18 months from SPV transfer).**	Conn-BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3: 2.016 Cr.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
												• 1 nos. 400kV line bay at ISTS substation end (under the scope of ISTS). (**Expected SCOD:30.12.2024**)			

It was informed that a meeting was held on 24.01.2024 amongst CEA, CTU & RE developers at 400kV level of Kallam PS for discussing utilization of 220kV bay being vacated at Kallam PS by M/s JSW Neo wherein following was discussed:

- It was informed that as per Reg. 11.4 of GNA Regulations, 2022, for optimal utilisation of transmission system, the Nodal Agency with consent of the concerned Connectivity grantee(s), may rearrange the Connectivity across different terminal bay(s) of the same ISTS sub-station.

- In view of the above, the applicants at 400kV level of Kallam PS were informed that they may opt to come at 220kV level to the extent of 300MW (in order of priority as per date of application) so that maximum power of about 1951MW can be injected using the planned 4x500MVA ICTs at Kallam PS (after considering 0.95 p.f.).

- M/s Avaada Energy Pvt. Ltd. (2200000075:50MW + 2200000353:250MW + 2200000391:100MW) which was sharing the bay allocated to M/s TSPPL chose to shift the connectivity to the 220kV level for 50+250MW applications while withdrawing their application for 100MW. However, Connectivity granted/agreed for all other applicants shall remain intact without any changes.

- It was deliberated that earlier, the 400kV bay at Kallam PS had original schedule of Dec-24. However, CERC in petition no. 123/TL/2023 had directed that commissioning of Kallam Augmentation Part-1 and Part-2 must match with the corresponding generators. In view of the same, based on earlier meetings conducted by CTU with RE developers at 400kV level of Kallam PS on 09.10.2023, 02.11.2023 & 08.11.2023, it emerged that 1 no. 400 kV line bay under Kallam Augmentation Part-2 associated with the TSPPL generation project is required to be implemented by 31.12.2024 (i.e. as per the original schedule of the TSPPL bay) for evacuation of power from the Avaada generation project (ahead of the requirement informed by M/s TSPPL of Mar-25).

- Hence, as M/s AVAADA is shifting from 400 kV sharing with Torrent to 220 kV ISTS bay being vacated by M/s JSW; if there are any transmission charges applicable on the 400 kV Bay being implemented by M/s Indigrid under RTM for the period 31st December 2024 – 31st March 2025, the same should be borne by M/s AVAADA.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)

- M/s Avaada requested CTU to discuss with M/s Indigrid if commissioning schedule of the 400kV bay may be revised to Mar-25 matching with the schedule of TSPPL. However, in case M/s Indigrid does not agree to the same, M/s AEPL agreed to bear the said charges for the period between 31st December 2024 – 31st March 2025. (confirmed vide e-mail dated 24.01.2024)

Subsequently, M/s Indigrid was informed the change in requirement of 400kV bay from Dec-24 to Mar-25 vide e-mail dated 24.01.2024. In response, M/s Indigrid acknowledged the revised implementation schedule for said work from Dec-24 to Mar-25 and confirmed that the system will be developed accordingly vide e-mail dated 29.01.2024. It was also informed by them that they shall intimate the revised dates to Hon'ble CERC through their petition for grant of Transmission Licence for the said work.

After the above exercise, developer wise cumulative connectivity granted/agreed for grant is given below:

Sl.	Name of applicant	Cumulative RE Injection (MW)	Voltage level
1	Torrent Solar Power Private Limited (TSPPL)	600	400kV
2	TATA POWER RENEWABLE ENERGY LIMITED	302.8	400kV
3	SERENTICA RENEWABLES INDIA PRIVATE LIMITED	300	400kV
		1202.8	
1	AVAADA ENERGY PRIVATE LIMITED	300	220kV
2	Other RE applications already granted/agreed	1651.3	220kV
		1951.3	

Based on the above exercise, the total available margin at Kallam PS would become 100MW at 400kV level.

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
10.	2200000404 (Revised Application)	Bhojraj Developers Pvt. Ltd. (BDPL)	Generating station(s), including REGS(s), without ESS	12.12.2023	Hybrid (Solar: 26; Wind:160)	Land Route	WR	Agar Malwa, Madhya Pradesh	Pachora PS	186	30.06.2025 **Actual: 28.02.2026 subject to CTS**	Deliberated below.			Conn-BG1: 50 Lakhs; Conn-BG2: 3 Cr. Conn-BG-3: 3.72 Cr.
	Dedicated Transmission System for Connectivity: • BDPL-Pachora PS 220kV S/c line along with associated bays at the generating station (under the scope of the applicant). • 1 no. 220kV bay is already under tendering under ISTS as a part of the Rajgarh Phase-II Scheme. **Associated Transmission System:** • Nil **Common Transmission System Augmentation:** • Transmission System already under implementation@: ▪ Establishment of 400/220 kV, 3x500MVA at Pachora SEZ PP. ▪ Pachora SEZ PP – Bhopal (Sterlite) 400kV D/c line (Quad/Twin HTLS) (with minimum capacity of 2100 MVA/ckt at nominal voltage). • Common Transmission System Augmentation for Connectivity under GNA: ▪ 400/220 kV, 3x500 MVA ICT augmentation (4th 5th and 6th) at Pachora PS. ▪ Pachora PS – Ujjain (MPPTCL) 400 kV D/c line (Quad ACSR/AAAC/AL59 Moose equivalent).														
11.	2200000409 (Original – Enh)	Solarcraft Power India 7 Pvt. Ltd. (SPI7PL)	Generating station(s), including REGS(s), without ESS	08.12.2023	Wind	Land Route	WR	Kalaburagi, Karnataka	Solapur PS	47.2	31.12.2025 **Actual start date: 28.02.2026**	M/s SPI7PL shall share Dedicated Transmission System for Connectivity proposed for its other WPP of 50MW against application no.	Nil	• Establishment of 400/220 kV, 4x500 MVA ICTs at Solapur PS.	Conn-BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3:

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
											(Subject to commissioning of CTS)	**2200000213**) as given below: • SPI7PL – Solapur PS 220kV S/c line along with associated bay at generation end (under the scope of the applicant). • 1 no. 220kV line bay at Solapur PS is being implemented under ISTS as part of the pooling station.		• Solapur PS – Solapur (PG) 400 kV D/c line (Quad ACSR/AAAC/AL59 moose equivalent) **[Expected SCOD: Feb-26]**	94.4 Lakhs
12.	2200000398 (Original Application)	TEQ Green Power XVI Pvt. Ltd. (TGPXVIPL)	Generating station(s), including REGS(s), without ESS	01.12.2023	Wind	LOA (SJVN)	WR	Kutch, Gujarat	Lakadia PS	76	15.02.2026 **Actual start date:** 15.02.2026 subject to ATS	• TGPXVIPL – Lakadia 220kV S/c line on D/c tower along with associated bay at generation end (under the scope of applicant). • 1 no. 220kV line bay on Sec-II at ISTS substation end was agreed under ISTS based on request of applicant.	Establishment of 1x500 MVA, 400/220kV ICT (5th) at Lakadia PS along with associated ICT bays.	Nil	Conn-BG1: 50 Lakhs; Conn-BG2: As per the cost of ATS + Bay
	Applicant has applied for 76 MW connectivity and has submitted SJVN LOA dated 24.11.2023 and amendment to LOA dated 30.11.2023 indicating LOA contract capacity as 80 MW with installed capacity as Solar: 50 MW (Barmer, Rajasthan), Wind: 201 MW (76 MW at Kutch, Gujarat and 125 MW at Vijayapura, Karnataka) and ESS: 20 MWh (Vijayapura, Karnataka).														
13.	2200000403 (Original – Enh)	Renew Solar (Shakti Eight) Pvt. Ltd. (RS(S8)PL)	Generating station(s), including	04.12.2023	Solar	Land BG Route	WR	Kutch, Gujarat	Lakadia PS	100	30.09.2026 **Actual start date:**	M/s RS(S8)PL shall share the Dedicated Transmission System for Connectivity	Establishment of 1x500	Nil	Conn-BG1: 50 Lakhs;

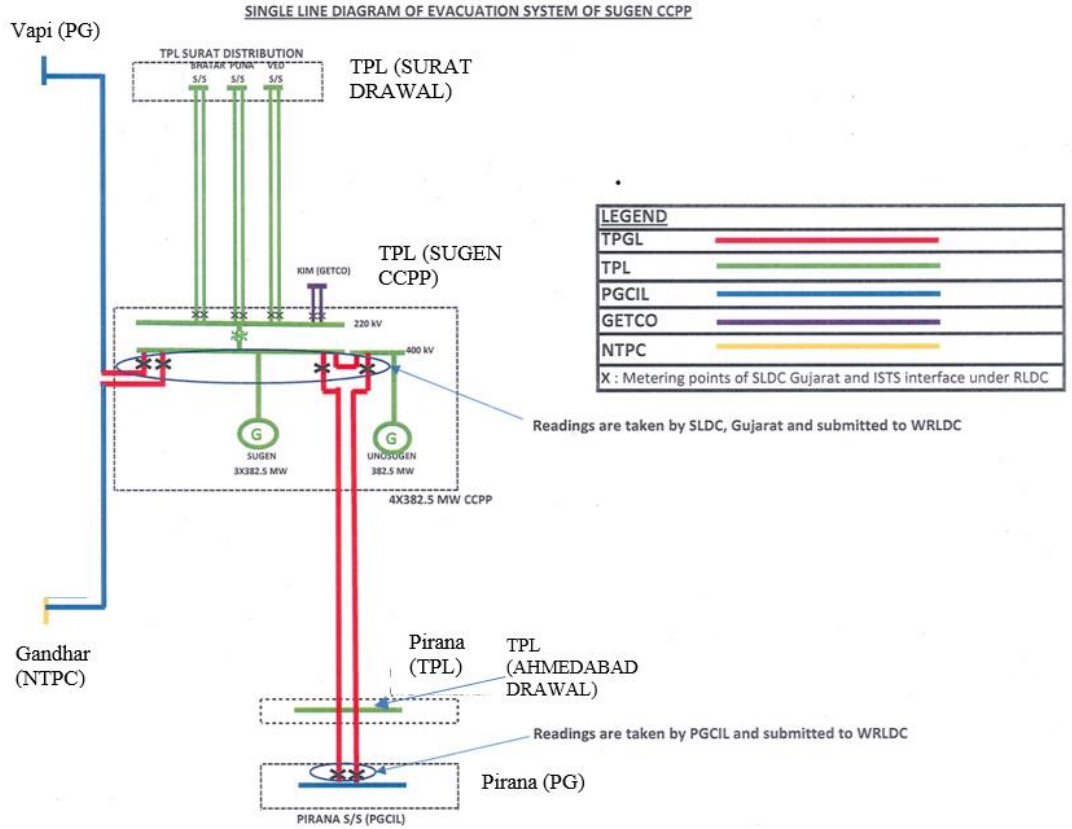
Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
			REGS(s), without ESS								30.09.2026 subject to ATS	proposed for its other SPP of 200MW against application no. **2200000341**) as given below: • RS(S8)PL – Lakadia 220kV S/c line on D/c tower along with associated bay at generation end (under the scope of applicant) • 1 no. 220kV line bay at ISTS substation end shall be under ISTS.	MVA, 400/220kV ICT (5th) at Lakadia PS along with associated ICT bays.		Conn-BG2: As per the cost of ATS
14.	2200000427 (Original Application)	TEQ Green Power XVI Pvt. Ltd. (TGPXVIPL)	Generating station(s), including REGS(s), without ESS	15.12.2023	Wind	LOA (SJVN)	WR	Kutch, Gujarat	Lakadia PS	76	31.03.2026 **Actual start date:** 31.03.2026 subject to ATS	M/s TGPXVIPL shall share the Dedicated Transmission System for Connectivity proposed for its other WPP of 76MW against application no. **2200000398**) as given above.	Establishment of 1x500 MVA, 400/220kV ICT (5th) at Lakadia PS along with associated ICT bays.	Nil	Conn-BG1: 50 Lakhs; Conn-BG2: As per the cost of ATS
15.	2200000458 (Original Application)	Ganeko Solar Pvt. Ltd. (GSPL)	Generating station(s), including REGS(s), without ESS	28.12.2023	Hybrid	Land BG Route	WR	Kutch, Gujarat	Lakadia PS	290	31.12.2026 **Actual start date:** 31.12.2026	• GSPL – Lakadia 220kV S/c line **(on D/c tower)** along	Establishment of 1x500 MVA,	Nil	Conn-BG1: 50 Lakhs; Conn-BG2: As

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
											subject to ATS.	with associated bays at generation end (under the scope of applicant). • 1 no. 220kV line bay at ISTS substation end **under ISTS (as per request of applicant)**	400/220kV ICT (6th) at Lakadia PS along with associated ICT bays.		per the cost of ATS + Bay
16.	2200000428 (Original Application)	Juniper Green Energy Pvt. Ltd.	Generating station(s), including REGS(s), without ESS	16.12.2023	Wind	Land BG Route	WR	Mandsaur Ratlam, Madhya Pradesh	Mandsaur PS	300	30.06.2028 **Actual start date:** 30.06.2028 subject to CTS.	• JGEPL – Mandsaur PS 220kV S/c line along with associated bays at generation end • **1 no. 220kV line bay at ISTS substation end under ISTS (as per request of applicant)**	Nil	Mentioned below.	Conn-BG1: 50 Lakhs; Conn-BG2: 3 Cr. Conn-BG-3: 6 Cr.
	Common Transmission System Augmentation: • Establishment of 3x1500 MVA, 765/400 kV Mandsaur Pooling Station (along with associated bays) & 5x500MVA 400/220kV ICTs • Mandsaur PS – Indore(PG) 765 kV D/c Line • Establishment of 765/400 kV (2x1500 MVA), 400/22 kV (2x500MVA) & 220/132 kV (3x200 MVA) at Kurawar S/s • Mandsaur – Kurawar 765 kV D/c line along with														

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
	• LILO of Indore – Bhopal 765 kV S/c line at Kurawar • Kurawar – Astha 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line • LILO of one circuit of Indore – Itarsi 400 kV D/ c line at Astha • Shujalpur – Kurawar 400 kV D/c (Quad ACSR/AAAC/AL59 moose equivalent) line.														
17.	2200000442 (Original Enh Application)	Torrent Power Limited	Generating station(s), including REGS(s), without ESS	20.12.2023	Gas	Refer Comment 3 below	WR	Kamrej, Surat, Gujarat	400 KV Switchyard at SUGEN Plant	647.5	01.01.2024 **Revised: 31.03.2024 subject to CTS (Mar-24)**	• Interconnection with 400kV bus of SUGEN Plant (under the scope of applicant). (existing)	Nil	400/220 kV, 1x315 MVA ICT (4th) at SUGEN (by TPL(Surat))	Conn-BG1: 50 Lakhs; Conn-BG2: NIL Conn-BG-3: 12.95 Cr.
	It was informed that 3x382.5MW CCPP at Surat, Gujarat is presently interconnected with ISTS at 400kV level through Sugen TPS – Pirana (TPL) – Pirana(PG) 400kV D/c line and LILO of Gandhar – Vapi 400kV S/c line at Sugen TPS. (Refer schematic below). For TPL's 3x382.5MW Sugen CCPP, 50MW has been considered as deemed GNA and TPL has opted for conversion of 200MW to GNA under 37.6(2) Regulation and 250MW to GNA under Regulation 37.6(1) of GNA Regulations, 2022.														

Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)

SINGLE LINE DIAGRAM OF EVACUATION SYSTEM OF SUGEN CCPP



Sl. No.	Application ID	Name of the Applicant	Nature of Applicant	Submission Date	Energy Source	Eligibility Criteria	Region	Project Location	Connectivity location (requested)	Quantum (MW)	Connectivity sought from & Actual Start Date*	Dedicated Transmission System for Connectivity	Associated Transmission System for GNA	Common Transmission System Augmentation	BG Details & Remarks (if any)
	Applicant has opted "Yes" in the field "Whether generating station is already connected to or intending to connect to intra-state transmission system?". However, towards copy of the application already made to STU or intimation issued by STU for the quantum of Connectivity to the Intra-State system, applicant has submitted clarification that connectivity of SUGEN plant with STU grid at 220 kV Kim line is incidental and SUGEN is not having any contractual supply in STU network. However, as per Para 5 (v) of GNA Detailed Procedure, an applicant shall not be eligible for connectivity to both Intra-State Transmission System & Inter-State Transmission System for the same capacity and as per Clause 5.1. of CERC GNA Regulations, 2022, applicant already having Connectivity to intra-state for part of installed capacity, may apply for Connectivity to ISTS for the balance of the installed capacity. With respect to Connectivity status of SUGEN plant with STU, TPL informed that SUGEN has no connectivity with STU and the 220kV D/c line with Kim is only for supply of power to load of TPL (Surat) (DISCOM) by GETCO. It was further informed that applicant has applied for enhancement of 647.5 MW connectivity in the already granted 500 MW connectivity against installed capacity of 1147.5 MW and has informed that Conn-BG-3 at Rs. 2 Lac per MW of Rs.12.95 Crs for 647.5 MW has been submitted to CTUIL earlier in line with 'Advisory for submission of application and Conn-BG3 as per CERC order 11/SM/2023 dated 22-09-2023' at CTU website. Further, they have requested that the BG submitted earlier may be treated against present application and CTUIL may issue provisional permission for GNA of 647.5 MW till the time same is processed as per Regulation. As discussed in the 21st CMETS-WR meeting, the SUGEN 3x315MVA, 400/220kV ICTs remain N-1 non- compliant and are critically loaded in the present time-frame for which M/s TPL has confirmed in joint meeting held amongst GETCO, SLDC and TPL held on 26.09.2023 that 400/220 kV, 1x315 MVA ICT (4th) at SUGEN will be commissioned by TPL latest by Mar'24. Till that time, GETCO / GETCO SLDC have confirmed that SPS is already armed at SUGEN complex for restriction of power flow to GETCO network in case of unwarranted grid incident or for opening 220kV SUGEN – Kim line to avoid excessive drawl from SUGEN system. Hence, GETCO SLDC shall ensure N-1 compliance on 3x315MVA, 400/132kV ICTs at SUGEN (TPL) switchyard through operational measures till commissioning of 400/220 kV, 4th 1x315 MVA ICT at SUGEN by M/s TPL. After deliberations, it was agreed to grant connectivity under GNA to M/s TPL (SUGEN) subject to commissioning of 400/220 kV, 4th 1x315 MVA ICT at SUGEN by M/s TPL. In this respect, M/s TPL stated that the 4th 400/220kV ICT at SUGEN is coming as per plan by Mar-24.														

**Note: The date of commencement of Connectivity under GNA is Interim. The timeline for completion of ATS/* Common Transmission System Augmentation */Terminals bay(s) (if not under implementation) as applicable along with firm date for start of connectivity shall be intimated within*

6 months of furnishing of Conn-BG 1 (in case of Augmentation with ATS) and Conn-BG1, Conn-BG2 & Conn-BG3, (as applicable, in case of Augmentation without ATS) in line with Regulation 8.3 b of GNA Regulations.

It was agreed to grant connectivity to the above applicants as per the proposal given in table above. Further following was noted by the applicants:

- Liability of payment of applicable transmission charges shall as per CERC sharing Regulations, 2020.
- Wherever ATS / Terminal Bay at ISTS end is being implemented by ISTS Licensee as per intimation for grant of connectivity under GNA regulation, in case, COD of the ATS / Terminal bay of Connectivity line is achieved earlier than COD of the Generation project (but not earlier than the start date of Connectivity under GNA), the liability of payment of applicable transmission charges for such mismatch period shall be governed by CERC Sharing Regulations, 2020.

II. Application for Grant of GNA/GNARE to entities other than STU under Regulation 20.1, 20.3 and 20.4 to entities under Regulation 17.1(ii), (iii), (v) and (vi):

Sl. No.	Application ID	Name of the Applicant	Submission Date	Region	Nature of applicant	GNA within Region (MW)	GNA outside Region (MW)	Total Quantum (MW) of GNA Required	Start date of GNA	End date of GNA
1.	2200000377 (Revised Application)	ArcelorMittal Nippon Steel India Limited (AMNS)	05-12-2023	WR	Bulk consumer seeking to connect to ISTS	75	75	150	01.07.2025	31-12-2050

- Applied for GNA_{RE}: No
- Nearest ISTS sub-stations: EPTCL 400KV Sub-Station, Hazira, Surat

Applicant has informed that presently they have GNA of 563MW allocated to them effective from 01.10.2023 as per CERC regulation notification L-1/261/2021/CERC. To augment their capacity to receive power, 3rd ICT is slotted to be commissioned in Dec 2024.

In the 22nd CMETS-WR meeting held on 23.10.2023, while discussing the GNA application of M/s GIL, M/s EPTCL had stated that ampacity of the line per sub conductor is 836A, which is equivalent to a thermal limit of 1158MVA (or ~1100MW at 0.95 p.f.) per circuit.

It was informed that as on date, the deemed GNA of M/s AMNS (erstwhile Essar Steel) is 563MW. Further, 337MW additional GNA w.e.f 01.01.2025 was agreed to be granted in the 24th CMETS. Thus, the total GNA available currently with M/s AMNS is 900MW (563+337).

Accordingly, sufficient margins are available on Gandhar – Hazira 400kV D/c line (of EPTCL) for drawal of additional 150MW power by AMNS. In order to ensure drawal capacity at Hazira S/s, following system needs to be implemented on priority by EPTCL:

- Installation of 1x500MVA 400/220kV ICT (3rd) at Hazira

Out of 3x500MVA, 400/220kV ICTs envisaged at Hazira GIS S/s, only 2x500MVA ICTS were commissioned by EPTCL and EPTCL had submitted before CERC in Petition No. 173/TT/2013 & 111/TT/2015 that they are in the process of installing the 3rd ICT and an undertaking in this regard had been submitted to CERC. As per the EPTCL's statement in this regard, the civil work for 3rd ICT is under progress and commissioning is expected before Dec-24.

It was deliberated that with 3rd ICT, 1000MW can be drawn from Hazira S/s in case N-1 criteria is strictly applied. However, with subject application, cumulative drawal of AMNS is reaching 1050MW. In this respect, it was decided that the subject drawal may be allowed considering only a marginal 50MW excess quantum and any further drawal shall only be with system augmentation in Hazira area. Further, the applicant confirmed to take all action as may be necessary to enable secure operation of the system under all operating conditions/contingencies.

In view of the above, it was agreed to grant 150MW additional GNA to M/s AMNS with above system w.e.f. 01.07.2025.

Further, all the applicants who are contemplating implementation of 220kV S/c dedicated line up to ISTS S/s on Double Circuit / Multi Circuit towers are requested to forward an undertaking as finalized by CEA & CTU (on company letter head) stating below mentioned text:

Quote

1. *<Developer/s> would implement the connectivity line on Double Circuit and / or on Multi Circuit towers at their own cost & risk.*
2. *The <developer/s> would not make any claim for additional bay or additional quantum of injection or overriding priority at the ISTS pooling station on basis of point at Sl. no. 1.*
3. *All issues related to sharing of the Double Circuit and / or Multi Circuit towers has to be coordinated among the developers themselves under intimation to CEA / CTU before taking up implementation.*
4. *<Applicant> shall not claim any compensation/change in commissioning schedule/Connectivity Start Date/dedicated transmission line completion timeline due to Connectivity line on Double Circuit and / or on Multi Circuit tower*

Unquote

Further, for optimization of ROW, it was proposed that transmission towers of various **dedicated lines, up to 2-3 km periphery from the entry of the pooling station may be of Multi-circuit type.** The generation developers/applicants associated with the various pooling stations may coordinate amongst themselves for implementation of such span/stretches of the dedicated connectivity lines with M/C towers.

All applicants were also requested to note the following:

- It may be noted that as per 22.2(d) of GNA Regulations, "**Entities covered under Regulation 4.1 and clause (iii) of Regulation 17.1 of these regulations shall furnish one-time GNA charge for Rs. One lakh per MW for the quantum of GNA one month prior to the start date of GNA.** In case, such charges are not furnished by the entity within the specified timeline, the same shall be recovered by encashment of ConnBG1, ConnBG2 and Conn-BG3 as required. The proceeds of such onetime GNA charge shall be used for reducing Monthly Transmission Charges under the Sharing Regulations:
- Provided that the entities covered under Regulation 17.1(iii) shall pay monthly transmission charges for its GNA in addition to one-time GNA charge in accordance with the Sharing Regulations."
- Further, as per 40.2 of GNA regulations, one-time GNA charges shall not be payable for the capacity which has been declared commercial operation as on date of coming into effect of these Regulations.

The above was noted and agreed by the applicants.

B. ISTS Network Expansion schemes in Western Region

1.0 Status of downstream 220kV network by STUs from the various commissioned and under-construction ISTS substations in Western Region

The various STUs/POWERGRID were requested to update the status of the 220 kV line bays from various 400/220 kV ISTS substations (which was last updated during the 24th CMETS-WR meeting in Dec-23).

Sl. No.	ISTS S/s	Voltage ratio, Trans. Cap	Unutilized bays	Status of ISTS bay	Lines for unutilized bays	Status of Lines (as updated during 25th CMETS-WR meeting)
WR (400/220kV ICTs Existing)						

Sl. No.	ISTS S/s	Voltage ratio, Trans. Cap	Unutilized bays	Status of ISTS bay	Lines for unutilized bays	Status of Lines (as updated during 25th CMETS-WR meeting)
a)	Mapusa (PG)	400/220kV (3x315 MVA)	2	Existing bay	Mapusa – Cuncolin 220 kV D/c line	**Dec-25** Order placed and WIP.
			2		Mapusa–Tuem 220 kV D/c line	**Dec-26** Line is under tendering.
b)	Wardha	400/220 kV (2x315 MVA)	2	Existing bay	Wardha – Yavatmal 220 kV D/c line	MSETCL: **Commissioned**
c)	Solapur	400/220 kV (2x315 +1x500 MVA)	2	Existing bay	Solapur – Bale (M) 220kV D/c line	MSETCL: **1st circuit has been commissioned & 2nd circuit (LOA issued; commissioning targeted by Jun'24)**
			2		Solapur – Narangwadi 220 kV D/c line	MSETCL: **Commissioned**
d)	Navi Mumbai	400/220 kV (2 x 315 MVA)	4	Existing bay	LILO of Apta – Taloja and Apta – Kalwa section of the Apta-Taloja/Kalwa 220 kV D/c line at Navi Mumbai (PG)	Mar-24 (as per CEA review meeting held on 31.12.2023)
WR (400/220kV ICTs Under Construction)						
e)	Navsari (New)	765/400kV (3x1500MVA) & 400/220kV (3x500MVA)	8	Under Construction by POWERGRID – **Dec'23**	LILO of both circuits of 220 KV D/C Navsari – Sachin line at Navsari(New) (South Gujarat) (GIS) substation	GETCO: Awarded – **May'24**
					Navsari(New) (South Gujarat) (GIS) substation – Sachin 220kV D/c line	GETCO: shall be awarded in Jan'24 with 12 month schedule
					Navsari(New) (South Gujarat) (GIS) substation – Khajod 220kV D/c line	GETCO: shall be awarded in Jan'24 with 12 month schedule
f)	Pune (GIS) (Shikrapur)	400/220kV (2x500MVA)	4	Under Construction by POWERGRID – **Jun'24**	• Construction of 220kV DC ShikrapurPG-Khedcity lines • Construction of 220kV Ranjangaon-ShikrapurPG DC line	MSETCL: **LOA issued, Commissioning targeted by Dec'24 (Sep'24 on best effort basis)**

Sl. No.	ISTS S/s	Voltage ratio, Trans. Cap	Unutilized bays	Status of ISTS bay	Lines for unutilized bays	Status of Lines (as updated during 25th CMETS-WR meeting)
					• Reorientation of 220kV Lonikand I-Ranjangaon ckt & 220kV Ranjangaon-Utech-Babhleshwar ckt at 220kV Khedcity.	
g)	Raipur Pool (Durg) S/s	400/220kV (3x500MVA)	8	Under Construction by POWERGRID (Dharamjaigarh Transmission Ltd.) – 2 nos. bays by **Sep'24** & 6 nos. bays by **Dec'24**	• Raipur Pool – Rajnandgaon 220 kV D/c line • Raipur Pool – Gendpur 220 kV D/c line • Raipur Pool – Bemetra 220 kV D/c line • LILO of Siltara – Urla 220kV S/c line at Raipur Pool (instead of LILO of Borjhara – Urla 220kV S/c line planned earlier)	• Raipur Pool – Rajnandgaon 220 kV D/c line: For construction of 220 KV DCDS line, new NIT has been issued on dtd 03.10.2023 & due date for opening of tender is extended up to 07.02.2024. • Raipur Pool – Gendpur 220 kV D/c line: For construction of 220 KV DCDS line, proposal for award of order is under process. • Raipur Pool – Bemetra 220 kV D/c line: For construction of 220 KV DCDS line, proposal for award of order is under process. • LILO of Urla – Siltara 220kV S/c line at Raipur Pool: NIT has been issued on dtd 03.10.2023 for construction of line and due date for opening of tender is extended up to 07.02.2024.
h)	Dharamjaigarh S/s	400/220kV (2x500MVA)	4	Under Construction by POWERGRID (Dharamjaigarh Transmission Ltd.) – **Mar'25**	• Dharamjaigarh – Chhuri 220 kV D/c line • Dharamjaigarh – Dharamjaigarh CSP 220 kV D/c line	• Dharamjaigarh – Chhuri 220 kV D/c line For construction of 220 KV Dharamjaigarh (PG)-Chhuri DCDS line order has been issued issued to M/s L&T on dtd 06.10.2023. • Dharamjaigarh – Dharamjaigarh CSP 220 kV D/c line: For construction of 220 S/s

Sl. No.	ISTS S/s	Voltage ratio, Trans. Cap	Unutilized bays	Status of ISTS bay	Lines for unutilized bays	Status of Lines (as updated during 25th CMETS-WR meeting)
						Dharamjaigarh (CSPTCL) at Vill-Hati & construction of 220 KV Dharamjaigarh PS (PGCIL Bhaisma) –Dharamjaigarh (CSPTCL) DCDS line NIT has been issued on dtd 29.09.2023 & is under process.
i)	Raigarh S/s	400/220kV (2x315MVA-existing & 1x500MVA-UC)	2	Under Construction by POWERGRID – **Nov'23**	• Raigarh (PG) – Malda 220 kV D/c line	• For proposed 220/132/33 KV Substation Malda land has been identified at Village – Pirda & Dongridih, Tehsil- Malkharouda, Distt. - Sakti (C.G). Further, as per information gathered aforesaid land has been allotted by District Collector Sakti vide orders dtd 11.09.2023 & 02.01.2024. Process for obtaining aministrative approval is under process. • For construction of 220 KV DCDS line from 400 KV s/s Raigarh PGCIL to 220 KV S/s Malda CSPTCL, survey & TFR is under process. • For construction of 02 Nos. 220 KV feeder bays at 400 KV s/s PGCIL Raigarh, work shall be carried out by PGCIL on deposit basis by CSPTCL. Agreement has been executed between PGCIL & CSPTCL on dtd. 27.03.2023.

Sl. No.	ISTS S/s	Voltage ratio, Trans. Cap	Unutilized bays	Status of ISTS bay	Lines for unutilized bays	Status of Lines (as updated during 25th CMETS-WR meeting)
						Further, as per Terms of Payment clause 9.0 (a) & (b) 10% of the estimated cost of the Project along with corresponding Consultancy Fee and applicable GST on Consultancy Fee i.e. Rs. 2,92,13,140/- has been paid to PGCIL on dtd 09.06.2023.
j)	Bhatapara S/s	400/220kV (2x315MVA-existing & 1x500MVA-UC)	2	Under Construction by POWERGRID – **May'23**	• Bhatapara (PG) – Bhatapara (CSPTCL) 220 kV D/c line	(i) For construction of 220 KV DCDS line from 400 KV s/s Bhatapara PGCIL to 220 KV S/s Bhatapara CSPTCL, Price Bid has been opened on dtd 06.10.2023 & after negotiation, case processed for approval and is under process. (ii) For construction of 02 Nos. 220 KV feeder bays at 400 KV s/s PGCIL Bhatapara, work shall be carried out by PGCIL on deposit basis by CSPTCL. Agreement has been executed between PGCIL & CSPTCL on dtd. 16.12.2022. Further, as per Terms of Payment clause 9.0 (a) & (b) 10% of the estimated cost of the Project along with corresponding Consultancy Fee and applicable GST on Consultancy Fee i.e. Rs. 4,48,20,160/- has been paid to PGCIL on dtd 03.02.2023.

Sl. No.	ISTS S/s	Voltage ratio, Trans. Cap	Unutilized bays	Status of ISTS bay	Lines for unutilized bays	Status of Lines (as updated during 25th CMETS-WR meeting)
						For construction of 02 Nos 220 KV Feeder bays at 220 KV S/s Bhatapara civil foundation work almost completed & for erection of structure & equipment's order issued & work is under progress.
k)	Jabalpur PS	400/220kV (2x500MVA)	4	Under Construction by POWERGRID – **Aug'24**	• LILO of Narsinghpur – Jabalpur (MP) 220 kV D/c line at Jabalpur Pool	MPPTCL: Approved by BoD and currently under tendering/survey. All efforts are being made to complete tendering activities as soon as possible and work anticipated to be completed between **Jun-25 and Dec-25.** MPPTL was requested to coordinate with POWERGRID with regard to the mismatch and if required, a communication may be sent to CEA/CTU for coordination of the elements. **MPPTCL vide letter dated 07.12.2023 has requested POWERGRID to implement the system in matching time-frame of STU system i.e. by Dec-25.**
l)	Satna S/s	400/220kV (2x315+ 1x500MVA Existing & 1x500MVA UC)	2	Under Construction by POWERGRID – **May'24**	• LILO of Satna 220kV - Maihar 220kV line at Satna (PG) S/s	

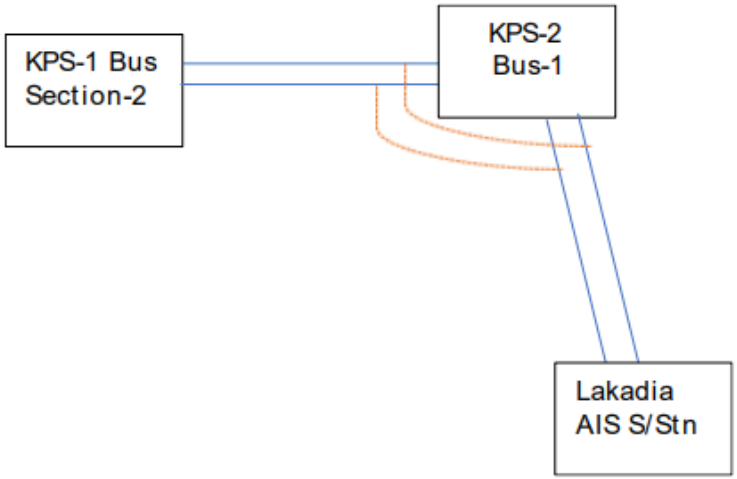
STUs were informed that as per the extant Sharing Regulations, 2020 (as amended), the Transmission Charges for inter-connecting transformers (ICTs) and downstream bays planned for drawal of power by the concerned State are to be borne by respective states(s) and accordingly, STUs may match the construction of 220kV lines with associated 220kV bays being implemented under ISTS.

Further, as per the Minutes of Meeting chaired by Secretary (Power) on 24.07.2015, all lines of voltage level 132kV and above, must have OPGW in place of one of the earth wire(s) in view of the importance of reliable communication in Power System.

All the STUs noted the above.

2.0 Request of M/s Adani Green Energy Ltd. (AGEL) to examine interim arrangement of establishment of KPS1 – Lakadia 765kV D/c line through interconnection of KPS1 – KPS2 765kV D/c line & KPS2 - Lakadia 765kV D/c line bypassing the KPS2 substation to evacuate the power beyond 3 GW from KPS1

M/s AGEL vide letter dated 15.12.2023 has informed that they are planning to install about 2800MW RE capacity by Mar-24 which would increase to 3200MW by Jun-24, 4200MW by Sep-24 & 5700MW by Dec-24 at KPS1 S/s. However, by that time, KPS2 S/s being implemented by POWERGRID would not be ready (SCOD: Jan-25). In this respect, M/s AESL is expediting KPS2 – Lakadia 765kV D/c line as well as working with M/s Megha Engg to expedite KPS1 – KPS2 765kV D/c line so that the lines are ready by Sep-24, when injection at KPS1 would exceed 4000MW and the KPS1 – Bhuj 765kV D/c line would become N-1 non-compliant. Hence, M/s AGEL has proposed that till availability of KPS2 S/s as well as other elements of Khavda Ph-II (5GW) scheme, which are mostly under implementation by POWERGRID, KPS1 – Lakadia 765kV D/c line may be established through interconnection of KPS1 – KPS2 765kV D/c line (21km.) & KPS2 - Lakadia 765kV D/c line (177km.) bypassing the KPS2 substation. The above interim arrangement would be restored to originally planned configuration upon completion of KPS2 S/s. The schematic in this regard is given below:



The matter was deliberated in the 24th CMETS-WR meeting wherein following was deliberated:

- It was informed that the feasibility of charging the KPS1 – Lakadia line (bypassed at KPS2) (198km.) was assessed and a total rise of 18-20kV was observed. Hence, if pre-charging voltage is maintained less than 780kV, the line charging would be feasible. The proposed KPS1 – Lakadia 765kV D/c line would help to maintain N-1 compliance on KPS1 – Bhuj 765kV D/c line, when injection at KPS1 crosses 3000-3500MW. However, without other elements of Khavda Ph-II (5GW) scheme including Banaskantha – Ahmedabad 765kV D/c line (Network expansion scheme linked with Khavda REZ), evacuation of power beyond 3GW from Khavda area would not be feasible, as it would lead of overloading issues at Vadodara and Banaskantha. Evacuation would be possible only in short term based on available margins in existing ISTS.
- GRID-INDIA stated that the KPS1 – Lakadia 765kV D/c line would be about 200km. long and it would lead to severe overvoltages when loading on the lines is low, during evening/night hours. The underloaded 765kV lines are already being kept open in order to control overvoltages in WR Grid. Hence, it would be preferable that the KPS1 – KPS2 – Lakadia 765kV D/c line section is charged together along with 2x330MVAr line reactors at KPS2 end. Further, even with this line, power evacuation would only be possible based on available magins. Hence, M/s AGEL may review if at all the scheme is required to be expedited.
- M/s AGEL stated that they would utilize the margins available in the system, especially when there is low wind season.
- It was deliberated that KPS2- Lakadia 765kV D/c line along with 2x330MVAr line reactors at KPS2 end is under the scope of AESL. Hence, M/s AESL may take up with POWERGRID for early commissioning of complete scope mentioned above, including scope of KPS1 – KPS2 765kV D/c line (by Megha Engg), so that POWERGRID may complete 765kV Bus works in matching time-frame, as per requirement of AGEL/AESL. M/s AGEL may provide feedback to CTU based on above discussions with POWERGRID so that the matter can be deliberated and finalized.

Subsequently, M/s AESL vide e-mail dated 18.01.2024 has informed the following:

Quote

- *We had discussion with PGCIL regarding the completion of 765kV Bus works, at PGCIL's KPS2 substation, in matching time-frame with our early commissioning of complete scope of KPS1 – KPS2 765kV D/c line (by Megha Engg) and KPS2 – Lakadia 765kV D/c line (By AESL).*

- *PGCIL has informed that completion of said works is not feasible in matching time-frame with our early commissioning schedule as mentioned above.*
- *In this regard, it is requested to kindly finalize and approve the Interim arrangement of Bypassing KPS2.*

Unquote

The matter was deliberated and it was agreed that the proposed interim arrangement of establishment of KPS1 – Lakadia 765kV D/c line through interconnection of KPS1 – KPS2 765kV D/c line & KPS2 - Lakadia 765kV D/c line bypassing the KPS2 substation may be allowed for enabling immediate injection of power beyond 3000MW to help maintain N-1 compliance on KPS1 – Bhuj 765kV D/c line, when injection at KPS1 crosses 3000MW. The said interim arrangement would facilitate evacuation beyond 3000MW in the short term based on available margins in existing ISTS (refer to deliberations in 24th CMETS-WR regarding overloading issues at Vadodara and Banaskantha for evacuation of power beyond 3GW from Khavda area). Further, the DOCO of the assets being charged on interim basis would continue to be governed by the relevant provisions of the TSA. The above interim arrangement would be restored to originally planned configuration upon completion of KPS2 S/s.

3.0 Finalisation of power evacuation system for 2X800MW thermal units in addition to existing 2X600MW units of Mahan Energen Limited, Singrauli

It was informed that details of applications received from M/s Mahan Energen Ltd. (Formerly Essar Power MP Ltd) and pending system finalization are given below:

1. **Transition case under Regulation 37.6(1) (i.e., Connectivity quantum effective and not having LTA/MTOA): 1100MW (for 2x600MW project)**
2. **Capacity Enhancement Application under Reg. 5.1 of GNA Regulation, 2022 (Appl. No. 2200000224): 100MW (for 2x600MW project)**
3. **Mahan Energen Limited (Appl. No. 2200000347): 280MW (for 2x800MW expansion project)**

As per CERC Regulation, 2004/2009, Connectivity has been granted to Mahan Energen Ltd. (Formerly Essar Power MP Ltd) (2x600MW) for 1100MW as per the following details:

- Mahan TPS – Bilaspur PS 400kV D/c (Quad ACSR Moose) line

- LILO of one ckt of 400kV Vindhyachal – Korba STPP at Mahan TPS
- 4 nos. 400kV line bays at Mahan TPS.

The LILO of one ckt. of 400kV Vindhyachal – Korba STPP at Mahan TPS was disconnected as per directions in CERC order dated 01.06.2022 in I.A. No. 4/IA/2022 in Petition No. 92/MP/2021. M/s MEL has opted for conversion to GNA for 1100MW under Regulation 37.6(1) of GNA Regulations, 2022. M/s MEL has also filed an application for grant of Connectivity for balance 100MW under Regulation 4 of GNA Regulations, 2022 for its existing plant.

Subsequently, a meeting was held amongst CEA, CTU, MPPTCL, CSPTCL, EPTCL & MEL on 01.09.2023, wherein, it was decided that M/s MEL was to apply for connectivity for the expansion of Bandhaura Thermal power Plant (2 x 800 MW) (Mahan Expansion project) being developed by Mahan Energen Limited (MEL). In this regard, it is to mention that MEL has filed an application to MP Power Transmission Co. Ltd (MP STU) for connectivity of 1320 MW (Gross) capacity of its Mahan Expansion project with Intra-State Transmission System & balance 280MW (Gross) capacity of the Mahan Expansion project to Inter State Transmission System under GNA.

The matter was discussed in a joint study meeting amongst CEA, CTU, MPPTCL, GRID-INDIA & MEL on 11.12.2023 wherein following was discussed:

- MPPTCL informed that they are preliminarily contemplating the following system for about 1230MW power drawal (1320MW capacity) in MP system:

KV Level	**Proposed Transmission Infrastructure**	**Length/Capacity**
400/220/132	**Establishment of Rewa(Sagra) 400kV S/s with 3x500MVA,400/220kV and 2x200MVA, 220/132kV ICT**	**3x500MVA,400/220kV 2x200MVA, 220/132**
400	PTEMPL Switchyard - Rewa(Sagra) 400kV DCDS line(Quad Moose)	150km
220	LILO of both circuit of Rewa - Sirmour/Bansagar-I 220kV line at Rewa(Sagra) 400kV S/s	10km
220	Rewa(Sagra) 400kV - Kotar 220kV DCDS line	45km

132	Rewa(Sagra) 400kV - Rewa(Sagra) 132kV DCDS line (Interconnector) [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	10km
132	Rewa(Sagra) 400kV - Rewa 132kV DCDS line [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	25km
132	Rewa(Sagra) 400kV - Mangawan 132kV DCDS line [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	25km
400/220/132	**Establishment of Amarpatan 400kV S/s with 2x500MVA,400/220kV and 2x200MVA, 220/132kV ICT**	**2x500MVA,400/220kV 2x200MVA, 220/132**
400	Rewa(Sagra) - Amarpatan 400kV DCDS line(Quad / Twin Moose)	60km
220	LILO of both circuit of Maihar - Satna (PGCIL) 220kV line at Amarpatan 400kV S/s	20Km
132	Amarpatan 400kV - Amarpatan 132kV DCDS line (Interconnector) [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	10km
132	Amarpatan 400kV - Satna -II 132kV DCDS line	35km
132	Amarpatan 400kV - Rampur Baghelan 132kV DCDS line [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	25km
132	Amarpatan 400kV - Unchehra 132kV DCDS line	25km

- It was informed that preliminary studies reveal that evacuation of 280MW power generated from the Mahan Energen units cannot be reliably evacuated with just the interconnection of MEL (2x800MW) and MEL (2x600MW) switchyards with MEL(2x600MW) – WR Pool 400kV D/c line and considering above proposed system for MEL(2x800MW), on account of system instability as angular difference on MEL(2x600MW) – WR Pool 400kV D/c line is seen to be relatively large (~28deg). The system proposed by MP is observed to be a radial system with no anchoring at 400kV level, which may be leading to high angular difference / instability issue. Hence, to alleviate the problem, additional studies need to be carried out in coordination with MPPTCL.
- MPPTCL stated that they have already proposed system which they feel is sufficient for evacuation of about 1230MW power from MEL's project. For balance 280MW for which MEL has applied for connectivity to CTU, CTU may indicate requirement of additional system, if any.
- Accordingly, it was decided that a joint study meeting would be held amongst CEA, CTUIL, MPPTCL, MEL & GRID-INDIA to finalize power evacuation system for 2X800MW thermal units in addition to existing 2X600MW units of Mahan Energen Limited.

During the joint study meeting held on 11.01.2024, a no. of alternatives were discussed as given below:

Alternatives	**Deliberations & Outcomes based on studies**
Base Case: Mahan (Ext) - Rewa (Sagra) 400kV D/c line & Rewa(Sagra) - Amarpatan 400kV D/c line alongwith establishment of Rewa (Sagra) & Amarpatan S/s and interconnections) with Mahan - Mahan (Ext) interconnector open MEL expansion dispatch considered: 1230MW	It was informed that with this alternative, it is observed that angular separation between Mahan (Ext) & Rewa (Sagra) bus in Sc-7 is about 17 degrees under N-1 of one ckt of Mahan (Ext) - Rewa (Sagra) 400kV D/c line. Further, under N-1 of one circuit of Amarpatan – Maihar 220 kV line about 290 MW power flows on other circuit which is more than thermal loading of the line. MPPTCL stated that overloading issues in downstream network of Amarpatan may be resolved by reconductoring of Amarpatan – Maihar 220 kV D/c section or any other suitable measures. Considering the above, the proposed power evacuation network evolved by MPPTCL was found to be suitable for about 1230MW power drawal (1320MW capacity) through MP intra-state system.

Alternatives	Deliberations & Outcomes based on studies
Case-I: [Mahan (Ext) - Rewa (Sagra) 400kV D/c line & Rewa (Sagra) - Amarpatan 400kV D/c line alongwith establishment of Rewa (Sagra) & Amarpatan S/s and interconnections) with Mahan - Mahan (Ext) interconnector closed. MEL expansion dispatch considered: 1510MW (1230MW under STU & 280MW under CTU) MEL existing dispatch considered: 1100MW 750MW dispatch of Rewa (UMSP) is also considered in Sc-7 at Rewa (PG) in Sc-7	It was informed that with this alternative, it is observed that under N-1 of one ckt of MEL- Bilaspur (PS), angular separation between Mahan & Bilaspur PS bus in Sc-7 is about 28 degrees which leads to system instability. Further, under N-1 of one circuit of Amarpatan – Maihar 220 kV line about 295 MW power flows on other circuit which is more than thermal loading of the line. It was suggested that the above system is observed to be a radial system with no anchoring at 400kV level, which may be leading to high angular difference / instability issue & accordingly additional anchoring at 400kV level at MEL plant needs to be provided. Considering the above, this alternative was not found to be suitable.
Case-II: Base Case + Rewa Sagra - Rewa PS 400kV D/c line (quad) ~25km & Mahan - Mahan (Ext) interconnector closed	It was informed that with this alternative, it is observed that under N-1 of one ckt of MEL- Bilaspur (PS), angular separation between Mahan & Bilaspur PS bus in Sc-7 is about 25 degrees. Further, under N-1 of one circuit of Amarpatan – Maihar 220 kV line about 270 MW power flows on other circuit which is more than thermal loading of the line. Considering the above, this alternative was not found to be suitable.
Case-III: Base Case + LILO of both circuits of Mahan – Rewa (Sagra) 400kV line at Rewa PS (Under ISTS) & Mahan - Mahan (Ext) interconnector closed	It was informed that with this alternative, it is observed that under N-1 of one ckt of MEL- Bilaspur (PS), angular separation between Mahan & Bilaspur PS bus in Sc-7 is about 22 degrees. Further, under N-1 of one circuit of Rewa (PG) – Rewa (MP) 220 kV line about 265MW power flows on other circuit which is under thermal loading of the line. Further, under N-1 of one circuit of Rewa (PG) – Sidhi (MP) 220 kV line about 252 MW power flows on other circuit which is also under thermal loading of the line. Power flow on downstream network of Amarpatan & Rewa (Sagra) is also within acceptable limits as power flow towards both Rewa (Sagra) & Amarpatan reduces in the present case w.r.t. above cases as

Alternatives	Deliberations & Outcomes based on studies
	some power flows towards Rewa (PG) & additional anchoring is also being provided which reduces the angular separation between Mahan & Bilaspur PS bus. Further, requirement of only 2x500MVA,400/220kV ICTs at proposed Rewa (Sagra) S/s is there instead of 3x500MVA,400/220kV ICTs due to reduction in power flow on downstream network at Rewa (Sagra). Considering the above, this alternative was found to be suitable.
Case-IV: Base Case + Mahan (Ext) - Katni (MP) 400kV D/c line (Under ISTS) e & Mahan - Mahan (Ext) interconnector closed	It was informed that with this alternative, it is observed that angular separation between Mahan & Bilaspur PS bus is about 18 degrees in Sc-7 as 2 outlets are being provided at Mahan (Ext) bus itself. Power flow on downstream network of Amarpatan & Rewa (Sagra) is also within acceptable limits as power flow towards both Rewa (Sagra) & Amarpatan reduces as about 850MW power is diverted towards Katni (MP). However, MPPTCL informed that the proposed system involves 2 nos. of 400kV line bays at Katni (MP) S/s for termination of Mahan (Ext) - Katni (MP) 400kV D/c line & space at Katni S/s is not available for termination of the above line. Considering the above, this alternative was not found to be feasible.
Case-V: Base Case + Mahan (Ext/existing bus) – Rewa PS (PG) 400kV D/c line (quad) (Under ISTS) & Mahan - Mahan (Ext) interconnector closed	It was informed that with this alternative, it is observed that angular separation between Mahan & Bilaspur PS bus is about 19 degrees in Sc-7. Further, under N-1 of one circuit of Rewa (PG) – Rewa (MP) 220 kV line about 310 MW power flows on other circuit which is under thermal loading of the line (single HTLS). Further, under N-1 of one circuit of Rewa (PG) – Sidhi (MP) 220 kV line about 262 MW power flows on other circuit which is also under thermal loading of the line. In this case also, power flow on downstream network of Amarpatan & Rewa (Sagra) is also within acceptable limits as power flow towards both Rewa (Sagra) & Amarpatan becomes less in the present case w.r.t. above cases as about 800MW power flows towards Rewa (PG) & additional anchoring is also being provided as 2 outlets are being provided at Mahan (Ext) bus which reduces the angular separation between Mahan & Bilaspur PS bus. WRLDC requested to check that whether the fault level at Vindhyachal 400kV & Jabalpur 400kV buses are enhanced due to interconnection of Mahan (Ext) with Rewa (PG) w.r.t. Case-III. Towards this, it was

Alternatives	Deliberations & Outcomes based on studies
	informed that there is negligible change in fault level at both Vindhyachal 400kV & Jabalpur 400kV buses w.r.t Case-III. Further, requirement of only 2x500MVA,400/220kV ICTs at proposed Rewa (Sagra) S/s is there instead of 3x500MVA,400/220kV ICTs due to reduction in power flow on downstream network at Rewa (Sagra). It was deliberated that this scheme would be more expensive than Case-III [LILO of both circuits of Mahan – Rewa (Sagra) 400kV line at Mahan (Ext)]. Towards this, it was opined that this alternative is preferrable from both stability point of view as well as implementation point of view considering that Mahan – Rewa PS (PG) 400kV D/c line (quad) can be implemented under ISTS without depending on STU system which can result in mismatch in case of delay in STU system & also reduction in angular separation between Mahan & Bilaspur buses by around 3 degrees is observed. Further, the above augmentation would cater to evacuation of 1200MW power from existing MEL plant as well as for evacuation of 280MW power from Mahan Expansion project. Considering the above, this alternative was found to be suitable. Additionally, MEL confirmed that 2 nos. of 400kV line bays are available at Mahan existing 400kV switchyard so that proposed MEL - Rewa PS (PG) 400kV D/c line (quad) can also be terminated at Mahan (MEL) existing switchyard. It was also informed that MEL have applied for 280MW (Gross) capacity of the Mahan Expansion project to Inter State Transmission System under GNA with connectivity sought date as 25-12-2026. In case of non-availability of STU system, it was informed that with the commissioning of MEL - Rewa PS (PG) 400kV D/c line (quad) line under ISTS & interconnection between Mahan - Mahan (Ext) bus, connectivity of 1200MW from existing MEL plant & connectivity of 280MW from MEL Expansion plant can be made effective.
Case - VI: Base Case + LILO of both circuits of Sasan - Vindhyachal 765kV D/c line at Mahan TPS & Mahan - Mahan (Ext) interconnector open	It was informed that with this alternative, it is observed that angular separation between Mahan & Bilaspur PS bus is about 8 degrees in Sc-7 as strong interconnection is being provided in the form of Mahan – Vindhyachal PS & Mahan- Sasan PS D/c line. In this case, as Mahan (Ext) – Mahan interconnector is kept open, STU charges for 280MW will also be levied on Mahan & accordingly, MEL would be required to apply for GNA under Regulations 17.1 (vi).

Alternatives	Deliberations & Outcomes based on studies
	MEL stated that the proposed system (i.e. LILO of both circuits of Sasan - Vindhyachal 765kV D/c line at Mahan TPS) is not agreeable considering that the same cannot be utilized for their expansion project of 2x800MW as the same would remain disconnected from the existing 2x600MW project. Considering the above, this alternative was not found to be suitable.

Keeping above in view, Alternative-V [MP STU proposed system + Mahan (existing bus) – Rewa PS (PG) 400kV D/c line (quad) (Under ISTS) & Mahan - Mahan (Ext) interconnector closed] was agreed as the best option from techno-economic point of view considering distinct advantages mentioned above over other alternatives studied during the meeting.

Accordingly, following transmission system was agreed for grant of connectivity under GNA to M/s MEL for 1200MW with an implementation timeframe of 24 months from date of SPV transfer/ date of allocation to implementing agency for Associated Transmission System for GNA under ISTS:

1. Dedicated Transmission System for Connectivity:

- Mahan TPS – Bilaspur PS 400kV D/c (Quad ACSR Moose) line (Existing- Under ISTS)
- 2 nos. 400kV line bays at Mahan TPS (Existing- Under ISTS)

2. Associated Transmission System for GNA:

- Mahan (existing bus) – Rewa PS (PG) 400kV D/c line (quad) along with line bays at Rewa PS (PG) end (under the scope of ISTS)
- 2 nos. 400kV line bays at MEL (existing) (under the scope of MEL)

3. Common Transmission System Augmentation for Connectivity under GNA:

- Existing Transmission System

Date from which the GNA to be granted: COD of ATS (subject to submission of requisite BGs)

Further, following transmission system was agreed for grant of connectivity under GNA to M/s MEL for 280MW out of total 1600MW capacity for its proposed expansion project:

1. **Dedicated Transmission System for Connectivity:**
   - Interconnection between Mahan - Mahan (Ext) bus (under the scope of MEL)
2. **Associated Transmission System for GNA:**
   - NIL
3. **Common Transmission System Augmentation for Connectivity under GNA:**
   - Mahan (existing bus) – Rewa PS (PG) 400kV D/c line (quad) along with line bays at Rewa PS (PG) end (under the scope of ISTS)
   - 2 nos. 400kV line bays at MEL (existing) (under the scope of MEL)

Date from which the GNA to be granted: 31.12.2026* (Start date for Connectivity under GNA sought by MEL)

**The date of commencement of Connectivity under GNA is Interim. The timeline for completion of Common Transmission System Augmentation along with firm date for start of connectivity shall be intimated after submission of applicable Conn-BG1, Conn-BG2 & Conn-BG3 & award of the scheme in line with GNA Regulations, 2022.*

After deliberations, Connectivity under GNA was agreed to be granted for below applications of MEL with above system:

1. Transition case under Regulation 37.6(1) (i.e., Connectivity quantum effective and not having LTA/MTOA): 1100MW (for 2x600MW project)
2. Capacity Enhancement Application under Reg. 5.1 of GNA Regulation, 2022 (Appl. No. 2200000224): 100MW (for 2x600MW project)
3. Mahan Energen Limited (Appl. No. 2200000347): 280MW (for 2x800MW expansion project)

Further, following transmission system proposed by MPPTCL was deliberated & agreed for evacuation of MP's share of about 1230MW power (1320 MW Gross capacity) from proposed 2x800 MW units of Mahan Expansion project to be developed by MPPTCL by Jan'27 as per PPA signed between MEL & MPPMCL:

KV Level	Transmission Infrastructure	Length/Capacity
400/220/132	**Establishment of Rewa (Sagra) 400kV S/s with 2x500MVA,400/220kV and 2x200MVA, 220/132kV ICT**	**2x500MVA,400/220kV 2x200MVA, 220/132**
400	PTEMPL Switchyard - Rewa(Sagra) 400kV DCDS line(Quad Moose)	150km
220	LILO of both circuit of Rewa - Sirmour/Bansagar-I 220kV line at Rewa(Sagra) 400kV S/s	10km
220	Rewa(Sagra) 400kV - Kotar 220kV DCDS line	45km
132	Rewa(Sagra) 400kV - Rewa(Sagra) 132kV DCDS line (Interconnector) [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	10km
132	Rewa(Sagra) 400kV - Rewa 132kV DCDS line [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	25km
132	Rewa(Sagra) 400kV - Mangawan 132kV DCDS line [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	25km
400/220/132	**Establishment of Amarpatan 400kV S/s with 2x500MVA,400/220kV and 2x200MVA, 220/132kV ICT**	**2x500MVA,400/220kV 2x200MVA, 220/132**
400	Rewa(Sagra) - Amarpatan 400kV DCDS line(Quad / Twin Moose)	60km
220	LILO of both circuit of Maihar - Satna (PGCIL) 220kV line at Amarpatan 400kV S/s	20Km
132	Amarpatan 400kV - Amarpatan 132kV DCDS line (Interconnector) [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	10km
132	Amarpatan 400kV - Satna -II 132kV DCDS line	35km
132	Amarpatan 400kV - Rampur Baghelan 132kV DCDS line [In case on non-availbility of feeder bay at Existing EHV Substation then option for LILO of Existing Line will be explore]	25km
132	Amarpatan 400kV - Unchehra 132kV DCDS line	25km

MPPTCL stated that the above system may be slightly changed based on feasibility of physical implementation of downstream system and the same shall be intimated from time to time.

4.0 Additional schemes pertaining to Interconnection of RE developer's DTL at Bay of KPS-1 (Section-I) & KPS2 (Section-1):

It was informed that the following schemes pertaining to Interconnection of RE developer's DTL at Bay of KPS-1 (Section-I) & KPS2 (Section-1) were discussed and agreed in Meeting amongst CEA, CTU, GRID-INDIA, GETCO, KBTL, POWERGRID, Adani & GSECL held on 11.01.2024:

4.1 Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (Section-I)

<table>
<tr><th>Sl. No.</th><th>Items</th><th>Details</th></tr>
<tr><td>1.</td><td>Name of Scheme</td><td>Interconnection of RE developer's DTL at Bay no. 412 of KPS-1 (Section-I)</td></tr>
<tr><td>2.</td><td>Scope of the scheme</td><td><table>
<tr><th>Sl. No.</th><th>Scope of the Transmission Scheme</th><th>Capacity /km</th></tr>
<tr><td>1.</td><td>Implementation of additional line bay equipment including other miscellaneous works required for physical interconnection of Dedicated Transmission Line of RE Developer at bay no. 412 of KPS-1 (Section-1)</td><td>As required for completion of scope of the scheme.</td></tr>
</table></td></tr>
<tr><td>3.</td><td>Depiction of the scheme on Transmission Grid Map</td><td>SLD attached at Annexure-A</td></tr>
</table>

Sl. No.	Items	Details
4.	Upstream/downstream system associated with the scheme	400kV bay allotted to Adani Green Energy Limited (AGEL)(1050MW) at KPS-1 (Section-I)
5.	Objective / Justification	KPS 1 (Bus Section 1) is under implementation by Khavda Bhuj Transmission Ltd. (KBTL) (a subsidiary of Adani Transmission Ltd.) through TBCB Route where in 3 nos. 400kV bays at KPS1 Sec-1, which have been allocated to: Adani Renewable Energy Holding Four Ltd. (AREH4L) [500MW (appl. no.- 1200002437) +2000MW (appl. no.- 1200002678) +1000MW (appl. no.- 1200002679)]. Another 400kV GIS bay is required for enabling connectivity of Adani Green Energy Ltd. (AGEL) (1050MW – appl. no. 1670426092248) at 1st 400 kV bus section of KPS1. As per the original scope of transmission scheme under implementation by KBTL, *in case of GIS Sub-station, GIS duct of the future bay shall be brought outside the GIS hall/building with extension/interface module suitably*. In the instant case, future bay at KPS-1 (Section-1) is 412 which has been allocated to AGEL. Accordingly, this scheme has been proposed which includes installation of Line Trap, Surge Arrester, Line CVT, Control & Protection Panel, GIS duct etc., to complete the balance work of bay no. 412, thereby enabling physical interconnection of AGEL's DTL with KPS-1 (Section-I).
6.	Estimated Cost	**₹ 4.7 Crore**
7.	Impact on the total Annual Transmission charges (ATC) in % along with the existing ATC	A. ATC (considering Levelized Tariff @15% of estimated cost): ₹ 0.704Crore B. Present ATC: ₹ **46,043.07** Core* C. A/B (%): Less than 0.0015%
8.	Need of phasing, if any	Not Applicable
9.	Implementation timeframe	28.02.2026 *(refer note no. a)* *a. Implementation Timeframe has been aligned with the start date of connectivity mentioned the in-principle grant of Connectivity which is subject to the availability of Common Transmission System Augmentation for Connectivity under GNA [which inter-alia includes Khavda Phase-III transmission system with commissioning schedule of 24 month from the date of SPV transfer (26.12.2023)].*

Sl. No.	Items	Details
		Scheme shall be implemented upon receipt of requisite Conn-BGs from AGEL.
10.	Inclusion of any wildlife/protected area along the transmission line route	Not applicable.
11.	Deliberations with RPC along with their comments	The estimated cost of the scheme is less than INR 500 Cr. Accordingly, the same is not required to be sent to WRPC for deliberation in line with MoP office order no. 15/3/2018-Trans-Pt(5) dated 28-10-2021 regarding reconstitution of NCT.
12.	System Study for the evolution of the proposal	During the 15th CMETS-WR meeting held on 30.01.2023. it was agreed to Grant connectivity to Adani Green Energy Limited (1050MW- appl. no.1670426092248) at KPS-1 with Bay at KPS-1 under the scope of ISTS.

**Total YTC allowed for Oct'23, as per notification of transmission charges payable by DICs for Billing Month of December 2023 dated 25.11.2023 published on NLDC website (available at* https://posoco.in/transmission-pricing/notification-of-transmission-charges-for-the-dics/)

In view of the above, Interconnection of RE developer's DTL at Bay no. 412 of KPS-1 (Section-I) scheme was agreed to be implemented under ISTS as per details given below:

Interconnection of RE developer's DTL at Bay no. 412 of KPS-1 (Section-I)

Sl.	*Scope of the Transmission Scheme*	*Item Description*	*Implementation Timeframe.*
1.	Implementation of additional line bay equipment including other miscellaneous works required for physical interconnection of Dedicated Transmission Line of RE Developer at bay no. 412 of KPS-1 (Section-1)	As required for completion of scope of the scheme.	25.12.2025 *(refer note no. a)*
		Total Estimated Cost:	**₹ 4.7 Crore**

Note:

a. *Implementation Timeframe has been aligned with the start date of connectivity mentioned the in-principle grant of Connectivity which is subject to the availability of Common Transmission System Augmentation for Connectivity under GNA [which inter-alia includes Khavda Phase-III transmission system with commissioning schedule of 24 month from the date of SPV transfer (26.12.2023)].*

4.2 Interconnection of RE developer's DTL at Bay no 416 of KPS-2 (Section-I)

<table>
<tr><th>Sl. No.</th><th>Items</th><th>Details</th></tr>
<tr><td>1.</td><td>Name of Scheme</td><td>Interconnection of RE developer's DTL at Bay no. 416 of KPS-2 (Section-I)</td></tr>
<tr><td>2.</td><td>Scope of the scheme</td><td>
<table>
<tr><th>Sl. No.</th><th>Scope of the Transmission Scheme</th><th>Capacity /km</th></tr>
<tr><td>1.</td><td>Implementation of additional line bay equipment including other miscellaneous works required for physical interconnection of Dedicated Transmission Line of RE Developer at bay no. 416 of KPS-2 (Section-1)</td><td>As required for completion of scope of the scheme.</td></tr>
</table>
</td></tr>
<tr><td>3.</td><td>Depiction of the scheme on Transmission Grid Map</td><td>SLD attached at Annexure-B</td></tr>
<tr><td>4.</td><td>Upstream/downstream system associated with the scheme</td><td>400kV bay allotted to Gujarat State Electricity Corporation Limited (GSECL)(1000MW) at KPS-2 (Section-I)</td></tr>
<tr><td>5.</td><td>Objective / Justification</td><td>KPS 2 is under implementation by KPS2 Transmission Ltd. (K2TL) (a subsidiary of Power Grid Corporation of India Ltd.) through TBCB Route where in 2 nos. 400kV bays have been allocated to GIPCL [600MW (appl. no. 1200003371) + 575MW (appl. no. 2200000159)] & GSECL [600MW (appl. no. 1200003331)] at 400kV Bus Section-1 & and 1 no. 400kV line bay has been allocated to NTPC REL</td></tr>
</table>

Sl. No.	Items	Details
		[265MW (appl. no. 1200003585) + 100MW (appl. no. 1200003733) + 890MW (appl. no. 1200003953) + 300MW (appl. no. 330700007)] at 400kV Bus Section-2. Another 400kV GIS bay is required for enabling connectivity of GSECL [1000MW (appl. no. 230700005) +364MW (appl. no. 2200000048)] at 1st 400 kV bus section of KPS2. As per the original scope of transmission scheme under implementation by K2TL, *in case of GIS Sub-station, GIS duct of the future bay shall be brought outside the GIS hall/building with extension/interface module suitably*. In the instant case, future bay at KPS-2 (Section-1) is 416 which has been allocated to GSECL. Accordingly, this scheme has been proposed which includes installation of Line Trap, Surge Arrester, Line CVT, Control & Protection Panel, GIS duct etc., to complete the balance work of bay no. 416, thereby enabling physical interconnection of GSECL's DTL with KPS-1 (Section-I).
6.	Estimated Cost	**₹ 12.26 Crore**
7.	Impact on the total Annual Transmission charges (ATC) in % along with the existing ATC	A. ATC (considering Levelized Tariff @15% of estimated cost): ₹ 1.84Crore B. Present ATC: ₹ **46,043.07** Core* C. A/B (%): Less than 0.004%
8.	Need of phasing, if any	Not Applicable
9.	Implementation timeframe	31.03.2025 *(refer note no. a)* **Note:** *a. Implementation Timeframe has been aligned with expected COD of Khavda Phase-II transmission system, through which LTA has been granted to GSECL for 1000MW (Connectivity appl. no. 230700005 & LTA application no. 430000002).*
10.	Inclusion of any wildlife/protected area along the transmission line route	Not applicable.

Sl. No.	Items	Details
11.	Deliberations with RPC along with their comments	The estimated cost of the scheme is less than INR 500 Cr. Accordingly, the same is not required to be sent to WRPC for deliberation in line with MoP office order no. 15/3/2018-Trans-Pt(5) dated 28-10-2021 regarding reconstitution of NCT.
12.	System Study for the evolution of the proposal	During the 13th CMETS-WR meeting held on 08.12.2022. it was agreed to Grant connectivity to Gujarat State Electricity Corporation Limited (1000MW) at KPS-2 with Bay at KPS-2 under the scope of ISTS.

**Total YTC allowed for Oct'23, as per notification of transmission charges payable by DICs for Billing Month of December 2023 dated 25.11.2023 published on NLDC website (available at* https://posoco.in/transmission-pricing/notification-of-transmission-charges-for-the-dics/)

In view of the above, Interconnection of RE developer's DTL at Bay no 416 of KPS-2 (Section-I) scheme was agreed to be implemented under ISTS as per details given below:

Interconnection of RE developer's DTL at Bay no 416 of KPS-2 (Section-I):

Sl.	*Scope of the Transmission Scheme*	*Item Description*	*Implementation Timeframe.*
1.	Implementation of additional line bay equipment including other miscellaneous works required for physical interconnection of Dedicated Transmission Line of RE Developer at bay no. 416 of KPS-2 (Section-1)	As required for completion of scope of the scheme.	31.03.2025 *(refer note no. a)*
		Total Estimated Cost:	**₹ 12.26 Crore**

Note:

a. Implementation Timeframe has been aligned with expected COD of Khavda Phase-II transmission system, through which LTA has been granted to GSECL for 1000MW (Connectivity appl. no. 230700005 & LTA application no. 430000002).

5.0 Transmission System for 5 GW Offshore wind farm (Sub Zone B3 to B6) in Gujarat

Following was informed w.r.t. 5 GW Offshore wind farm (Sub Zone B3 to B6) in Gujarat:

- Govt. of India has set a target of 500 GW capacity addition from non-fossil fuel based generation capacity by 2030. MNRE has identified about 30 GW Offshore wind potential each in the coast of Gujarat and Tamil Nadu. Initially 5 GW Offshore wind potential each at Gujarat (CUF – 38%) and Tamil Nadu (CUF – 48%) has been prioritized for implementation.
- The Offshore wind potential may be integrated with the Onshore pooling station though Submarine cables and transmission system beyond Onshore wind has been planned as AC transmission system. The transmission system for integration of 5 GW Offshore wind potential each at Gujarat and Tamil Nadu has already been identified.
- In the meeting held on 16.08.2023, between MNRE & CTUIL, following was decided:
  - Initial 02 GW transmission capacity (01 GW each off the coast of Gujarat and Tamil Nadu) shall be developed in the 1st Phase and further 04 GW each off the coast of Gujarat and Tamil Nadu shall be developed subsequently.
  - NIWE to demarcate the offshore sites of 01 GW capacity into 2 x 500 MW blocks each (500 MW for VGF Project and remaining 500 MW for Non-VGF Project) of the coast of Gujarat and Tamil Nadu and finalize the probable coordinates of the offshore pooling substations.
  - MNRE to share with CTUIL the site details with probable coordinates of the offshore substations and commissioning timelines for the above 1GW and the balance offshore wind energy projects.

Transmission system for integration of 1GW Offshore wind in Gujarat (Subzone B3) was also deliberated in the 22nd CMETS-WR held on 23.10.2023, wherein, NIWE/MNRE were requested to provide the following inputs so that the scheme may be finalized.

- Providing coordinates of B3-OSS-1 for VGF site (500MW)
- Ampacity of 220kV export cables (1400sq. mm. or 1600 sq. mm.).
- Details w.r.t. reactive power compensation (onshore / offshore)

Subsequently, the matter was deliberated in MNRE in the meeting held on 22.12.2023 for finalization of the specifications of the transmission infrastructure in which following broad decisions were taken:

- The tentative timelines for the offshore wind energy projects are as follows:

  - 500 MW VGF project off-Gujarat coast to be commissioned by March 2028. Tender for the project to be published by March 2024
  - 4 GW non-VGF project off-Tamil Nadu coast to be commissioned by in FY 2029-30. Tender for the projects to be published on 01.02.2024
  - 500 MW VGF project off-Tamil Nadu coast to be commissioned by March 2029. Tender for the project to be published by March 2025.
  - Non-VGF project off-Gujarat coast will be tendered based on the response for the Tamil Nadu non-VGF project
- Offshore substation and subsea transmission line will be planned for the block-edge locations presented by NIWE in order to reduce conflicts with operations of offshore wind power developers, and reduce the investment by PGCIL.
- The tentative specifications of the transmission infrastructure were agreed upon, and are as follows:
  - Operating voltage for the substation and the transmission line to be kept 220 kV.
  - Substation transformer configuration of 2 x 315 MVA to be used in order to allow for safety margins and evacuation of additional capacity if awarded capacity increases beyond 500 MW
  - 2 x 300 MVA capacity subsea cables to be used for power evacuation

In the 22nd CMETS-WR meeting, GETCO had stated that since the onshore pooling substation shall be designed to allow for expansion of capacity up to 5 GW, the Mahuva Onshore PS – Vataman line should be implemented with 765kV D/c line (initially charged at 400kV level) and with expansion requirement, the line could be charged at 765kV level so that another line is not required to be implemented immediately thereafter. In this respect, CTU had stated that 400kV D/c line was proposed in order to keep cost of the project in check as it would be first of its kind; however, the suggestion of GETCO was acknowledged and it was decided that the same would be kept in mind while finalizing the scheme.

GETCO stated that since the Non-VGF project off-Gujarat coast is proposed to be tendered based on the response for the Tamil Nadu non-VGF project, the requirement of 765kV line may not be there.

NIWE stated that there may be some changes to the configuration / sizing of wind turbines; however, this may not impact the ISTS portion.

Based on above, the following transmission system for 1 GW in the coast of Gujarat was agreed as under:

Transmission System for Offshore Wind Zone Phase-1 (500 MW VGF on coast of Gujarat for Subzone B3):

A. Onwards Transmission System from Onshore Pooling Station

1. Installation of 2x1500MVA, 765/400 kV ICTs at Vataman along with 1x125 MVAr (420kV) Bus Reactor
2. Mahuva Onshore PS – Vataman 400 kV D/c line (190 km) (Quad Moose) with 63MVAr & 50MVAr, 420kV switchable line reactors on each ckt at Mahuva & Vataman ends respectively.

Vataman switching S/s has been planned through LILO of Lakadia-Vadodara 765 kV D/c line at Vataman under Khavda Ph-III (7 GW) and is presently under implementation by POWERGRID (under TBCB) with implementation schedule of Dec'25.

B. Onshore Pooling Station

1. Establishment of 2x500 MVA, 400/220kV Mahuva Onshore Pooling Station (Mahuva PS) alongwith 1x125 MVAR, 420kV bus reactor (with space provision for upgradation to 765 kV level to cater to future Offshore Wind Projects adjacent to B3, B4, B5 pockets in future)
2. ± 300 MVAr STATCOM at 220kV level of Mahuva PS with 1 No. of 220 kV bay
3. 220KV, 1x125MVAR Variable Bus Shunt Reactor (with control range between 25 – 125MVAr for each VSR) with 1 No. of 220 kV bay

C. Offshore Pooling Station

1. Establishment of **2x315MVA**, 220/66kV Gujarat Offshore B3 Sub-Station Station-1 (B3-OSS-1) with 66kV line bays – **9** nos. for RE Interconnection
2. B3-OSS-1 – Mahuva Onshore PS 220kV 2xS/c (3 core) cables (35 km*- under sea cable of about 25 km & under ground cable of about 10 km) alongwith associated line bays at both ends (with capacity of 300MVA/ckt at nominal voltage) with 1x50MVAr switchable line reactors at B3-OSS-1 end on each cable

Note:

1. *The no. of 220 kV Submarine Cables has been considered assuming capacity of one three core cable as 300MVA.*
2. *Reactive compensation has been worked considering MVAr generation of about 3MVAr/km by 220 kV Submarine Cable.*
3. ** Distance indicated is beeline length, however, it may change based on actual survey.*

Expected Commissioning Schedule: **Mar'28**

Transmission System for Offshore Wind Zone Phase-2 (500 MW Non- VGF on coast of Gujarat for Subzone B3):

A. Onshore Pooling Station

1. Augmentation of Mahuva Onshore Pooling Station by 1x500 MVA, 400/220kV ICT alongwith 1x125 MVAR, 420kV bus reactor
2. 220KV, 1x125MVAR Variable Bus Shunt Reactor (with control range between 25 – 125MVAr for each VSR) with 1 Nos. of 220 kV bay

B. Offshore Pooling Station

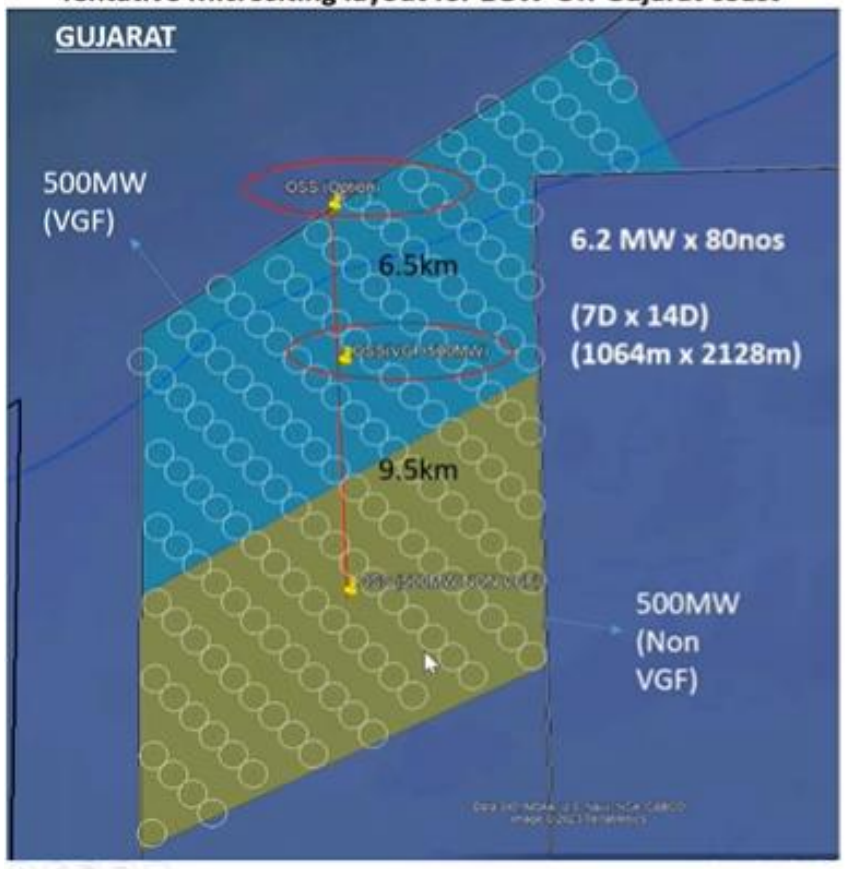
3. Establishment of **2x315MVA**, 220/66kV Gujarat Offshore B3 Sub-Station Station-2 (B3-OSS-2) with 66kV line bays – **9** nos. for RE Interconnection
4. B3-OSS-2 – Mahuva Onshore PS 220kV 2xS/c (3 core) cables (~50 km*) alongwith associated line bays at both ends (with capacity of 300MVA/ckt at nominal voltage) with 1x50MVAr switchable line reactors at B3-OSS-2 end on each cable

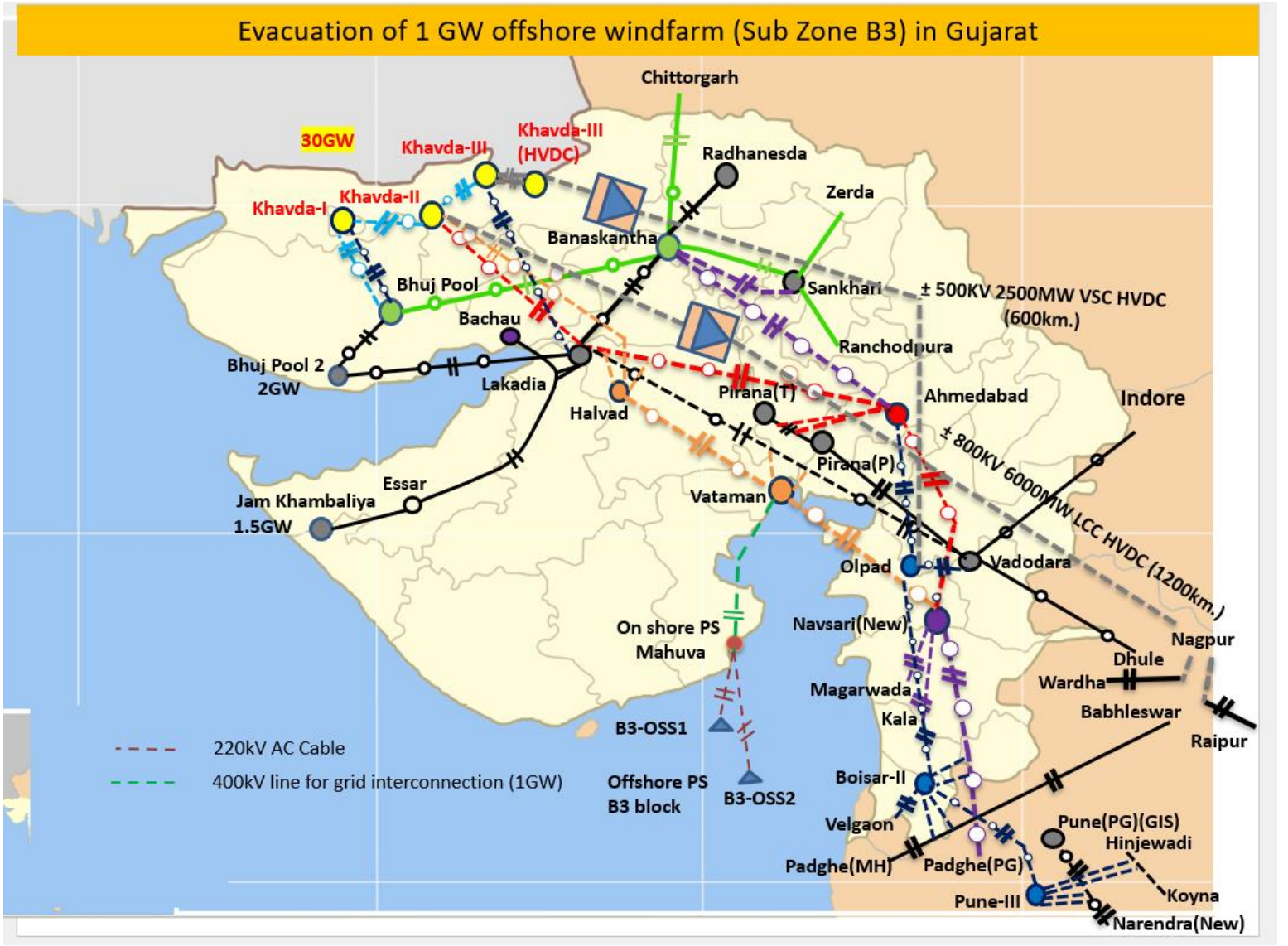
**The cable lengths are tentative and subject to change based on inputs from MNRE sought vide mail dated 06.10.2023.*

Note:

4. *The no. of 220 kV Submarine Cables has been considered assuming capacity of one three core cable as 300MVA.*
5. *Reactive compensation has been worked considering MVAr generation of about 3MVAr/km by 220 kV Submarine Cable.*

Tentative Micrositing layout for 1GW-Off Gujarat coast





6.0 Proposals of GETCO for drawal of power through the ISTS network in vicinity of Jam Khambhaliya PS.

It was informed that the following proposals had been received from GETCO for drawal of power through the ISTS network in vicinity of Jam Khambhaliya PS:

- Installation of 2x500MVA, 400/220kV ICTs at Jam Khambhaliya (on segregated 220kV bus) (under ISTS) and 220 kV D/C Jam Khambhalia (ISTS) – Kuvadiya line (In-STS): (10-12 km.)

  GETCO stated that the 220kV D/c line shall involve 18 months for implementation by STU. However, considering ISTS time-line of ~24 months from approval-to-COD, the line would be matched with 2x500MVA ICTs under ISTS))
- LILO of both circuits of 400 kV D/C Jam Khambhalia – Kalavad line at Babarzar 400 kV substation along with Establishment of 2x500MVA, 400/220kV ICTs at Babarzar. (In-STS) :

  GETCO stated that the scheme is planned under In-STS GEC-II and may be expected by FY27 (under tenderization)

After deliberations, the above schemes were agreed. With the above 2x500MVA ICTs for drawal of power by GETCO, the configuration at 220kV level of Jam Khabhaliya PS would be as below:

1) 220kV Section 1 (existing) with 4x500MVA ICTs and 7 nos. 220kV bays (existing)
2) **220kV Bus Sectionaliser between Section-1 (existing) and Section-2 (new)**
3) 220kV Section 2 (New) with proposed 2x500MVA ICTs (under proposed scope) + **1 No. 500MVA ICT (New)** and 3 nos. 220kV bays (2 nos. under proposed scope & 1 no. under applicant scope)
4) **220kV Bus Sectionaliser between Section-2 (new) and Section-3 (Proposed above)**
5) 220kV Section 3 with New 2x500MVA ICTs and 4 nos. 220kV bays **(Proposed above)**

Here, it was noted that 1 No. 500MVA ICT (7th) on Bus Section-II of Jam Khambhaliya PS has been proposed for RE injection. Now, the last 220kV bus section-3 along with New 2x500MVA ICTs and 4 nos. 220kV bays are required for GETCO drawal. Hence, it was agreed that the entire scope of work may be implemented under same scheme:

Augmentation of Transformation capacity at Jam Khambhaliya PS (JKTL):

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Augmentation of transformation capacity at Jam Khambhaliya PS (GIS) by 1x500MVA, 400/220kV (7th) ICT terminated on New 220kV bus section-2	500MVA, 400/220kV ICTs: 1 Nos. 400kV ICT bays: 1 No. (TSP to implement complete dia. with the other 400kV bay to be utilized by EETFEL (Bulk consumer)) 220kV ICT bays: 1 No.
2.	Creation of New 220kV Bus Section at Jam Khambhaliya PS (Section 3) (with space for 2 nos. 220kV line bays: future in same GIS hall)	220kV Bus sectionaliser bay - 1 Set *(to be kept normally OPEN and may be closed based on system requirement)* 220kV BC – 1 No.
3.	Augmentation of transformation capacity at Jam Khambhaliya PS (GIS) by 2x500MVA, 400/220kV ICT (8th & 9th) terminated on New 220kV bus section-3	500MVA, 400/220kV ICTs: 2 Nos. 400kV ICT bays: NIL (bays being implemented under Jamnagar scheme, which is currently under tendering, with schedule of Apr/May-26) 220kV ICT bays: 2 Nos.
4.	Implementation of 220kV GIS line bays at Jam Khambhaliya PS for Kuvadia 220kV D/c line	220kV line bay – 2 No. (GIS)

- **Implementation time-frame***: 21 months*

7.0 Requirement of ICT Augmentation & Bus Reactor at Lakadia PS & Bhuj-II PS for renewable energy-based generation of more than 1000 MW (other than ATS)

It was informed that Para 4.4.5 of the Manual on Transmission Planning Criteria, 2023 published by CEA states as under:
"The 'N-1' criteria may not be applied to the immediate connectivity system of renewable generations with the ISTS/Intra-STS grid i.e. the line connecting the generation project switchyard to the grid and the step-up transformers at the grid station.

Provided that, 'N-1' criteria shall be applicable in case of renewable generation projects with storage, which are firm in nature and fully dispatchable.

Provided that, 'N-1' reliability criteria may be considered for ICTs at the ISTS / STU pooling stations for renewable energy based generation of more than 1000 MW after considering the capacity factor of renewable generating stations."

Bhuj-II PS

In view of receipt of applications for connectivity under GNA for 2734.5MW at Bhuj-II PS in Gujarat, the 1x500MVA, 400/220kV ICT (7th) was agreed in the 23rd CMETS-WR meeting. However, with receipt of additional application for 350MW in 24th CMETS-WR meeting, connectivity under GNA for 3084.5MW was received at Bhuj-II PS for which 1x500MVA, 400/220kV ICT (8th) & 1x1500MVA, 765/400kV ICT(4th) was required. Further, Installation of 1x330MVAr 765kV Bus Reactor (2nd) was also agreed at Bhuj-II PS with increasing RE penetration, in order to control voltages at the S/s. The BR has sensitivity of 2-3kV.

Now, in this meeting, additional applications for 240MW have been received taking the cumulative RE capacity to 3324.5MW. Considering the rapid pace of applications being received at Bhuj-II PS, it was proposed to install all remaining ICTs and 220kV bays at Bhuj-II PS in one go so as to minimize multiple implementation time-lines / co-ordination issues, etc.

In view of the same, the following scope was finally proposed at Bhuj-II PS:

Provision of ICT Augmentation & Bus Reactor at Bhuj-II PS

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	**Augmentation of transformation capacity at Bhuj-II PS (GIS) by 3x500MVA, 400/220kV ICT (7th, 8th & 9th)**	500MVA, 400/220kV ICTs: **3 No.** 400kV ICT bays: **3 No.** 220kV ICT bays: **3 No.**.

Sl. No.	Scope of the Transmission Scheme	Capacity /km
2.	**Augmentation of transformation capacity at Bhuj-II PS (GIS) by 1x1500MVA, 765/400kV ICT (4th)**	1500MVA, 765/400kV ICT: 1 No. 765kV ICT bay: 1 No. 400kV ICT bay: 1 No.
3.	**Installation of 1x330MVAr 765kV Bus Reactor (2nd) along-with associated bay**	330MVAr, 765kV Bus Reactor: 1 No. 765kV BR bay: 1 No.
4.	**Implementation of 220kV GIS line bay at Bhuj-II PS for Aditya Birla Renewables Subsidiary Limited (ABRSL) [2200000321: 362MW]**	220kV line bay – 1 No. (GIS) (Bus Sec-II)
5.	**Implementation of 220kV GIS line bay at Bhuj-II PS for ACME Cleantech Solutions Private Limited (ACSPL) [2200000382: 350MW]**	220kV line bay – 1 No. (GIS) (Bus Sec-II)
6.	**Implementation of 220kV GIS line bay at Bhuj-II PS for ACME Cleantech Solutions Private Limited (ACSPL) [2200000431: 50MW]**	220kV line bay – 1 No. (GIS) (Bus Sec-II)
7.	**Implementation of 220kV GIS line bay at Bhuj-II PS for Avaada Energy Pvt Ltd. (AEPL) [2200000444: 100MW]**	220kV line bay – 1 No. (GIS) (Bus Sec-II)
8.	**Implementation of 220kV GIS line bays at Bhuj-II PS for future applicants**	220kV line bay – 2 Nos. (GIS) (Bus Sec-II)

Implementation time-frame: 21 months

Lakadia PS

In the 24th CMETS-WR meeting, in view of receipt of applications for connectivity under GNA for 1700MW at Lakadia PS in Gujarat (incl. application discussed and agreed in the meeting), 1x500MVA, 400/220kV ICT (5th) was agreed.

Now, in the 25th CMETS-WR, additional applications for 542MW have been received taking the cumulative RE capacity to 2242MW for which 6th 400/220kV, 1x500MVA ICT shall also be required. Considering the rapid pace of applications being received at Lakadia PS, it was agreed to install all remaining ICTs and 220kV bays at Lakadia PS in one go so as to minimize multiple implementation time-lines / co-ordination issues, etc.

In view of the same, the following scope was agreed at Lakadia PS:

Augmentation of transformation capacity at Lakadia PS

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	**Creation of New 220kV Bus Section at Lakadia PS along with 220kV Sectionaliser arrangement between existing & New 220kV bus**	220kV Bus Sectionaliser - 1 set BC – 1 No. TBC – 1 No.
2.	**Augmentation of transformation capacity at Lakadia PS by 4x500MVA, 400/220kV ICTs (5th 6th, 7th & 8th) terminated on new 220kV Bus Section**	500MVA, 400/220kV ICTs: 4 No. 400kV ICT bays: 4 Nos. 220kV ICT bays: 4 No. (New Bus Section)
3.	**Implementation of 220kV line bay at Lakadia PS for Juniper Green Energy Private Limited (JGEPL) (Appl. No. 2200000376: 300MW)**	220kV line bay – 1 No. (New Bus Section)
4.	**Implementation of 220kV line bay at Lakadia PS for TEQ Green Power XVI Pvt. Ltd. (TGPXVIPL) (Appl. No. 2200000398: 76MW)**	220kV line bay – 1 No. (New Bus Section)
5.	**Implementation of 220kV line bay at Lakadia PS for Ganeko Solar Pvt. Ltd. (GSPL) (Appl. No. 2200000458: 290MW)**	220kV line bay – 1 No. (New Bus Section)

Sl. No.	Scope of the Transmission Scheme	Capacity /km
6.	**Implementation of 220kV line bays at Lakadia PS for future RE applicants**	220kV line bay – 4 Nos. (New Bus Section)
7.	**Installation of 1x330MVAr 765kV Bus Reactor (2nd) along-with associated bay**	330MVAr, 765kV Bus Reactor: 1 No. 765kV BR bay: 1 No.

Implementation time-frame: *15.02.2026 (subject to minimum schedule of 18 months) for Sl.1, 2, 4, 6 & 7, 30.06.2028 for Sl. 3 & 31.12.2026 for Sl.5*

Meeting ended with a vote of thanks.

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Flag-I: List of Participants

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33	Santosh P Narayan	Tata Power Renewable Energy Limited	Group Head Project Development	narayans@tatapower.com
34	Yogendra Kumar Chikane	Enel Green Power India Pvt Ltd	Senior Manager Business development	yogendra.chikane@enel.com
35	Ashok Singh	Reliance Industries Limited	Sr. VP	ashok3.singh@ril.com
36	Tushar Garg	TEQ Green Power XVI Private Limited	Deputy Manager	tushar.garg@o2power.in
37	Subir Kumar	ArcelorMittal Nippon Steel India Limited	General Manager	subir.kumar@amns.in
38	Lokendra Singh Ranawat	Kallam Transmission Limited (IndiGrid)	Head Regulatory	lokendra.ranawat@indigrid.com
39	R S Surani	GSECL	Superintending Engineer	sere2.gsecl@gebmail.com
40	M R Krishna Rao	Adani Power Ltd.	President	mr.krishnarao@adani.com

MS Teams Attendance Record

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deeppak kharre	deeppak.kharre@blupineenergy.com
Rohit	

Khavda-Bhuj Transmission Limited

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Dr.Rajesh Katyal DG NIWE	
Sachidanand AMNS	
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Vishal Modi (Guest)	

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Himanshu Gulati	
Aditya Das WRLDC (Guest)	
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Kanti Bhuva, CE (SLDC)	

Annexure-7

सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड
(पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्व में)
(भारत सरकार का उद्यम)

CENTRAL TRANSMISSION UTILITY OF INDIA LTD.
(A wholly owned subsidiary of Power Grid Corporation of India Limited)
(A Government of India Enterprise)

Ref. No.: C/CTU/AI/00/16th CCTP

16th February 2024

OFFICE MEMORANDUM

Sub: Inter-State Transmission Schemes (costing up to Rs.100 Cr.) to be taken up for implementation under Regulated Tariff Mechanism (RTM).

The undersigned is directed to inform that CTU has approved the implementation of the following ISTS costing less than or equal to Rs.100 Cr. in line with the MoP office order dated 28.10.2021 under the Regulated Tariff Mechanism (RTM) mode by the implementing agencies as indicated in the table below:

Sl. No.	Name of Transmission Scheme	Implementing Agency
Western Region		
1.	Augmentation of Transformation Capacity at 400/220kV Rajgarh (PG) S/s in MP by 400/220 kV, 1x500 MVA ICT (3rd)	Power Grid Corporation of India Ltd.
2.	Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV Bus Section-I)	Khavda Bhuj Transmission Ltd. (a subsidiary of Adani Energy Solutions Ltd.)
3.	Interconnection of RE developer's DTL at Bay no 416 of KPS-2 (400kV Bus Section-I)	KPS2 Transmission Ltd. (a subsidiary of Power Grid Corporation of India Ltd.)

The detailed scope of works for the above transmission schemes is given at **Annexure-I**.

The above transmission schemes are awarded to the Implementing Agency for its implementation under RTM mode. The implementing agency shall enter into a concession agreement with CTU for the implementation of the above-mentioned transmission schemes through the Regulated Tariff Mechanism (RTM).

This issues with the approval of Competent Authority.

Khavda-Bhuj Transmission Limited

(Partha Sarathi Das)
Sr. General Manager

Encl: as stated.

To:

1. **The Chairman & Managing Director** Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001	2. **KPS2 Transmission Ltd.** (a subsidiary of Power Grid Corporation of India Ltd.) Saudamini, Plot No. 2, Sector-29, Gurgaon – 122009.
3. **Shri Bhavesh Kundalia** Khavda Bhuj Transmission Ltd. (a subsidiary of Adani Energy Solutions Ltd.) Adani Corporate House, Shantigram, S.G. Highway, Ahmedabad – 382 421, Gujarat, India.	

Copy to:

1. **Shri Rakesh Goyal** Chief Engineer & Member Secretary (NCT) Central Electricity Authority Sewa Bhawan, R. K. Puram, New Delhi-110 066.	2. **Shri Om Kant Shukla** Director (Trans) Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110 001

Annexure-I

Western Region

1. Augmentation of Transformation Capacity at 400/220kV Rajgarh (PG) S/s in MP by 400/220 kV, 1x500 MVA ICT (3rd)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Augmentation of Transformation capacity at 400/220kV Rajgarh S/s by 1x500MVA ICT (3rd) (terminated on the sectionalized 220kV bus)	• 400/220kV, 1x500MVA ICT – 1 No. • 400kV ICT bay – 1 No. (AIS) • 220kV ICT bay – 1 No. (GIS) (on the sectionalized 220kV bus, which is presently under implementation by POWERGRID) • 220 kV GIS duct (m) – 300m. approx.	21 months from date of award to implementing agency.
2.	Implementation of 220kV GIS line bay at Rajgarh 400/220kV (PG) S/s (on extended bus) for RE Interconnection	• 220kV line bay – 1 No. (GIS) (on the sectionalized 220kV bus, which is presently under implementation by POWERGRID) • 220 kV GIS duct (m) – 150m approx.	31.12.2026
		Total Estimated Cost:	**₹ 71 Crore**

2. Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV Bus Section-I)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Implementation of additional line bay equipment including other miscellaneous works required for physical interconnection of Dedicated Transmission Line of RE Developer at bay no. 412 of KPS-1 (400kV Bus Section-1)	As required for completion of scope of the scheme.	*25.12.2025 (refer note no. a)*
		Total Estimated Cost:	**₹ 4.7 Crore**

Note:

a. Implementing agency shall match the Implementation Timeframe of the subject transmission scheme with commissioning schedule of Khavda Phase-III transmission system which is 25.12.2025 (i.e., 24 months from the date of SPV transfer which is 26.12.2023).

3. Interconnection of RE developer's DTL at Bay no 416 of KPS-2 (400kV Bus Section-I)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Implementation of additional line bay equipment including other miscellaneous works required for physical interconnection of Dedicated Transmission Line of RE Developer at bay no. 416 of KPS-2 (400kV Bus Section-1)	As required for completion of scope of the scheme.	28.03.2025 *(refer note no. a)*
		Total Estimated Cost:	**₹ 12.26 Crore**

Note:

a. Implementing agency shall match the Implementation Timeframe of the subject transmission scheme with commissioning schedule of Khavda Phase-II transmission system which is presently expected by 28.03.2025.

Khavda-Bhuj Transmission Limited

Annexure-8

Form-I

Application Form for Grant of Transmission licence

1. **Particulars of the Applicant**

SN	Particulars	Details
i.	Name of the Applicant	Khavda – Bhuj Transmission Ltd (KBTL)
ii.	Status	Public Limited Company
iii.	Address	C 105, Anand Niketan New Delhi 110021
iv.	Name, Designation & Address of the Contact Person	Shri Bhavesh Kundalia, Khavda – Bhuj Transmission Ltd. Adani House, Shantigram, 3rd Floor, South Wing, SG Highway, Ahmedabad - 382421
v.	Contact Telephone No	9099991282
vi.	Fax No	079-25556601
vii.	Email ID	bhavesh.kundalia@adani.com
viii.	Place of Incorporation/ Registration	New Delhi
ix.	Year of Incorporation/ Registration	2021
x.	Following documents are to be enclosed	
	a) Certificate of Registration	Annexure 9
	b) Copy of Board resolution	Annexure 11

2. **Particulars of the Project for which licence is being sought:**

KBTL has been granted licence no. 73/Transmission/2022/CERC by Hon'ble Commission. However, Centra Transmission Utility of India Limited (CTU) has approved implementation of Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part E1 and Interconnection of RE developer's DTL at Bay no 412 of KPS-1 (400kV bus section-1) on Regulated Tariff Mechanism (RTM). Hence, KBTL has sought Grant of licence for the following:

a) Transmission Lines:

S No	Name (end-points Location)	Voltage Class (kV)	Length (km)	Type (S/C or D/C)
-	-	-	-	-

b) Sub-stations:

Khavda-Bhuj Transmission Limited

S No	Name (Location)	Voltage Level (s) (kV)	Transformer (Nos. and MVA capacity)	Reactive/ Capacitive compensation (device with MVAR Capacity)	No. of bays
1	Augmentation of transformation capacity at KPS1 (GIS) by 1x1500 MVA, 765/400 kV ICT (8th) on bus section-I	765/400 kV	1 x 1500	1500 MVA, 765/400 kV ICT – 1 No.	765 kV bays – 2 Nos. on bus Section-I (including 1 No bay for Dia completion) 400 kV bays – 2 Nos. on bus section-I (including 1 No bay for Dia completion)
2	Implementation of additional line bay equipment including other miscellaneous works	400 kV			400 kV bay – 1 No on 400 kV Bus Section -1

c) Commissioning Schedule:

- SCOD for Sr. No. 1 is 10.07.2025.
- SCOD for Sr. No. 2 is 25.12.2025.

d) Identified Long-Term transmission customers of the Project:

1. Adani Renewable Energy Holding Four Limited

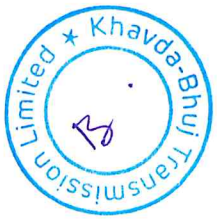
e) Any other relevant information: Nil

3. Levelised transmission charges in case of project selected through the transparent process of competitive bidding and estimated completion cost of the project in other cases:-.

4. In case applicant has been selected in accordance with the guidelines for competitive bidding, enclose:

(a) Recommendation of selection by the Empowered Committee:- Not Applicable
(b) Evaluation report made public by the Bid Process Coordinator:- Not applicable

5. List of documents enclosed:



Name of the Document

a) Certificate of Registration: Annexure 9
b) MoA & AoA: Annexure 10
c) Copy of Board Resolution: Annexure 11

Bundela

(Signature of the Applicant)

Khavda-Bhuj Transmission Limited

Dated: 11.03.2024.
Place: Ahmedabad.

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 KHAVDA-BHUJ TRANSMISSION LIMITED is incorporated on this Seventeenth day of May Two thousand twenty-one under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares.

The Corporate Identity Number of the company is U40108DL2021GOI381217.

The Permanent Account Number (PAN) of the company is **AAICK7951K** *

The Tax Deduction and Collection Account Number (TAN) of the company is **DELK22825F** *

Given under my hand at Manesar this Eighteenth day of May Two thousand twenty-one .

DS MINISTRY OF CORPORATE AFFAIRS 6

Digital Signature Certificate
Mr Parvinder Singh
DEPUTY REGISTRAR OF COMPANIES
For and on behalf of the Jurisdictional Registrar of Companies
Registrar of Companies
Central Registration Centre

Disclaimer: This certificate only evidences incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a license nor permission to conduct business or solicit deposits or funds from public. Permission of sector regulator is necessary wherever required. Registration status and other details of the company can be verified on www.mca.gov.in

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

KHAVDA-BHUJ TRANSMISSION LIMITED
Urjanidhi, First Floor, 1, Barakhamba, Lane, Connaught Place,, DELHI,
Central Delhi, Delhi, India, 110001

* as issued by the Income Tax Department

Khavda-Bhuj Transmission Limited

[Pursuant to Schedule I (see Sections 4 and 5) to the Companies Act, 2013)] FORM NO. INC-34

SPICe + AOA

(e-Articles of Association)

*Table F as notified under schedule I of the companies Act, 2013 is applicable to the company

KHAVDA-BHUJ TRANSMISSION LIMITED

A COMPANY LIMITED BY SHARES

Check if not applicable	Check if altered	Article No	Description
			Interpretation
☐	☒		(1) In the interpretation of these Articles, unless repugnant to the subject or context:- The Act means The Companies Act, 2013 as amended from time to time and includes any statutory modification or re-enactment thereof for the time being in force. Articles means the articles of association of a company as originally framed or as altered from time to time or applied in pursuance of any previous company law or of this Act. Auditor(s) mean and include persons appointed as such for the time being by the Comptroller & Auditor General of India. Board or Board of Directors, in relation to a company, means the collective body of the directors of the company. Books of account includes records maintained in respect of: (i) all sums of money received and expended by a company and matters in relation to which the receipts and expenditure take place; (ii) all sales and purchases of goods and services by the company; (iii) the assets and liabilities of the company; and (iv) the items of cost as may be prescribed under section 148 in the case of a company which belongs to any class of companies specified under that section. Capital means the share capital for the time being raised or authorized to be raised for the purpose of the Company. Company Shall means KHAVDA-BHUJ TRANSMISSION LIMITED Debenture includes debenture stock, bonds or any other instrument of a company evidencing a debt, whether constituting a charge on the assets of the company or not. Director means a director appointed to the Board of a company under Section 2(34) of the Act. Dividend includes any interim dividend. Financial Institution includes a scheduled bank, and any other financial institution defined or notified under the Reserve Bank of India Act, 1934. Gender Words importing the masculine gender also include the feminine gender. Generation Company shall mean any entity engaged in the business of generation of electricity. In writing and Written include printing, lithography and other modes of representing or reproducing words in a

visible form.

Key managerial personnel, in relation to a company, means
(i) the Chief Executive Officer or the managing director or the manager;
(ii) the company secretary;
(iii) the whole-time director;
(iv) the Chief Financial Officer; and
(v) such other officer as may be prescribed.

Meeting means Annual General Meeting or Extraordinary General Meeting of Members duly called and constituted including an adjourned meeting. In the context of Board of Directors, it shall mean the meeting of the Directors including an adjourned meeting.

Member, in relation to a company, means
(i) the subscriber to the memorandum of the company who shall be deemed to have agreed to become member of the company, and on its registration, shall be entered as member in its register of members;

(ii) every other person who agrees in writing to become a member of the company and whose name is entered in the register of members of the company;

(iii) every person holding shares of the company and whose name is entered as a beneficial owner in the records of a depository.

Month means a calendar month.

Office means the Registered Office of the company for the time being.

Paid-up share capital or share capital paid-up means such aggregate amount of money credited as paid-up as is equivalent to the amount received as paid up in respect of shares issued and also includes any amount credited as paid-up in respect of shares of the company, but does not include any other amount received in respect of such shares, by whatever name called;

Persons include Corporations and firms as well as individuals.

Power / Transmission Utility shall mean any entity engaged in the business of power / transmission.

Proxy includes Attorney duly constituted under a valid Power of Attorney.

Project-In-Charge, a Director of the Company designated as Project In-charge for administrating day to day activities of the Company.

"Public Company" means a company which is not a private company and
b. has a minimum paid-up share capital as may be prescribed

Provided that a company which is a subsidiary of a company, not being a private company, shall be deemed to be public company for the purposes of this Act even where such subsidiary company continues to be a private company in its articles ;

Registrar means a Registrar, an Additional Registrar, a Joint
Registrar, a Deputy Registrar or an Assistant Registrar, having the duty of registering companies and discharging various functions under this Act.

Register of Members means the Register of Members to be kept pursuant to the Act.

Section 2(76) of the Act describes related party, with reference to a company, which means
(i) a director or his relative;
(ii) a key managerial personnel or his relative;
(iii) a firm, in which a director, manager or his relative is a partner;
(iv) a private company in which a director or manager is a member or director;
(v) a public company in which a director or manager is a director or holds along with his relatives, more than two per cent. of its paid-up share capital;
(vi) anybody corporate whose Board of Directors, managing director or manager is accustomed to act in accordance with the advice, directions or instructions of a director or manager;
(vii) any person on whose advice, directions or instructions a director or manager is accustomed to act:
Provided that nothing in sub-clauses (vi) and (vii) shall apply to the advice, directions or instructions given in a professional capacity;

			(viii) any company which is (A) a holding, subsidiary or an associate company of such company; or (B) a subsidiary of a holding company to which it is also a subsidiary; (ix) such other person as may be prescribed. Seal means the common seal of the company for the time being. Securities and Exchange Board means the Securities and Exchange Board of India established under section 3 of the Securities & Exchange Board of India Act, 1992. Securities means the securities as defined in clause (h) of section 2 of the Securities Contracts (Regulation) Act, 1956. Share means a share in the share capital of a company and includes stock. Share Capital means the total equity share capital of the Company agreed to be issued and called the Authorized Capital of the Company, as mentioned in the Memorandum of Association of the Company. Singular Number Words importing the singular number include, where the context admits the plural number and vice-versa. State Electricity Board means the Electricity Board or Vidyut Board or any other body by whatever name called, set up by the State Governments under Electricity (Supply) Act 1948, as amended, which expression shall include its successors, administrators, authorized representatives and permitted assigns. Transmission Company shall mean any entity engaged in the business of transmission of electricity. Year means English calendar year and Financial Year shall have the meaning assigned thereto by Section 2(41) of the Act. Unless the context otherwise requires, words or expressions contained in these regulations shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these regulations become binding on the company. Marginal Notes are for ease of reference only and shall not affect the construction and interpretation of these Articles. Other words or expressions contained in these Articles shall bear the same meaning as are assigned to them in the Act or any statutory modifications thereof. Table F not to Apply The regulations contained in Table F in the First Schedule to the Companies Act, 2013, shall not apply except to the extent that the same are repeated or contained or expressly made applicable by these Articles or by the Act but the regulations for the management of the Company and for the observance of the members thereof and their representatives shall, subject to any exercise of the statutory powers of the Company with reference to the repeal or alteration of, or addition to its regulations by Special Resolution, as prescribed by the said Companies Act, 2013 be such as contained in these Articles. Business Purpose The Company shall be engaged in the business of Transmission of Electricity, including construction, operation, maintenance and other related activities.
			Share capital and variation of rights
☐	☒	II	1.1 Share Capital / Increase of capital by the Company and how carried into effect The Authorized Share Capital of the Company is as mentioned in clause V of the Memorandum of Association of the Company. The Company in General Meeting may from time to time, by resolution, increase its authorized share capital by creation of new shares, such increase to be of such aggregate amount and to be divided into shares of such respective amounts as may be determined by the General Meeting subject to the provisions of the Act. 1.2 New Capital same as existing capital Any capital raised by the creation of new shares shall be considered as part of the original capital, and shall be subject to the same provisions herein contained, with reference to the payment of calls and installments, forfeiture, lien, surrender, transfer and transmission, voting and otherwise.

		1	1.3 Reduction of Capital The Company may, from time to time, by special resolution reduce its capital, which may be paid off either with or without extinguishing or reducing liability on shares, which is in excess of the wants of the company or canceling such share capital which has been lost or is unrepresented by available assets. 1.4 Subdivision and consolidation of shares The Company in general meeting may, from time to time, sub-divide or consolidate its shares or any of them and exercise any of the other powers conferred by Section 61 of the Act and shall file with the Registrar such notice of exercise of any such powers as may be required by the Act.
☐	☒	2	2.1 Register and Index of Members/Beneficial owners The Company shall cause to be kept a Register and also an Index of Members and Debenture-holders in accordance with Sections 88 of the Act. Further, as permissible under Section 88 of the Act, the register and Index of beneficial owners maintained by a Depository shall be deemed to be the corresponding Register and Index for the purpose of this Act. 2.2 Foreign Register of members The Company shall be entitled to keep in any country outside India a Foreign Register of members resident in that country, subject to compliance with the provisions of Section 88 of the Act. 2.3 Shares to be numbered distinctively The shares in the capital held otherwise than in the depository mode shall be numbered progressively in sequence and given distinctive number, Except and in the manner herein mentioned, no share shall be forfeited or surrendered and shall continue to bear the number which it had originally borne. 2.4 Share Application Money The Company shall ensure that the share application money paid is held by it in an account with a Scheduled Commercial Bank (in the name of the Company)
☐	☒	3	3. Further Issue of Capital (a)Where at any time the Company wishes to raise its subscribed share capital by issue of further shares, it shall first offer such shares to its existing shareholders in proportion to their existing shareholdings on the date of such issue. Such offer to the existing shareholders shall be in accordance with the provisions of Section 62of the Act. (b) The Company shall subject to applicable provisions of the Act and Articles of Association, make uniform calls from time to time upon all the Shareholders in respect of the moneys remaining unpaid on the issued share capital within 30 days or such time, as the Board may deem fit and appropriate.
☐	☒	4	4. Shares under control of Directors Subject to the provisions of these Articles and of the Act, the shares including any shares forming part of any increased capital of the Company shall be under the control of the Directors, who may allot or otherwise dispose off the shares to such persons in such proportion, on such terms and conditions and at such times as the Directors may think fit and subject to the sanction of the Company in General Meeting, subject to the provisions of Sections 52 and section 54 of the Act at a premium or par and such option being exercisable for such time and for such consideration as the Directors think fit. The Board shall cause to be filed the returns as to allotment provided for in Section 39(4) of the Act.
☐	☒		5.1 Issue of shares for consideration other than cash Subject to these Articles and the provisions of the Act, if any, the Board may issue and allot shares in the capital of the Company as payment or in consideration or as part payment or in part consideration of the purchase or acquisition of any property or for services, rendered to the Company in the conduct of its business and shares which may be so issued or allotted shall be credited or deemed to be credited as fully paid up or partly paid up shares. 5.2 Power of Company to Issue Shares

		5	The Company in General Meeting may subject to the provisions of Section 42 & 62 of the Act provide that any shares (whether forming part of the original capital or of any increased capital of the Company) shall be offered to such persons (whether a Member or not), in such proportion and on such terms and conditions of the Act) at a premium or at par or at a discount, as such General Meeting shall determine and with full power to give any person (whether a Member or not) the option to call for or be allotted shares of any class of the Company either subject to compliance with the provisions of Sections 52 and 54 of the Act at a premium or at par or at discount, such option being exercisable at such times and for such consideration as may be directed by such General Meeting or the Company in General Meeting may make any other provisions whatsoever for the issue, allotment or disposal of any shares.
☐	☒	6	6.1 Acceptance of shares Any person applying for shares in the Company followed by an allotment of any shares and subscribers to the Memorandum, shall be a shareholder within the meaning of these Articles, and every person whose name is on the Register of Members shall, for the purposes of these Articles, be a Member of the Company. 6.2 Deposit & call to be a debt payable Immediately The Money, (if any), which the Board shall, on the application for allotment of any shares being made by them, require or direct to be paid by way of deposit, call or otherwise, in respect of any shares allotted by them, shall immediately on the insertion of the name of the allottee in the Register of Members as the name of the holder of such shares, become a debt due to and recoverable by the Company from the allottee thereof, and shall be paid by him accordingly. 6.3 Liability of Members Every Member, or his heirs, executors or administrators, shall pay to the Company the portion of the capital and premium, if any, represented by or payable on, his share or shares which may, for the time being, remain unpaid thereon, in such amounts, at such time or times and in such manner as the Board shall, from time to time, in accordance with the Company?s regulations, require or fix for the payment thereof.
☐	☒		7.1 Share Certificates A certificate, issued under the common seal of the company, specifying the shares held by any person, shall be prima facie evidence of the title of the person to such shares. (a) Every Member or allottee of shares who is holding such shares in the physical form shall be entitled, without payment, to receive certificate specifying the name of the person in whose favour it is issued, the shares to which it relates and the amount paid-up thereof. Such certificates shall be issued only in pursuance of a resolution passed by the Board and on surrender to the Company of the letter of allotment or the fractional coupons of requisite value, save in case of issues against letters of acceptance or of renunciation or in cases of issue of bonus shares. Every such certificate shall be issued under the seal of the Company, which shall be affixed in the presence of two Directors and the Secretary or some other person appointed by the Board for the purpose, and the two directors and the Secretary or other persons as authorized by the Board shall sign the share certificate. Provided, if the composition of the Board permits of it, at least one of the aforesaid two directors shall be a person other than a Managing or a Whole Time Director. Particulars of every share certificate issued shall be entered in the Register of Members against the name of the person, to whom it has been issued, indicating the date of issue. For issue of any further duplicate certificate, the Board shall be entitled to charge such amount which shall not exceed fifty Rupees per Certificate. (b) A Director may sign a share certificate by affixing his signature thereon by means of any machine, equipment or other mechanical means such as engraving in metal or lithography, but not by means of a rubber stamp. PROVIDED that the Director shall be personally responsible for the safe custody of such machine equipment or other material used for the purpose. 7.2 Renewal of Share Certificates (a) No certificate of any share or shares shall be issued either in exchange for those which are sub-divided or consolidated or in replacement of those which are defaced, mutilated, torn or old, decrepit, destroyed or where the pages on the reverse for recording transfers have been duly utilized, unless the certificate in lieu of which it is issued is surrendered to the Company and for issuing such share certificate the company may charge such fee as the Board thinks fit, not exceeding twenty rupees per certificate. (b) When a new share certificate has been issued in pursuance of clause (a) of this Article, it shall state on the face of it and against the stub or counterfoil to the effect that it is Issued in lieu of share certificate No

		7	_____ sub-divided/replaced/on consolidation. (c) If a share certificate is lost or destroyed a new certificate in lieu thereof shall be issued only with the prior consent of the Board and on such reasonable terms, such as furnishing supporting evidence and indemnity and the payment of out-of-pocket expenses incurred by the Company in investigating evidence produced, as the Board thinks fit. (d) When a new share certificate has been issued in pursuance of clause (c) of this Article, it shall state on the face of it and against the stub or counterfoil to the effect that it is duplicate issued in lieu of share certificate No._____ and the word duplicate shall be stamped or printed prominently on the face of the share certificate. (e) Where a new share certificate has been issued in pursuance of clause (a) and/ or clause (c) of this Article, particulars of every such share certificate shall be entered in a Register of Renewed and Duplicate Share Certificates indicating against the name(s) of the person(s) to whom the certificate is issued, the number and date of issue of the share certificate in lieu of which the new certificate is issued and the necessary changes indicated in the Register of Members by suitable cross reference in the Remarks column. (f) All blank forms to be used for issue of share certificates shall be printed and the printing shall be done only on the authority of a resolution of the Board and the blank forms shall be consecutively machine-numbered and the forms and the blocks, engravings, facsimiles relating to the printing of such forms shall be kept in the custody of the Secretary or of such other person as the Board may appoint for the purpose; and the Secretary or the other person aforesaid shall be responsible for rendering an account of these forms to the Board. (g) The Committee of the Board, Company Secretary of the Company or a Director specifically authorized by the Board for such purpose shall be responsible for the maintenance, preservation and safe custody of all books and documents relating to the issue of share certificates including the blank forms of share certificates referred to in clause (f). (h) All books referred to in clause (g) shall be preserved in good order for not less than thirty years and in disputed cases shall be preserved permanently. 7.3 Joint holders (a) Where two or more persons are registered as the holders of any share, they shall be treated as a single shareholder and shall be deemed to hold the same as joint holders with benefits of survivorship subject to the following and other provisions contained in these Articles. (b) The Company shall be entitled to decline to register more than four persons as the holders of any share. (c) The Joint holders of any share shall be liable, severally as well as jointly, for and in respect of all calls and other payments which ought to be made in respect of such shares. (d) On the death of any such joint holder, the survivor or survivors shall be the only person or persons recognized by the Company as having any title to the share, but the Directors may require such evidence of death as they may deem fit and nothing herein contained shall be taken to release the estate of the deceased joint holder from any liability on shares held by him jointly with any other person. (e) Delivery of share certificate to any one of such joint holders shall be deemed to be delivery to all of them and any one of such joint holders may give effectual discharge and receipts for any dividends or other moneys payable in respect of such shares and/or in respect of any other obligation of the Company towards them. (f) Only the person whose name stands in the Register of Members as the first of the joint holders of any shares shall be entitled to delivery of the certificate relating to such share or to receive notices from the Company, and any notice given to such person shall be deemed proper notice to all joint holders. (g) Any one of two or more joint holders may vote at any meeting either personally or by proxy in respect of such share as if he were solely entitled thereto, and if more than one of such joint holders be present at any meeting personally or by proxy, the holder whose name stands first or higher (as the case may be) on the Register of Members in respect of such share shall alone be entitled to vote in respect thereof. PROVIDED always that a member present at any meeting personally shall be entitled to vote in preference to a person present by proxy although the name of such person present by proxy stands first on the Register of Members in respect of such shares.

☐	☐	8	Subject to the provisions of section 55, any preference shares may, with the sanction of an ordinary resolution, be issued on the terms that they are to be redeemed on such terms and in such manner as the company before the issue of the shares may, by special resolution, determine.
			Lien
☐	☒	9	9. Company to have lien on shares The Company shall have a first and paramount lien upon all shares (other than fully paid up shares) registered in the name of each member (whether solely or jointly with others) and upon the sale proceeds thereof, for all moneys (whether presently payable or not) called or payable at a fixed time in respect of all such shares (not being fully paid up) for all moneys presently payable by him or his estate to the Company. Any such lien shall extend to all dividends payable and bonuses declared from time to time declared in respect of such shares.
☐	☒	10	10. Enforcing lien by sale For the purpose of enforcing such lien, the Board may sell the shares subject thereto in such manner as they shall think fit, and for that purpose it may cause to be issued a duplicate certificate in respect of such shares and may authorize one of their Directors to execute a transfer thereof on behalf of and in the name of the Board. No sale shall be made until notice period for making call as aforesaid have expired and until notice in writing of the intention to sell shall have been made known to the shareholder for default in payment and default has been made by him in the payment of money called in respect of such shares for thirty days after the date of such notice. Upon issue of a duplicate certificate or certificates in lieu of the original share, the certificate or certificates originally issued shall stand cancelled and become null and void and the same shall have no effect.
☒	☐	11	
☐	☒	12	12. Application of proceeds of sale The net proceeds of any such sale shall be received by the Company and applied in or towards payment of such part of the amount as is presently payable and the residue, if any, shall (subject to a like lien for sums not presently payable as existed upon the shares before sale) be paid to the person entitled to the shares,at the date of the sale.
			Calls on shares
☐	☒	13	13.1 Directors may make calls The Board may, from time to time, subject to the terms on which any shares may have been issued and subject to the conditions of allotment, by a resolution passed at a meeting of the Board (and not by resolution by circulation) make such call as it thinks fit upon the Members in respect of all moneys unpaid on the shares held by them respectively and each member shall pay the amount of every call so made on him to the person or persons and at the times and places appointed by the board. A call may be made payable by installments. 13.2 Notice of calls Not less than thirty days? notice in writing of any call shall be given by the Company specifying the time and place of payment, and the person or persons to whom such call shall be paid. 13.3 When call made A call shall be deemed to have been made at the time when the resolution of the Board authorizing such call was passed at a meeting of the Board and demand notice is issued. 13.4 Calls may be revoked or postponed A call may be revoked or postponed at the discretion of the Board.
☐	☒	14	14. Directors may extend time The Board may, from time to time at its discretion, extend the time fixed for the payment of any call, and may extend such time as to all or any of the Members for reasons which the Board may consider satisfactory, but no Member shall be entitled to such extension save as a matter of grace.

☒	☐	15	
☐	☒	16	16. Calls to carry interest If any Member fails to pay any call due from him on the day appointed for payment thereof, or any such extension thereof as aforesaid, he shall be liable to pay interest on the same from the day appointed for the payment thereof to the time of actual payment at rate not exceeding 10 per cent per annum as maybe decided by the Board, but the Board may in its absolutediscretion and in special circumstances waive or reduce the levy of interest as deemed appropriate.
☐	☒	17	17. Sums deemed to be call Any sum, which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall, for the purposes of these Articles be deemed to be a call duly made and payable on the date on which by the terms of issue the same becomes payable, and in case of non-payment all the relevant provisions of these Articles as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.
☐	☒	18	18.1 Partial payment not to preclude Forfeiture Neither the receipt by the Company of a portion of any money which shall from time to time be due from any Member to the Company in respect of his shares, either by way of principal or interest nor any indulgence granted by the Company in respect of the payment of any such money, shall preclude the Company from thereafter proceeding to enforce a forfeiture of such shares as hereinafter provided. 18.2 Payment in anticipation of calls may carry interest The Board may, if it thinks fit, agree to and in anticipation receive from any Member willing to advance the same, all of calls money or any part of the amounts of his respective shares beyond the sums actually called up, and upon the moneys so paid in advance, or upon so much thereof, from time to time, and at any time thereafter as exceeds the amount of the calls then made upon and due in respect of the shares on account of which such advances are made, the Board may pay or allow interest, at such rate as the Member paying the sum in advance and the Board agree upon. The Board may agree to repay at any time any amount so advanced or may at any time repay the same upon giving to the Member three months? notice in writing. PROVIDED that moneys paid in advance of calls on any shares may carry interest but shall not confer a right to dividend or to participate in profits. (b) No Member paying any such sum in advance shall be entitled to voting rights in respect of the moneys so paid by him until the same would but for such payment become presently payable.
			Transfer of shares
☐	☒	19	19.1 Register of Transfers The Company shall maintain a Register of Transfers and therein shall be fairly and distinctively enter the particulars of every transfer or transmission of any share in the physical form. 19.2 Form of transfer The instrument of transfer shall be in writing and in such form as prescribed under the Act. All the provisions of Section 56 of the Act shall be duly complied with in respect of all transfers and of the registration thereof. The Company shall not charge any fee for registration of a transfer of shares or debentures. 19.3 Instrument of Transfer to be completed and presented to the Company The Instrument of Transfer duly stamped and executed by the transferor and the transferee shall be delivered to the Company in accordance with the provisions of the Act. The instrument of transfer shall be accompanied by the Share Certificate or such evidences the Board may require to prove the title of transferor and his right to transfer the shares and every registered Instrument of Transfer shall remain in the custody of the Company until destroyed by order of the Board. Any instrument of transfer which the Directors may decline to register shall be returned to the person depositing the same. 19.4 Transferor deemed to be holder

			The transferor shall be deemed to be the holder of such shares until the name of the transferee shall have entered in the Register of Members in respect thereof. Before the registration of a transfer, the certificate or certificates of the shares must be delivered to the Company along with Transfer Deed. 19.5 No transfer to insolvent etc. No transfer shall be made to a person of unsound mind or to an insolvent.
☐	☒	20	20. Closure of Register of Members/Debenture holders The Directors shall have power, on giving not less than seven days? previous notice as required by Section 91 of the Act, to close the Register of Transfer, Register of Members or Register of Debenture holders or the register of other security holders of the Company for any period or periods not exceeding in the aggregate forty-five days in each year (but not exceeding thirty days at any one time) as they may determine.
☐	☒	21	21. Nomination by shareholder Every share-holder or debenture holder may at any time, nominate in the prescribed manner, a person to whom his shares or debenture shall vest in the event of his death, as provided in Section 72 of the Act.
☐	☒	22	22. Title to shares of deceased holder In the event there is no nomination, the executors or administrators of a deceased Member or the holder of a Succession Certificate in respect of the shares of a deceased Member (not being one of two or more joint holders) shall be the only persons whom the Company will be bound to recognize as having any title to the shares registered in the name of such Member, and the Company shall not be bound to recognize such executors or administrators or holders unless such executors, administrators or holders shall have first obtained probate or Letters of Administration or Succession Certificate as the case may be, from a duly constituted Court in India. PROVIDED that the Directors may, at their absolute discretion dispense with production of Probate, Letters of Administration or Succession Certificate upon such terms as to indemnity or otherwise as they think fit and may enter the name of the person who claims to be absolutely entitled to the shares standing in the name of a deceased Member, as a Member
			Transmission of shares
☐	☒	23	23.1 Transmission of Shares Subject to the provisions of the Act, any person becoming entitled to any share in consequence of the death, lunacy or insolvency of any Member or by any lawful means other than by a transfer in accordance with these Articles, may, with the consent of the Directors (which they shall be under no obligation to give) and upon producing such evidence that he sustains the character in respect of which he proposes to act under this. Article or of his title as the Directors may require, and upon such indemnity as the Directors may require, either be registered as a Member in respect of such shares or elect to have some person nominated by him and approved by the Directors registered as a Member in respect of such shares. PROVIDED that if such persons shall elect to have his nominee registered, he shall testify his election by executing in favor of his nominee an instrument of transfer in accordance with these Articles, and until he does so he shall not be freed from any liability in respect of such shares.
☐	☒	24	24. Right of Board to decline or suspend registration (i) Any person becoming entitled to a share in consequence of the death or insolvency of a member may, upon such evidence being produced as may from time to time properly be required by the Board and subject as hereinafter provided, elect, either- (a) to be registered himself as holder of the share; or (b) to make such transfer of the share as the deceased or insolvent member could have made. (ii) The Board shall, in either case, have the same right to decline or suspend registration as it would have had, if the deceased or insolvent member had transferred the share before his death or insolvency.
☐	☒		25. The Company not liable for disregard of notice prohibiting registration of transfer The Company shall incur no liability or responsibility whatever in consequence of its registering or giving effect

		25	to any transfer of shares made or purported to be made by any apparent legal owner thereof (as shown or appearing in register of Members) to the prejudice of persons having or claiming any equitable right, title or interest to or in the same shares, notwithstanding that the Company may have had notice of such equitable right, title or interest or notice prohibiting registration of such transfer, and may have entered such notice or referred to it in any book, or attended or given effect to any notice which may have been given to it of any equitable right, title or interest or be under any liability whatsoever for refusing or neglecting so to do though it may have been entered or referred to in some book of the Company, but the Company shall nevertheless be at liberty to regard and attend to any such notice and give effect thereto, if the Directors shall so think fit.
☐	☒	26	26. Rights of successors A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would have been entitled if he were the registered holder of the shares, except that he shall not, before being registered as a Member in respect of the shares, be entitled to exercise any right conferred by membership in relation to meetings of the Company. PROVIDED that the Directors shall, at any time, give notice requiring any such person to elect to be registered himself or to transfer the shares, and if the notice is not complied within ninety days from the date of issue of the notice, the Directors may thereafter withhold payment of all dividends, bonuses or other moneys payable in respect of the shares until the requirements of the notice have been complied with.
			Forfeiture of shares
☐	☒	27	27.1 If money payable on shares not paid notice to be given to members If any Member fails to pay any call, or installment of a call, on or before the day appointed for the payment of the same or any such extension thereof as aforesaid, the Board may, at any time thereafter, during such time as any part of the call or installment remains unpaid, serve a notice on him requiring him to pay the same together with any interest which may have accrued and all expenses that may have been incurred by the Company by reason of such non-payment. 27.2 Contents of Notice The notice shall name a further day (not being less than fourteen days from the date of the service of notice) and a place or places on and at which such call or installment and such interest thereon at such rate as the Directors shall determine from the day on which such call or installment ought to have been paid and expenses as aforesaid are to be paid. The notice shall also state that in the event of the non-payment on or before the day, at or before the time and at the place appointed, the shares in respect of which the call was made or installment is payable, shall be liable to be forfeited.
☐	☒	28	28. In default of payment, shares to be Forfeited If the requirement of any such notice as aforesaid are not complied with, every or any share in respect of which such notice has been given may, at any time thereafter, but before payment of all calls or installments, interest and expenses due in respect thereof, be forfeited by a resolution of the Board to that effect. Such forfeiture shall include all dividends declared or any other moneys payable in respect of the aforesaid share and not actually paid before the forfeiture.In default of payment, shares to be Forfeited
☐	☒	29	29. Notice of forfeiture to a Member When any share shall have been so forfeited, notice of the forfeiture shall be given to the Member in whose name it stood immediately prior to the forfeiture, and an entry of the forfeiture, with the date thereof, shall forthwith be made in the Register of Members, but no forfeiture shall be in any manner invalid by any omission or neglect to make any such entry as aforesaid in the Register.
☐	☒	30	30. Forfeited share to be property of the Company and may be sold etc. Any share so forfeited shall be deemed to be the property of the Company, and may be sold, re-allotted, or otherwise disposed of, either to the original holder thereof or to any person, upon such terms and in such manner as the Board shall think fit.
☐	☒	31	31. Member still liable to pay calls owing at the time of forfeiture and interest Any members whose shares have been forfeited shall notwithstanding the forfeiture be liable to pay and shall forthwith pay to the Company, on demand, all calls, installment, interest and expenses owing upon or in respect of such shares at the time of the forfeiture together with interest accrued thereon at the time of the forfeiture at such rate as the Board may determine, and the Board may enforce the payment thereof, if it thinks fit.

☐	☒	32	32.1 Effect of forfeiture The forfeiture of a share shall involve extinction, at the time of the forfeiture, of all interest in and all claims and demands against the Company, in respect of the share and all other rights incidental to the share, except only such of those rights as by these Articles are expressly saved. 32.2 Evidence of forfeiture A declaration in writing by Chairman or Managing Director of the Company or by any person duly authorised in this regard that certain shares in the Company have been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the shares and such declaration, and the receipt of the Company for the consideration, if any, given for the shares on the sale or disposition thereof shall constitute a good title to such shares and the person to whom the shares are sold shall be registered as the holder of such shares and shall not be bound to see as to the application of the purchase money nor shall his title to such shares be affected by any irregularity or invalidity in the proceedings in reference to such forfeiture, sale or disposition. 32.3 Validity of sale under Articles of forfeited shares Upon any sale after forfeiture or for enforcing a lien in purported exercise of the powers herein before given, the board may appoint some person to execute an instrument of transfer of the shares sold and cause the purchaser?s name to be entered in the Register of Members in respect of the shares sold, and the purchaser shall not be bound to see the regularity of the proceedings, or to the application of the purchase money, and after his name has been entered in the Register in respect of such shares the validity of the sale shall not be impeached by any person and the remedy of any person aggrieved by the sale shall be in damages only and against the Company exclusively. 32.4 Cancellation of Share Certificates in respect of forfeited shares Upon any sale, re-allotment or other disposal under the provisions of the preceding Articles, the certificate or certificates originally issued in respect of the relative shares shall (unless the same shall on demand by the Company have been (previously) surrendered to it by the defaulting member) stand cancelled and become null and void and of no effect, and the Directors shall be entitled to issue a duplicate certificate or certificates in respect of the said shares to the person or persons entitled thereto.
☐	☒	33	33. Power to annul forfeiture The Board may at any time before any share so forfeited, shall have been sold, re-allotted or otherwise disposed of, annul the forfeiture thereof upon such terms and conditions as it thinks fit.
			Alteration of capital
☒	☐	34	
☐	☒	35	The company may, from time to time, by ordinary resolution increase the share capital by such sum, to be divided into shares of such amount, as may be specified in the resolution. 35. Subject to the provisions of section 61, the company may, by ordinary resolution, the Company may from time to time:-- (a) consolidate and divide all or any of its share capital into shares of larger amount than its existing shares; (b) convert all or any of its fully paid-up shares into stock, and reconvert that stock into fully paid-up shares of any denomination; (c) Sub-divide its shares, or any of them into shares of smaller amount than is fixed by the memorandum, so, however, that in the sub-division the proportion between the amount paid and the amount, if any, unpaid on each reduced share shall be the same as it was in the case of the share from which the reduced share is derived.; (d) Cancel any shares which as the date of the passing of the resolution, have not been taken or agreed to be taken by any person and diminish the amount of its share capital by the amount of the shares so cancelled. The resolution whereby any share is sub-divided may determine that, as between the holders of the shares resulting from such sub-division, one or more of such shares shall have some preference or special advantage as regards dividend, capital, voting or otherwise over or as compared with the others or other, subject, to the

			provisions of the Act. Subject to the provisions of Sections 66 of the Act, the Board may accept from any member the surrender on such terms and conditions as shall be agreed of all or any of his shares. The company may, by special resolution, reduce in any manner and with, and subject to, any incident authorised and consent required by law, -- (a) its share capital; (b) any capital redemption reserve account; or (c) any share premium account.
☒	☐	36	
☒	☐	37	
			Capitalisation of profits
☐	☒	38	38. (1) Any General Meeting of the Company may resolve that any amounts standing to the credit of the Free Reserve or Share Premium Account or the Capital Redemption Reserve Account or any moneys, investment or other assets forming part of the undivided profits including profits or surplus moneys arising from the realization and (when permitted by the law) from the appreciation in value of any capital assets of the Company standing to the credit of the General Reserve or any other Reserve or Reserve Fund or any other Fund of the Company or in the hands of the Company and available for dividend be capitalized:- (a) by the issue and distribution of shares, as fully paid-up, and to the extent permitted by the Act, debentures, debenture stock, bonds or other obligations of the Company ; or (b) by crediting share of the Company, which may have been issued and are not fully paid-up, with the whole or any part of the sum remaining unpaid thereon; PROVIDED that any amounts standing to the credit of the Share Premium Account or the Capital Redemption Reserve Account shall be applied only in crediting the payment of capital on shares to be issued to Members as fully paid bonus shares (Further capitalization of reserve created by the revaluation of assets are not to be used for issuance of Bonus Shares as per section 63 of the Act). (2) Such issue and distribution under sub-clause (1) (a) of this Article and payment to the credit of unpaid share capital under sub-clause (1) (b) of this Article shall be made among and in favour of the Members or any class of them or any of them entitled thereto and in accordance with their respective rights and interests and in proportion to the amount of capital paid-up on the shares held by them respectively in respect of which such distribution or payment shall be made, on the footing that such Members become entitled thereto as capital. (3) The Directors shall give effect to any such resolution and for the said purpose the Board may settle any difficulty which may arise in regard to distribution as it thinks expedient including in regard to fractional entitlements, and shall apply such profits, General Reserve, other Reserve or any other Fund or account as aforesaid as may be required for the purpose of making payment in full on the shares, or other obligations of the Company so distributed under sub clause (1) (a) of this Article or (as the case may be) for the purpose of paying, in whole or in part, the amount remaining unpaid on the shares which may have been issued and are not fully paid-up under sub-clause (1)(b) above. PROVIDED that no such distribution or payment shall be made unless recommended by the Directors, and, if so recommended, such distribution and payment shall be accepted by such Members as aforesaid in full satisfaction of their interest in the said capitalized fund. (4) For the purpose of giving effect to any such resolution, the Directors may settle any difficulty which may arise in regard to the distribution or payment as aforesaid as they think expedient, and, in particular, they may issue fractional certificates and may fix the value for distribution of any specific asset and may determine that any cash payment be made to any Members on the footing of the value so fixed and may vest any such cash, shares, debentures stock, bonds or other obligations in trustees upon such trusts for the persons entitled thereto as may seem expedient to the directors, and generally may make arrangement for the acceptance, allotment and sale of such shares, debentures, debentures stock, bonds or other obligations and fractional certificates or otherwise as they may think fit. (5) When deemed requisite, a proper contract shall be filed in accordance with the Act and the Board may appoint any person to sign such contract on behalf of the Members entitled as aforesaid.

☐	☒	39	39. Subject to the provisions of the Act and these Articles, in cases where some of the shares of the Company are fully paid and others are partly paid, such capitalization may be effected by the distribution of further shares in respect of the fully paid shares and by crediting the partly paid shares with the whole or part of the unpaid liability thereon, but so that as between the holders of the fully paid shares and the partly paid shares, the sums so applied in the payment of such further shares and in the extinguishment or diminution of the liability on the partly paid shares shall be applied pro rata in proportion to the amount then already paid or credited as paid on the existing fully paid and partly paid shares respectively.
			Buy-back of shares
☐	☒	40	40. Notwithstanding anything contained in these articles but subject to the provisions of sections 68 to 70 and any other applicable provision of the Act or any other law for the time being in force, the company may purchase its own shares or other specified securities.
			General meetings
☐	☒	41	41.1 Annual General Meeting The Company shall in each year hold a General Meeting as its Annual General Meeting in addition to any other meeting in that year. All General Meetings other than Annual General Meetings shall be called Extraordinary General Meetings. If for any reason beyond the control of the Board, the general meeting (including an Annual General meeting) cannot be held on the appointed day, the Board shall have power to postpone the General meeting of which a notice should be given to the members. Every member of the Company shall be entitled to attend either in person or by proxy and the Auditor of the Company shall have the right to attend and to be heard at any General Meeting which he attends on any part of the business which concerns him as Auditor. 41.2 Extraordinary General Meeting The Board may, whenever it thinks fit, call an Extraordinary General Meeting of the Company. The Board shall at the requisition in writing by a Member or Members holding in the aggregate not less than one-tenth of such of the paid-up capital of the company on that date and carries the right of voting in regard to the matter in respect of which the requisition has been made.
☐	☒	42	42.1 Requisition of Members to state object of Meeting Any valid requisition so made by Members must state the object or objects of the meeting proposed to be called, and must be signed by the requisitionists and deposited at the registered office of the company. PROVIDED that such requisition may consist of several documents in like form, each signed by one or more requisitionists. 42.2 On receipt of requisition Directors to call meeting and in default requisitionists may do so Upon the receipt of any such requisition, the Board shall forthwith call an Extraordinary General Meeting, and if they do not proceed within twenty-one days from the date of the requisition being deposited at the Registered Office to cause a meeting to be called on a day not later than forty-five days from the date of deposit of the requisition, the requisitionists, or such of their number as represent either a majority in value of the paid-up share capital held by all of them or one-tenth of such of the paid-up share capital of the Company as is referred to in Section 100(2) of the Act, whichever is less, may themselves call the meeting, but in either case, any meeting so called shall be held within three months from the date of the deposit of the requisition, as aforesaid. 42.3 Meeting called by requisitionists Any meeting called under the foregoing Articles by the requisitionists shall be called in the same manner, as nearly as possible, as that in which meetings are to be called by the Board. 42.4 Twenty-one days notice of meeting to be given A general meeting of a Company may be called by giving not less than clear twenty-one days? notice either in writing or through electronic mode in such a manner as may be prescribed, Every notice of a meeting shall specify the place, date, day and the hour of meeting, and shall contain statement of the business to be transacted at such meeting. And, The notice of every meeting shall be given to every member of the Company, Legal Representative of any deceased member or the assignee of an insolvent member, auditor or auditors of

			the Company and every director of the Company and all such persons as are under these Articles entitled to receive notice from the Company "Provided that a general meeting may be called after giving shorter notice than that specified in this sub-section if consent, in writing or by electronic mode, is accorded thereto? (i) in the case of an annual general meeting, by not less than ninty-five per cent. of the members entitled to vote thereat; and (ii) in the case of any other general meeting, by members of the company? (a) holding, if the company has a share capital, majority in number of members entitled to vote and who represent not less than ninety-five per cent. of such part of the paid-up share capital of the company as gives a right to vote at the meeting; or (b) having, if the company has no share capital, not less than ninty-five per cent. of the total voting power exercisable at that meeting: Provided further that where any member of a company is entitled to vote only on some resolution or resolutions to be moved at a meeting and not on the others, those members shall be taken into account for the purposes of this sub-section in respect of the former resolution or resolutions and not in respect of the latter.".
			Proceedings at general meetings
☐	☒	43	43.1 Business to be transacted at the General Meeting and nature thereof In the case of an Annual General Meeting, all business to be transacted thereat shall be deemed special, other than (i) the consideration of the financial statements and the reports of the Board of Directors and Auditors; (ii) the declaration of any dividend; (iii) the appointment of Directors in place of those retiring; (iv) the appointment of, and the fixing of the remuneration of, the Auditors, and in the case of any other meeting, all business shall be deemed to be Special Business, and there shall be annexed to the notice of the Meeting an Explanatory statement setting out all material facts concerning each such item of special business, including in particular the nature of the concern or interest, financial or otherwise, if any, therein of (i) every Director, and the Manager (if any); (ii) every other key managerial personnel; and relatives of the persons mentioned in sub clauses (i) and (ii). Where any such item of Special Business relates to, or affects any other company, the extent of shareholding interest in such other company of every promoter, director and the manager, if any, and of every other key managerial personnel of the Company shall also be set out in the statement if the extent of such shareholding interest is not less than two per cent of the paid-up share capital of that other company and where any item of business consists of the according of approval to any documents by the meeting, the time and place where the document can be inspected shall be specified in the statement aforesaid. The annual general meeting shall be called during business hours on any day that is not a National Holiday and it is to be held either at the registered office of the company or at some other place within the city in which the registered office of the company is situate. 43.2 Omission to give notice not to invalidate a resolution passed The accidental omission to give any such notice as aforesaid to any of the Members, or the non-receipt thereof, shall not invalidate any resolution passed at any such meeting. 43.3 Meeting not to transact business not mentioned in notice No General Meeting, Annual or Extraordinary, shall be competent to enter upon, discuss or transact any business which has not been mentioned in the notice or notices, upon which it was convened. 43.4 Body Corporate deemed to be personally present A body corporate being a Member shall be deemed to be personally present if it is represented in accordance with Section 113 of the Act. 43.5 Quorum at General Meeting No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business. Save as otherwise provided herein, the quorum for the general meetings shall be as provided in section 103 of the Companies Act, 2013

			43.6 If quorum not present meeting to be dissolved or adjourned If, at the expiration of half an hour from the time appointed for holding a general meeting of the Company, a quorum is not present, the meeting, if convened by or upon the requisition of Members, shall stand dissolved, but in any other case, the meeting shall stand adjourned to the same day in the next week or, if that day is a public holiday, until the next succeeding day which is not a public holiday, at the same time and place, or to such other day and at such other time & place as the Board may determine, and if at such adjourned meeting a quorum is not present at the expiration of half an hour from the time appointed for holding the meeting, the Members present shall form the quorum, and may transact the business for which the meeting was called.
☐	☒	44	44.1 Chairman of General Meeting The Chairman of the Board shall be entitled to take the Chair at every General Meeting whether Annual or Extraordinary. If at any meeting the Chairman is not present within fifteen minutes of the time appointed for holding such meeting or he has informed that he shall be unable or unwilling to take the Chair then any one of directors with mutual consent shall so preside at the meeting. If no Director be present or if all the Directors present decline to take the Chair, then the Members present shall elect one of the members to be the Chairman of the Meeting 44.2 No Business whilst chair vacant No business shall be discussed at any General Meeting except the election of a Chairman, whilst the Chair is vacant. 44.3 Chairman with consent may adjourn meeting The Chairman, with the consent of the Members, may adjourn any meeting from time to time and from place to place within the city, town or village in which the Registered Office of the Company is situated, but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. Notwithstanding, the provision as above in the event of disorder at a validly convened meeting the Chairman may adjourn the meeting provided that such an adjournment shall not be a longer period than the Chairman considers necessary to being order at the meeting and Chairman communicates his decision to those present in so far as it is possible. 44.4 Questions at General Meeting how Decided Every question submitted to a meeting shall be decided in the first instance unless a poll is demanded, on a show of hands. Before or on the declaration of the result of the voting on any resolution on a show of hands, a poll may be ordered to be taken by the Chairman of the meeting on his own motion and shall be ordered to be taken by him on a demand made in that behalf by any member or members present in person or by proxy, and holding shares in the Company, which confer a power to vote on the resolution not being less than one-tenth of the total voting power in respect of the Resolution or on which an aggregate sum of not less than five lakh rupees has been paid up. The demand for a poll may be withdrawn at any time by the person or persons making the demand. Unless a poll is so demanded, a declaration by the Chairman that a resolution has, on show of hands, been carried through unanimously or by a particular majority or lost and an entry to that effect in the Minutes Book of the Company shall be conclusive evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against the resolution. 44.5 Chairman s Casting Vote In the case of an equality of votes, the Chairman shall have a casting vote in addition to the vote or votes to which he may be entitled otherwise.
☐	☒	45	45.1 Poll to be taken, if demanded If a poll is demanded as aforesaid, the same shall be taken at such time (not later than forty-eight hours from the time when the demand was made) and place in the city or town in which the Registered office of the Company is for the time being situated, as the Chairman shall direct, either at once or after an interval or adjournment and the result of the poll shall be deemed to be the resolution of the meeting. 45.2 In which case poll taken without Adjournment Any poll duly demanded on the election of the Chairman of a meeting or on any question of adjournment shall be taken at the meeting forthwith. 45.3 Demand for poll not to prevent transaction of other business

			The demand for a poll except on the questions of the election of the Chairman and of an adjournment shall not prevent the continuance of a meeting for the transaction of any business other than the question on which the poll has been demanded.
☐	☒	46	46.1 Minutes of General Meetings (a) The Company shall cause minutes of the proceedings of every General Meeting or every resolution passed by postal ballot to be kept by making within thirty days of the conclusion of every such meeting concerned, record thereof kept with Minute Book for that purpose with their pages consecutively numbered. (b) Each page of every such book shall be initialed or signed and the last page of the record of proceedings of each meeting in such book shall be dated and signed by the Chairman of the same meeting within the aforesaid period of thirty days or in the event of the death or inability of that Chairman within that period, by a Director duly authorised by the Board for the purpose. (c) In no case the minutes of proceedings of a meeting shall be attached to any such book as aforesaid by pasting or otherwise. (d) The minutes of each meeting shall contain a fair and correct summary of the proceedings thereat. (e) All decisions taken and appointments of officers made at any meeting aforesaid shall be included in the minutes of the meeting. (f) Nothing herein contained shall require or be deemed to require the inclusion in any such minutes of any matter which in the opinion of the Chairman of the meeting (a) is or could reasonably be regarded as defamatory of any person, or (b) is irrelevant or immaterial to the proceedings, or (c) is detrimental to the interests of the Company. The Chairman of the meeting shall exercise an absolute discretion in regard to the inclusion or non-inclusion of any matter in the minutes on the aforesaid grounds. (g) Any such minutes shall be evidence of the proceedings recorded therein. Where the minutes have been kept in accordance with section then, until the contrary is proved, the meeting shall be deemed to have been duly called and held, all appointments of directors, key managerial personnel, auditors or company secretary in practice, shall be deemed to be valid. No document purporting to be a report of the proceedings of any general meeting of a company shall be circulated or advertised at the expense of the company, unless it includes the matters required to be contained in the minutes of the proceedings of such meeting. The company shall observe secretarial standards with respect to general and Board meetings specified by the Institute of Company Secretaries of India constituted under section 3 of the Company Secretaries Act, 1980, and approved as such by the Central Government. (h) The book containing the minutes of the proceedings of any general meeting of the Company or of a resolution passed by postal ballot, shall be kept at the registered office of the Company and shall be open, during business hours, to the inspection by any member without any charge, for such period not being less than two hours in each business day are allowed for inspection.
			Adjournment of meeting
☐	☒	47	47. Adjournment of Meeting (i) The Chairperson may, with the consent of any meeting at which a quorum is present, and shall, if so directed by the meeting, adjourn the meeting from time to time and from place to place. (ii) No business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. (iii) When a meeting is adjourned for thirty days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. (iv) Save as aforesaid, and as provided in section 103 of the Act, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.
			Voting rights

☐	☒	48	48. Members in arrears not to vote No member shall be entitled to vote either personally or by proxy at any General Meeting or Meeting of a class of shareholders either upon a show of hands or upon a poll in respect of any shares registered in his name on which any calls or other sums presently payable by him have not been paid or in regard to which the Company has exercised any right of lien.
☐	☒	49	49. Number of votes to which Member Entitled Subject to the provisions of these Articles and without prejudice to any special privileges or restrictions as to voting for the time being attached to any class of shares for the time being forming part of the capital of the Company, every Member shall be entitled to be present, and to speak and vote at such meeting by show of hand for which the Member present in person shall have one vote. On a poll taken at a meeting of a company, a member entitled to more than one vote, or his proxy, need not to use all his votes or cast in the same way all the votes he uses.
☐	☒	50	50. Votes by a Member entitled to more than one vote On a poll taken at a meeting of the Company, a Member entitled to more than one vote by virtue of his share-holding or his proxy or other person entitled to vote for him, as the case may be, need not, if he votes, use all his votes or cast in the same way all the votes he uses and he may vote in different manner as he deems fit.
☐	☒	51	51. Vote of Member who is a minor If any shareholder be a minor, the vote in respect of his share or shares shall be by his guardian, or any one of his guardians, if more than one, to be selected in case of dispute by the Chairman of the meeting.
☐	☒	52	52. Votes of Joint Members If there be joint registered holders of any shares, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders. For this purpose, seniority shall be determined by the order in which the names stand in the register of members.
☐	☒	53	53. Voting in person or by proxy or Representative Subject to the provisions of these Articles, votes may be given either personally or by proxy. A body corporate being a Member may vote either by proxy or by a representative duly authorised in accordance with Section 113 of the Act and such representative shall be entitled to exercise the same rights and powers (including the right to vote by proxy) and by postal ballot, on behalf of the body corporate which he represents as that body could exercise if it were an individual Member of the Company.
☐	☒	54	54.1 Votes in respect of shares of Deceased Any person entitled under the Transmission Clause to transfer any shares may vote at any General Meeting in respect thereof in the same manner as if he were the registered holder of such shares. PROVIDED that forty-eight hours at least before the time of holding the meeting or adjourned meeting, as the case may be, at which he proposes to vote he shall satisfy the Chairman of his right to transfer such shares and give such indemnity (if any) as the Chairman may require or the Chairman shall have previously admitted his right to vote at such meeting in respect thereof. 54.2 Time for objection to vote No objection shall be made to the validity of any vote, except at the meeting or poll at which such vote was tendered, and every vote whether given personally or by proxy, not disallowed at such meeting or poll, shall be deemed valid for purposes of such meeting or poll whatsoever. 54/3 Chairman of the meeting to be the judge of the validity of any Vote The Chairman of any meeting shall be the sole judge of the validity of every vote tendered at such meeting. The Chairman present at the taking of a poll shall be the sole judge of the validity of every vote tendered at such poll.
			Proxy
☐	☒		55.1 Appointment of proxy A person can act as proxy on behalf of members not exceeding fifty and holding in the aggregate not more than ten percent of the total share capital of the company carrying voting rights:

		55	Provided that a member holding more than ten percent of the total share capital of the Company carrying voting rights may appoint a single person as proxy and such person shall not act as proxy for any other person or shareholder. Every proxy shall be appointed in writing under the hand of the Member or if such Member is a body corporate under the common seal of such corporation, or be signed by an appointer or his attorney duly authorised in writing. The proxy so appointed shall not have any right to speak at the meetings. 55.2 Deposit of instrument of Proxy etc. The instrument appointing a proxy and the power of attorney or other authority (if any), under which it is signed or a notarized copy of that power or authority, shall be deposited at the Registered Office of the Company not later than forty-eight hours before the time for holding the meeting at which the person named in the instrument proposes to vote, and in default, the instrument of proxy shall not be treated as valid. No instrument appointing a proxy shall be valid after the expiration of twelve months from the date of its execution.
☐	☒	56	56. Form of proxy An instrument appointing a proxy shall be in the form No. MGT-11 as prescribed in the rules made under section 105 of the Companies Act, 2013
☐	☒	57	57. Proxy either for specified meeting or for a period An instrument of proxy may appoint a proxy either for the purpose of a particular meeting specified in the instrument and any adjournment thereof or it may appoint for the purpose of every meeting of the Company, or of every meeting to be held before a date specified in the instrument and every adjournment of any such meeting. 57.2 Validity of votes given by proxy notwithstanding death of Member A vote given in accordance with the terms of an instrument of proxy shall be valid, notwithstanding the previous death or insanity of the principal or the revocation of the proxy or of the authority under which the proxy was executed, or the transfer of the shares in respect of which the proxy is given. Provided that no intimation in writing of such death, insanity, revocation or transfer shall have been received by the company at its office before the commencement of the meeting or adjourned meeting at which the proxy is used.
			Board of Directors
☐	☒	58	58.1 Management of Affairs The day to day management of the business and affairs of the Company shall be vested with Project-in-charge under the supervision, direction & control of the Board. The Board, may exercise all such powers of the Company and do all such acts, deeds and things as are not prohibited by the Act or any other statute or by the Memorandum of Association of the Company and without prejudice to the foregoing, shall be responsible for all policy matters and the supervision, direction and control of the conduct of the business, affairs & operations of the Company. 58.2 First Directors Shri Sanjay Nayak, Shri Dharuman Manavalan and Shri Sachin Shukla shall be the First Directors of the Company
☐	☒		59.1 Number and appointment of Directors The Board of Directors of the Company shall consist of not less than 3 but not more than 15 Directors. A Director shall not be required to hold any qualification shares in the Company. Notwithstanding anything to the contrary contained in these Articles, so long as any moneys remain owing by the Company to a Financial Institution or any other person by the Company or the Company has entered into any agreement or undertaking or arrangement (hereinafter refer as ?agreement?) with Bodies (like State Electricity Board/Nigam) or the Board of Directors have decided to seek nomination on the Board from the beneficiary state or any Financial Institution or PFC Consulting Limited or person holds Debentures in the Company by direct subscription or private placement, the Company may agree to grant to such Financial Institution, PFC Consulting Limited, person or other Bodies as a condition of such loan or subscription to Debenture or any other agreement or to a Debenture Trustee, the right to appoint from time to time any person

			or persons as Director or Directors of the Company, (which director or directors is /are hereinafter referred to as ?Nominee Director/s?), retiring or non-retiring, subject to and on such terms and conditions as the Company may agree with such Financial Institutions, PFC Consulting Limited, Person, other Bodies and/or Debenture Trustee. The Company shall have a right to remove from office Nominee Director(s) at the option of the Company in consultation with Financial Institutions, PFC Consulting Limited, Bodies, persons or Debenture Trustee. Such Nominee Director(s) shall not be required to hold any Share qualification in the Company. Also at the option of the Company such Nominee Director(s) shall not be liable to retirement by rotation of the Directors. Subject as aforesaid, the Nominee Director(s) shall be entitled to the same rights and privileges and be subject to the same obligations as any other Director of the Company. The Nominee Director(s) so appointed shall hold the said office only so long as moneys remain owing by the Company to the Financial Institution or so long as the Debenture Trustee hold debenture in the Company or operation of agreement and the Nominee Director/s so appointed in the exercise of the said person shall ipso facto vacate such office immediately the money owing by the Company to the Financial Institution, or on the Debenture Trustee ceasing to hold Debentures/ Shares on the satisfaction of liability of the Company arising out of any Guarantee furnished by the Financial Institutions or satisfactory completion of term of agreement with Bodies. The Nominee Director(s) appointed under this article shall be entitled to receive all notice of and attend all General meeting, Board Meeting and of the meetings of the Committee of which the Nominee Director(s) is/are member(s) as also the minutes of meetings. The financial institutions/Debenture Trustee/persons/bodies shall also be entitled to receive all such notice and minutes. The Company shall pay to the Nominee Director(s) sitting fees and expenses which other Director of the Company are entitled, but if any other fees, commission, remuneration in any form is payable to the Director of the Company the fees, commission, money and remuneration in relation to such Nominee Director(s) shall accrued to Debenture Trustee and same shall accordingly be paid by the Company directly to the debenture trustee. Any expenses that may incurred by the financial institution or such Nominee Director(s) in connection with their appointment or Directorship shall also be paid or reimbursed by the Company to the financial Institution or as the case may be to such Nominee Director(s). Provided that if any such Nominee Director(s) is/are an officer of the Financial Institution, the sitting fees in relation to such Nominee Director(s) shall also accrue to the Financial Institute and the same shall accordingly be paid by the Company directly to that Financial Institution.
		59	Provided further that if such Nominee Director(s) is/are an official of any of the Reserve Bank of India, the sitting fees in relation to such Nominee Director(s) shall also accrue to Financial Institution to whom he represents as Nominee Director from Reserve Bank of India and the same shall accordingly be paid by the Company directly to that Financial Institution. Provided also that in the event of the Nominee Director(s) being appointed as Whole Time Director(s) such Nominee Director(s) shall exercise such powers and duties as may be approved by the Lenders or Bodies in consultation with Board and have such rights as are usually exercised or available to a Whole Time Director, in management of the Borrower or Bodies and such Nominee Director(s) shall be entitled to receive such remuneration fees commission and moneys as may be approved by the Lenders or Bodies in consultation with Board. 59.2 Company may increase the number of Directors Subject to Section 149 of the Act, the Company may subject to special resolution in General Meeting increase the maximum number of Directors. Further the Company may, subject to the provisions of Section 169 of the Act, by passing the ordinary resolution in the General Meeting of the members, may remove any Director before the expiration of his period of office and appoint another person in the place of director so removed. 59.3 Appointment of Alternate Directors In accordance with Section 161 and other applicable provisions (if any) of the Act, the Board shall have power at any time and from time to time, to, appoint a person, not being a person holding any alternate directorship for any other Director in the Company, to act as an alternate director for a director (hereinafter called the original Director) during his absence for a period of not less than three months from India. 59.4 Directors power to fill up casual Vacancies

			Casual vacancies among Directors may be filled by the Board of Directors at their meeting and any person so appointed shall hold the office as per the provision of section 161. 59.5 Appointment of Additional Director Subject to the provisions of Section 161 and other applicable provisions (if any) of the Act, the Board shall have power at any time and from time to time, to appoint a person as an Additional Director but so that the total number of Directors shall not at any time exceed the maximum number fixed by these Articles. The Additional Director so appointed shall retire from Office at next following Annual General Meeting but shall be eligible for election by the company at that meeting as a Director. 59.6 Directors may act notwithstanding any vacancy The continuing Directors may act notwithstanding any vacancy in their body, but if, and so long as their number is reduced below the minimum number fixed by Article 100 thereof, the continuing Directors may act for the purpose of increasing the number of Directors to that number, or of summoning a General Meeting for that purpose.
☐	☒	60	60.1 Remuneration of Directors Subject to the provisions of the Act, the Chairman or Managing Director or any other functional Directors who is/are in the whole-time employment of the Company may be paid remuneration either by way of a monthly payment or at a specified percentage of the net profit of the Company or partly by one way and partly by the other, keeping in view the limiting provisions governing the Managerial remuneration under the provisions of the Act. Subject to the provisions of the Act, a Director, who is neither in the whole-time employment nor a Chairman cum Managing Director of the Company may be paid remuneration either:- (a) by way of monthly, quarterly or annual payment with the approval of the Central Government, or (b) by way of commission if the Company by a special resolution authorizes such payment; and The sitting fee payable to a Director (excluding Whole-time Director) for attending a meeting of the Board or Committee thereof shall be such sum as may be fixed by the Board provided that the same shall not exceed Rs. 1,00,000/- or such other sum as prescribed in the Act as amended from time to time. 60.2 Travelling expenses incurred by Director going out on Companys Business The Board may allow and pay to any Director who is not a bona-fide resident of the place where the Registered Office of the Company or where the meetings of the Board are actually held and who has to come to such place for the purpose of attending any meeting, such sum as the Board may consider fair compensation for travelling, boarding, lodging and other actual incidental expenses, in addition to his fee for attending such meeting as specified above. If any Director be called upon to go or reside out of the bonafide place of his residence on the Companys business, he shall be entitled to be paid and reimbursed any travelling or other actual expenses incurred by him in connection with the business of the Company.
☐	☒	61	61. When office of Directors to become Vacant Subject to Section 167 of the Act, the office of a Director shall become vacant if:- (a) he incurs any of the disqualifications specified in section 164 under the act; (b) he absents himself from all the meetings of the Board of Directors held during a period of twelve months with or without seeking leave of absence of the Board; (c) he acts in contravention of the provisions of entering into contracts or arrangements in which he is directly or indirectly interested; (d) he fails to disclose his interest in any contract or arrangement in which he isdirectly or indirectly interested; (e) he becomes disqualified by an order of a court or the Tribunal; (f) he is convicted by a court of any offence, whether involving moral turpitude or otherwise and sentenced in respect thereof to imprisonment for not less than six months: Provided that the office shall be vacated by the director even if he has filed an appeal against the order of such

			court; (g) he is removed in pursuance of the provisions of this Act; (h) he, having been appointed a director by virtue of his holding any office or other employment in the holding, subsidiary or associate company, ceases to hold such office or other employment in that company.
☐	☒	62	62. Directors may contract with Company Except with the consent of the Board of Directors given by a resolution at a meeting of the Board and subject to such conditions, the company shall not enter into any contract or arrangement with a related party with respect to? (a) sale, purchase or supply of any goods or materials; (b) selling or otherwise disposing of, or buying, property of any kind; (c) leasing of property of any kind; (d) availing or rendering of any services; (e) appointment of any agent for purchase or sale of goods, materials, services or property; (f) such related party's appointment to any office or place of profit in the company, its subsidiary company or associate company; (g) underwriting the subscription of any securities or derivatives thereof, of the company. Every contract or arrangement entered as related party transaction shall be referred in the Board?s report to the shareholders along with the justification for entering into such contract or arrangement.
☐	☒	63	63.1 Disclosure of interest by Directors 1) Every Director of the Company, who is in any way, whether directly or indirectly, concerned or interested in a contract or arrangement, or proposed by Directors interested in a contract or arrangement, or proposed contract or arrangement entered into or to be entered into, by or on behalf of the Company, shall disclose the nature of his concern or interest at every financial year or whenever there is change in the disclosure of interest. (2) Nothing in sub-clause (1) of this Article shall apply to any contract or arrangement entered into or to be entered into between the Company and any other company, where any of the Directors of the Company or two or more of the Directors together holds or hold not more than two per cent of the paid-up share capital in the other company 63.2 Interested Directors not to participate or vote in Board?s proceedings An interested director, who is in any way, whether by himself or through any of his relatives or firm, body corporate or other association of individuals in which he or any of his relatives is a partner, director or a member, interested in a contract or arrangement, or proposed contract or arrangement, entered into or to be entered into by or on behalf of a company, shall, take any part in the discussion of, or vote on any contract or arrangement entered into, or to be entered into, by or on behalf of the Company, if he is in any way, whether directly or indirectly, concerned or interested in such contract or arrangement, nor shall his presence count for the purpose of forming a quorum at the time of any such discussion or vote, and if he does vote, his vote shall be void. A contract or arrangement entered into by the company without disclosure or with participation by a director who is concerned or interested in any way, directly or indirectly, in the contract or arrangement, shall be voidable at the option of the company.
☐	☒	64	64.1 Register of Contracts in which Directors are interested The company shall keep registers in accordance with Section 189(1) giving separately the particulars of all contracts or arrangements to which to matter of disclosure of interest by directors and related party transaction applies, in such manner and containing such particulars as may be prescribed and after entering the particulars, such registers shall be placed before the next meeting of the Board and signed by all the directors present at the meeting and shall within thirty days of appointment make such disclosure as are necessary for the purpose of same. The Register shall be kept at the Registered office of the Company and shall be open to inspection at such office shall be open for inspection at such office during business hours and extracts may be taken there from, and copies thereof as may be required by any member of the company shall be furnished by the company to such extent, in such manner, and on payment of same fee as in the case of the Register of Members of the Company. 64.2 Director may be Director of companies promoted by the Company

			A Director may become a Director of any other company promoted by the Company, or in which it may be interested as a vendor, shareholder, or otherwise and no such Director shall be accountable for any benefits received as Director or shareholder of such a company except in so far as Section 188 of the Act may be applicable. 64.3 Register of Directors and key managerial personnel and their Shareholding The Company shall keep at its registered office a Register containing such particulars of its Directors and key managerial personnel, Manager as may be prescribed under Section 170 of the Act and shall comply with the provisions of the said Section in all respects. The register shall include the details of securities held by each of them in the company or its holding, subsidiary, subsidiary of companys holding company or associate companies.
			Proceedings of the Board
☐	☒	65	65.1 Meetings of Directors The Directors may meet together as a Board for the dispatch of business from time to time, so that at least four such meetings shall be held in every year in such a manner that not more than one hundred and twenty days shall intervene between two consecutive meetings of the Board. The Directors may adjourn and regulate their meetings as they think fit. 65.2 Board may appoint Chairman All meetings of the Directors shall be presided over by the Chairman, if present, but if at any meeting of the Directors, the Chairman is not present at the time appointed for holding the same then in that case the Directors shall choose one of the Directors present to preside over the meeting.
☐	☒	66	66. Certain persons not to be appointed Chairman & Managing Directors & Functional Director The Company shall not appoint a person as its Chairman, Managing Director or Whole-time Director who:- (a) is an undischarged insolvent, or had at any time been adjudged an insolvent; (b) is or has at any time been, convicted by a Court of an offence involving moral turpitude.
☐	☒	67	67.1 Notice of Directors Meeting A meeting of the Board shall be called by giving not less than seven days notice in writing to every director at his address registered with the company and such notice shall be sent by hand delivery or by post or by electronic means. Board may be called at shorter notice to transact urgent business where at least one independent director, if any, shall be present. Every notice convening a meeting of the Board of Directors shall set out the agenda of the business to be transacted thereat in sufficient detail provided however that the meeting may consider any other business with the permission of the chair. 67.2 When meeting to be convened The Company Secretary or any director of the Company may, as and when directed by the Chairman to do so, convene a meeting of the Board by giving a notice in writing to every Director. 67.3 Quorum at Board Meeting No business shall be transacted at any Board meeting unless a quorum of Board of Director is present at the time when the meeting proceeds to business. Save as otherwise provided herein, the quorum for the Board meetings shall be as provided in section 174 . 67.4 Questions at Board meetings how to be decided All questions arising at a Meeting of the Board or any committee thereof shall be decided by majority of votes of directors present and in case of equality of votes, the Chairperson shall have a second and casting vote.
☐	☒		68.1 Committee of Board Subject to the restrictions contained in Section 179, 180 and other applicable provisions of the Act and

		68	preceding Articles, the Board may delegate any of its powers to Committees of the Board consisting of such member or members of its body as it may think fit. PROVIDED that the Board may, from time to time, revoke, modify and discharge any such Committee of the Board either wholly or in part. Every Committee of the Board so formed shall in the exercise of the powers so delegated conform to any Policy/regulations that may, from time to time, be laid down by the Board. All acts done by any such Committee of the Board in conformity with such regulations and in fulfillment of the purposes of their appointment shall have the like force and effect as if done by the Board 68.2 Meeting of Committee how to be Governed The meetings and proceedings of any such Committee of the Board consisting of two or more members shall be governed by the provisions of the act and guidelines laid down for regulating the meetings and proceedings of the Directors, so far as the same are applicable thereto and are not superseded by any regulations made by Directors under the last preceding Article.
☐	☒	69	69. Resolution by circulation No resolution on matters shall be deemed to have been duly passed by the Board or by a Committee thereof by circulation, unless the resolution has been circulated in draft, together with the necessary papers, if any, to all the Directors, or members of the Committee, as the case may be, at their addresses registered with the company in India by hand delivery or by post or by courier, or through such electronic means as may be prescribed and has been approved by a majority of the directors or members, who are entitled to vote on the resolution. Resolution passed in such circulation shall be made part of the minutes of such meeting. Provided that, where not less than one-third of the total number of directors of the company for the time being require that any resolution under circulation must be decided at a meeting, the chairperson shall put the resolution to be decided at a meeting of the Board.
☐	☒	70	70. Defects in appointment of Directors not to invalidate actions taken All acts done by any meeting of the Board, or by a Committee of the Board, or by any person acting as a Director shall notwithstanding that it was subsequently noticed that there was some defect in the appointment of such Director or persons acting as aforesaid, or that they, or any of them, were disqualified or had vacated office or that the appointment of any of them had been terminated by virtue of any provisions contained in the Act or these Articles, be as valid as if every such person had been duly appointed and was qualified to be a Director and had not vacated his office or his appointment had not been terminated. PROVIDED that nothing in this Article shall be deemed to give validity to acts done by a Director after his appointment had been noticed by the Company to be invalid or to have terminated.
☐	☒	71	71. Minutes of proceedings of meetings of the Board (a) The Company shall cause minutes of all proceedings of every meeting of the Board and committee thereof to be kept by making within thirty days of the conclusion of every such meeting record thereof in Minute Book kept for that purpose with their pages consecutively numbered. (b) Each page of every such book shall be initialed or signed and the last page of the record of proceedings of each meeting in such book shall be dated and signed by the Chairman of the said meeting or the Chairman of the next succeeding meeting. The minute books of the Board and committee meetings shall be preserved permanently and kept in the custody of the company secretary of the company or any director duly authorized by the Board for the purpose and shall be kept in the registered office or such place as Board may decide. The minutes shall also contain:- (i) the names of the Directors present at the meeting; And (ii) in the case of each resolution passed at the meeting, the names of the Directors, if any, dissenting from, or not concurring with the resolution. Nothing deemed to require the inclusion in any such minutes of any matter which, in the opinion of the Chairman of the meeting ? (i) is, or could reasonably be regarded as, defamatory of any person.

			(ii) is irrelevant or immaterial to the proceedings, or (iii) is detrimental to the interests of the Company. The Chairman shall exercise an absolute discretion in regard to the inclusion or non-inclusion of any matter in the minutes on the grounds specified in this sub-clause. (c) Minutes of meetings kept in accordance with the aforesaid provisions shall be evidence of the proceedings recorded therein.
☐	☒	72	72. Powers of Board The Board may exercise all such powers of the Company and do all such acts and things as it is entitled to do under section 179 of the Act and rules made thereunder, or by the Memorandum or Articles of the Company but shall not decide matters required to be exercised or done by the Company in General Meeting, Subject to these Articles no regulation made by the Company in General Meeting shall invalidate any prior act of the Board which would have been valid if that regulation had not been so made.
☐	☒		73. Certain powers of the Board Without prejudice to the general powers conferred by the Act and preceding Article and so as not in any way to limit or restrict those powers, and without prejudice to the other powers conferred by these Articles and by General Body, it is hereby declared that the Directors shall have the following powers, that is to say, power:- (1) to pay and charge to the capital account of the Company any commission or interest lawfully payable there out under the provisions of Sections 40 of the Act; (2) Subject to Sections 179 and 180 of the Act, to purchase or otherwise acquire for the Company any property, rights or privileges which the Company is authorised to acquire, at or for such price or consideration and generally on such terms and conditions as they may think fit, and in any such purchase or other acquisition to accept such title as the Directors may believe or may be advised to be reasonably satisfactory; (3) At their discretion and subject to the provisions of the Act, to pay for any property, rights or privileges acquired by, or services rendered to, the Company either wholly or partially, in cash or in shares, bonds, debentures, mortgages, or other securities of the Company, and any such shares may be issued either as fully paid-up or with such amount credited as paid-up thereon as may be agreed upon, and any such bonds, debentures, mortgages or other securities may be either specially charged upon all or any part of the property of the Company and its uncalled capital or not so charged; (4) To secure the fulfillment of any contract or engagement entered into by the Company in the normal course of business, by mortgage or charge any of the property of the Company and its uncalled capital for the time being or in such manner as they may think fit; (5) To accept from any Member, as far as may be permissible by law, a surrender of his shares or any part thereof, on such terms and conditions as shall be agreed upon; (6) To appoint any person to accept and hold in trust for the Company any property belonging to the Company, in which it is interested, or for any other purposes and to execute and do all such deeds and things as may be required in relation to any such trust, and to provide for the remuneration of such trust or trustees; (7) To institute, conduct, defend, compound, or abandon any legal proceedings by or against the Company or its officers, or otherwise concerning the affairs of the Company, and also to compound and allow time for payment or satisfaction of any debts due and of any claim or demand by or against the Company and to refer any differences to arbitration, and observe and execute any awards made thereon; (8) To act on behalf of the Company in all matters relating to bankruptcy and insolvency; (9) To make and give receipts, releases, and other discharges for moneys payable to the Company and for the claims and demands of the Company; (10) Subject to applicable provisions of the Act, to invest and deal with any moneys of the Company not immediately required for the purposes thereof upon such security (not being shares of this Company), or without security and in such manner as they may think fit, and from time to time to vary or realise such investments. Save as provided in Section 187 of the Act, all investments shall be made and held in the Company?s own name; (11) To execute, in the name and on behalf of the Company, in favour of any Director or other person who may incur or going to incur any personal liability whether as principal or surety, for the benefit of the Company, such

			mortgages of the Company?s property (present and future) as they think fit, and any such mortgage may contain a power of sale and such other powers, provisions covenants as shall be agreed upon; (12) To open account with any bank or banks and to determine from time to time who shall be entitled to sign, on the Company?s behalf bills, notes, receipts, acceptances, endorsements, cheques dividend warrants, releases, contracts and documents and to issue the necessary authority for such purpose; (13) To distribute by way of bonus or commission amongst the staff of the Company on the profits of any particular business or transaction, and to charge such bonus or commission as part of the working expense of the Company; (14) To provide for the welfare of employees or ex-employees of the Company and their families or connections of such persons, by building or contributing to the building of houses, dwellings or chawls, or by grants of money, pension, gratuities, allowances, bonus or other payments, or by creating, and from time to time subscribing or contributing to provident and other funds, associations, institutions or trusts and by providing or subscribing or contributing towards places of instrument and recreation, hospitals and dispensaries, medical and other attendance and other assistance as the Board shall think fit; and to subscribe or contribute or otherwise to assist or to guarantee money to charitable, benevolent, religious, scientific, national or other institutions or objects which shall have any moral or other claim to support or aid by the Company either by reason of locality of operation, or of public and general utility or otherwise;
		73	(15) Before recommending any dividend, to set aside out of the profits of the Company such sums as they may think proper for depreciation or to a Depreciation Fund, or to an Insurance Fund, or as a Reserve Fund or Sinking Fund or any Special Fund to meet contingencies or to repay debentures or debenture stock; or for special dividends or for equalizing dividends or for repairing, improving, extending and maintaining any of the property of the Company and for such other purposes (including the purposes referred to in the preceding clause), as the Board may, in their absolute discretion, think conducive to the interest of the Company, and subject to Section 179 of the Act, to invest the several sums so set aside or so much thereof as required to be invested, upon such investments (other than shares of the Company) as they may think fit, and from time to time to deal with and vary such investments and dispose of and apply and expend all or any part thereof for the benefit of the Company, in such manner and for such purposes as the Board, in their absolute discretion, think conducive to the interest of the Company notwithstanding that the matters to which the Board apply or upon which they expend the same or any part thereof, may be matters to or upon which the capital moneys of the Company might rightly be applied or expended, and to divide the Reserve Fund or division or a reserve Fund to another Reserve Fund or division of a Reserve Fund and with full power to employ the assets constituting all or any of the above funds, including the Depreciation Fund, in the business of the Company or in the purchase or repayment of Debentures or debenture stock, and without being bound to keep the same separate from the other assets, and without being bound to pay interest on the same with power however to the Board at their discretion to pay or allow to the credit of such funds interest at such rate as the Board may think proper; (16) To appoint and at their discretion remove or suspend such officers such as Executive Director, general managers, managers, secretaries, assistants, supervisors, clerks, agents and servants etc. for permanent, temporary or special services as they may from time to time think fit, and to determine their powers and duties and fix their salaries or emoluments or remunerations and to require security in such instances and to such amounts as they may think fit. And also from time to time to provide for the management and transaction of the affairs of the Company in any specified locality in India or abroad in such manner as they think fit, and the provisions contained in the following sub-clauses shall be without prejudice to the general powers conferred by this sub clause; (17) From time to time and at any time to establish any number of offices and establishment for properly managing the affairs of the Company in any specified locality in India or elsewhere and to appoint staff for such offices and to fix their remuneration; (18) Subject to the provisions of the Act, from time to time and at any time, to delegate to any such local Board, or any member or members thereof or any managers or agents so appointed or to any other person(s) any of the powers, authorities, and discretions for the time being vested in the Board, and to authorise the members for the time being of any such local Board, or any of them to fill up any vacancies, therein and to act notwithstanding vacancies and any such appointment or delegation under the preceding and this sub-clause may be made on such terms and subject to such conditions as the Board may think fit, and the Board may at any time remove any person so appointed, and may annul or vary any such delegation; (19) At any time and from time to time by Power of Attorney under the Seal of the Company, to appoint any person or persons to be the Attorney or Attorneys of the Company for such purposes and with such powers, authorities and discretions (not exceeding those vested in or exercisable by the Board under these presents and excluding the power to make calls and excluding also those which are to be exercised by the Board, in its

			Meetings) and for such period and subject to such conditions as the Board may from time to time think fit, and any such appointment may (if the Board thinks fit) be made in favour of the members or any of the members of any local Board, established as aforesaid or in favour of any company, or the shareholders, directors, nominees, or managers or any company or firm or otherwise in favour of any persons whether appointed by name or designation by the Board and any such Power of Attorney may contain such powers for the protection or convenience of such Attorney as the Board may think fit, and Board may specifically bestow powers enabling any such delegate or attorneys to sub-delegate all or any of the powers, authorities and discretions for the time being vested in them; (20) Subject to Sections 188 of the Act, for or in relation to any of the matters aforesaid or otherwise for the purposes of the Company, to enter into such negotiations and contracts and rescind and vary such contracts, and execute and do all such acts deeds and things in the name and on behalf of the Company as they may consider expedient; (21) From time to time to make vary and repeal bye-laws for the regulations of the business of the Company regulate employment of its officers and servants by making service Rules and Regulations; (22) Maintain proper records at places as per provisions of the Act and where the Company has a branch office, whether in or outside India, the Company shall be deemed to have complied with this Article if proper Books of Account relating to the transactions effected at the branch office are kept at the branch office and proper summarized returns, made up-to-date at intervals of not more than three months, are sent by the branch office to the Company at its Office or other place in India, at which the Company?s Books of Accounts are kept as aforesaid; (23) Ensure proper maintenance of the Books of Account which shall give a true and fair view of the state of the affairs of the Company or branch office, as the case may be, and explain its transactions. The Books of Account and other books and papers shall be open to inspection by any Director during business hours.
			Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer
☐	☒	74	Subject to the provisions of the Act, -- (i) A chief executive officer, manager, company secretary or chief financial officer may be appointed by the Board for such term, at such remuneration and upon such conditions as it may thinks fit; and any chief executive officer, manager, company secretary or chief financial officer so appointed may be removed by means of a resolution of the Board; (ii) A director may be appointed as chief executive officer, manager, company secretary or chief financial officer
☐	☒	75	A provisions of the Act or these regulations requiring or authorising a thing to be done by or to a director and chief executive officer, manager, company secretary or chief financial officer shall not be satisfied by its being done by or to the same person acting both as director and as, or in place of, chief executive officer, manager, company secretary or chief financial officer.
			The Seal
☐	☒	76	76.1 The Seal its custody and use The Board shall provide a Common Seal for the purpose of the Company, and shall have power, from time to time, to destroy the same and substitute a new Seal in lieu thereof, and the Board shall provide for the safe custody of the Seal for the time being, and the seal shall never be used except on the authority of the Board or by Committee of the Board as authorised.' 76.2 Deeds how executed Every deed or other instrument, to which the Seal of the Company is required to be affixed, shall unless the same is executed by a duly constituted attorney issued under the seal; be signed by two Directors or one Director and Secretary or some other person authorised by the Board for the purpose: PROVIDED that in respect of the Share Certificate, the Seal shall be affixed in accordance with Article as mentioned above .
			Dividends and Reserve

☐	☒	77	77. Division of profits and dividends in proportion to amount paid- up (a) The profits of the Company, subject to any special rights relating thereto created or authorised to be created by these Articles and subject to the provisions of these Articles, shall be divisible among the Members in proportion to the amount of capital paid-up or credited as paid-up on the shares held by them. (b) All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares held during any portion or portions of the period in respect of which the dividend is paid, but if any share is issued on terms providing that it shall rank for dividend from a particular date, such share shall rank for dividend accordingly.
☐	☒	78	78.1 The Company in General Meeting may declare a dividend Company in General Meeting may declare dividends to be paid to Members according to their respective rights, but no dividends shall exceed the amount recommended by the Board, but the Company in General Meeting may declare a smaller dividend. 78.2 Dividends only to be paid out of Profits a) No dividend shall be declared or paid by the Company for any financial year except out of its profits for that year arrived at in the manner set out in Section 123 of the Act. (b) Where, owing to inadequacy or absence of profits in any financial year, any Company proposes to declare dividend out of the accumulated profits earned by it in previous years and transferred by the company to reserves, such declaration of dividend shall not be made except in accordance with such rules as may be made in that behalf. (c) No dividend shall be declared or paid by a company from its reserves other than free reserves. 78.3 Interim Dividend Subject to the provisions of Section 123, the Board may, from time to time, pay the Members such interim dividend as appear to it to be justified by the profits of the Company.
☐	☒	79	79. Capital paid - up in advance to carry Interest Where capital is paid in advance of calls such capital may carry interest but shall not in respect thereof confer a right to dividend or participate in profits .
☐	☒	80	80.1 Retention of dividends until completion of transfer The Board may retain the dividends payable on shares in terms of Section 126 in respect of which any person is entitled to become a Member, or on completion any person under those Articles is entitled to transfer, or until such person shall become a Member in respect of such shares or shall duly transfer the same. 80.2 Transfer of shares must be Registered A transfer of shares shall not pass the right to any dividend declared thereon before the registration of transfer. Provided that where any instrument of transfer of shares has been delivered to the Company for registration and the transfer of such shares has not been registered by the Company, it shall, notwithstanding anything contained in any other provision of this Act a) transfer the dividend in relation to such shares to the Unpaid Dividend Account referred to in Section 124 of the Act unless the Company is authorised by the registered holder of such shares in writing to pay such dividend to the transferee specified in such instrument of transfer ;and (b) keep in abeyance in relation to such shares, any offer of rights shares under clause (a) of sub-section (1) of section 62 of the Act and any issue of fully paid-up bonus shares in pursuance of first proviso to sub-section (5) of section 123 of the Act.
☐	☒	81	81. No Member to receive dividend whilst indebted to the Company & Company s right of reimbursement Thereon No Member shall be entitled to receive payment as interest or dividend in respect of his shares, whilst any money may be due or owing from him to the Company in respect of such share or shares or otherwise howsoever, either alone or jointly with any person or persons, and the Board may deduct from the interest or dividend payable to any Member all sums of money so due from him to the Company.

☐	☒	82	82. Dividends how remitted (1) Unless otherwise directed any dividend payable in cash may be paid by cheque or warrant or in any electronic mode or by a pay slip or receipt or in any other manner having the force of a cheque or warrant sent through the post to the registered address of the Member or person entitled or in case of joint holders to that one of them first named in the Register in respect of the joint holdings. Every such cheque or warrant shall be made payable to the order of the person to whom it is sent the Company shall not be liable or responsible for any cheque or warrant or pay slip or receipt lost in transmission, or for any dividend lost to the Member or person entitled thereto by the forged endorsement of any cheque or warrant or the forged signature of any pay slip or receipt or the fraudulent recovery of the dividend by any other means. (2) Notwithstanding anything contained in these Articles any dividend declared, may be paid by Electronic Clearing System through any Sponsor Bank, after getting registration with the Reserve Bank of India for using this facility and collecting from the members necessary bank mandate in the prescribed format.
☐	☒	83	83. Dividends and call together Any General Meeting declaring a dividend, may, on the recommendation of the Board, make a call on the Members of such amount as the meeting may fix, but so that the call on each Member shall not exceed the dividend payable to him and so that the call be made payable at the same time as the dividend, and the dividend may, if so arranged between the Company and the Member, be set off against the calls.
☐	☒	84	84. Unclaimed dividend No unclaimed dividend shall be forfeited and all unclaimed dividends shall be dealt with in accordance with the provisions of Section 124 and other applicable provisions of the Act.
☐	☒	85	85. No interest against Dividend No dividend shall bear interest against the company.
			Accounts
☐	☒	86	86.1 Directors to keep true accounts (a) Every company shall prepare and keep at its registered office including its branch office or offices or at such other place in India as the Board thinks fit, Books of Accounts and other relevant books and papers and financial statement for every financial year which give a true and fair view of the state of the affairs of the company in accordance with Section 128 of the Act with respect to- (i) all sums of money received and expended by the Company and the matters in respect of which the receipts and expenditure take place; (ii) all sales and purchases of goods by the Company; (iii) the assets and liabilities of the Company. (iv) state of affairs of the company. (b) Where the Board decides to keep all or any of the Books of Account at any place other than the Office of the Company, the Company shall within seven days of the decision file with the Registrar a Notice in writing giving the full address of that other place in accordance with Section 128 of the Act. (c) The company may keep such books of account or other relevant papers in electronic mode in such manner as may be prescribed. (d) The Company shall preserve in good order the Books of Account relating to a period of not less than eight financial years immediately preceding a financial year. The books of account and other relevant books and papers maintained in electronic mode shall remain accessible in India so as to be usable for subsequent reference together with the vouchers relevant to any entry in such Books of Account. 86.2 Inspection of accounts or record by members No Member (not being a director) shall have any right of inspecting any account or books or documents of the Company except as conferred by Section 94 of the Act or authorised by the Board or by the company in general meeting. The Board may determine whether and to what extent and at what time and place and under what conditions or regulations the accounts and books of the Company or any of them may be open to inspection of the Members. Notwithstanding anything to the contrary contained hereinabove, the authorised representative of

			Promoters shall have a right to inspect the accounts books, plant, facility, documents, records, premises, equipment and machinery and all other property of the Company at convenient time(s), after giving advance notice to the Company. 86.3 Statement of Accounts to be furnished to General Meeting The Directors shall, from time to time, in accordance with Sections 129 and 134 and other applicable provisions of the Act, cause to be prepared and to be laid before the Company in General Meeting, such Balance Sheets, Profit and Loss Accounts and Reports as are required by these Sections. 86.4 Copies shall be sent to each Member Without prejudice to the provisions of Section 101 and subject to the provisions of Section 136 of the Act, a copy of the financial statements, including consolidated financial statements, auditors report and every other document required by law to be annexed or attached to the Balance Sheet shall at least twenty-one days before the General Body Meeting at which the same are to be laid before the members, be sent to the members of the company, to every trustee for every holder of any debenture issued by the company and to all persons other than such members or trustee, being the person so entitled to attend the General Body Meeting. 86.5 Copy of financial statement to be filed with registrar The Company shall comply with Section 137 of the Act as to filing copies of the Balance Sheet and Profit and Loss Account and documents required to be annexed or attached thereto with the Registrar.
			Winding up
☐	☒	87	87. If the Company shall be wound up and the assets available for distribution among the members as such shall be insufficient to repay the whole of the paid up capital such assets shall be distributed so that as nearly as may be the losses shall be borne by the members in proportion to the capital paid up or which ought to have been paid up at the commencement of the winding-up on the shares held by them respectively. And if in a winding-up the assets available for distribution among the members shall be more than sufficient to repay the whole of the capital paid up at the commencement of the winding-up, the excess shall be distributed amongst the members in proportion to the capital at the commencement of the winding-up paid up or whichought to have been paid up on the shares held by them respectively. But this Article is to be without prejudice to the rights of the holders of shares issued upon special terms and conditions. If the Company shall be wound up, whether voluntarily or otherwise, the liquidators may, with the sanction of a Special Resolution, divide among the contributions, in specie or kind, any part of the assets of the Company and may, with the like sanction, vest any part of the assets of the Company in Trustees upon such trusts for the benefit of the contributories, or any of them, as the liquidators, with the like sanction, shall think fit.
			Indemnity
☐	☒	88	88. Officers to be indemnified Subject to provisions of the Act, Every officer of the company shall be indemnified out of the assets of the company against any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquitted or in which relief is granted to him by the court or the Tribunal. Provided that if such person is proved to be guilty, the premium paid on such insurance shall be treated as part of the remuneration.
☒			***Others***
			89. Company not bound to recognize holding of shares on trust or any interest in shares other than that of registered holder Except as ordered by a Court of competent jurisdiction or as required by law , the Company shall not be bound to recognize holding of any share upon any trust and to recognize any equitable, contingent, future or partial interest in any share, or any interest in any fractional part of a share (except only as is by these Articles otherwise expressly provided) any right in respect of a share other than an absolute right thereto, in accordance with these Articles, in the person from time to time registered as the holder thereof, but the Board shall be at liberty at their sole discretion to register any share in the joint names of any two or more persons or

the survivor or survivors of them.

90. Funds etc. of Company may not be applied in purchase of shares of the Company

The Company shall not give, either directly or indirectly, and either by means of a loan, guarantee, the provision of security or otherwise, any financial assistance for the purpose of or in connection with the purchase or subscription made or to be made by any person for purchase of any shares in the Company except in conformity with the provisions of Section 67 of the Act.

91. Underwriting and Brokerage

91.1 Commission may be paid

Subject to the provisions of Section 40 of the Act, the Company may at any time pay a commission to any person in consideration of his subscribing or agreeing to subscribe for any shares in or debentures of the Company, or procuring, or agreeing to procure subscriptions for any shares in or debentures of the Company, but so that the commission shall not exceed in case of shares, five percent of the price at which the shares are issued, and in case of debentures, two and a half percent of the price at which the debentures are issued. Such commission may be satisfied by payment in cash or by allotment of fully or partly paid shares or debentures or partly in one way and partly in the other.

91.2 Brokerage

The Company may also on any issue of shares or debentures, pay such brokerage as may be lawful.

92. Interest out of Capital

Interest may be paid out of capital

Where any shares are issued for the purpose of raising money to defray the expenses of the construction of any work or building or the provision of any plant, which cannot be made profitable for a lengthy period, the Company may pay interest on so much of that share capital as is for the time being paid up, for the period, at the rate and subject to the conditions and restrictions provided by the Company Act, 2013 and may charge the same to capital as part of the cost of construction of the work or building, or the provision of plant.

93. Annual Returns

The Company shall comply with the provisions of Sections 92 of the Act as to the making of Annual Returns.

94. Borrowing powers

94.1 As per the provisions of Section 73, 76, 179, 180 and other applicable provisions of the Act, the Board of Directors may, from time to time at its discretion, by resolution at a meeting of the Board and subject to the approval of the shareholders in General Meeting, accept deposits from Members, either in advance of calls or otherwise, and generally raise or borrow or secure the payment of any sums of money for the purpose of the Company. Provided however, where the moneys already borrowed (apart from temporary loans obtained from the Companys bankers in the ordinary due course of business) exceed the aggregate of the paid-up capital of the Company, its free reserves (not being reserves set apart for any specific purpose) and the securities premium, the Board shall not borrow such moneys without the consent of the Company in General Meeting.

94.2 Payment or repayment of borrowed Moneys

Subject to the provisions of Article 64 hereof, the payment and repayment of moneys borrowed as aforesaid may be secured in such manner and upon such terms and conditions in all respects as the Board of Directors may think fit, by resolutions passed at a meeting of the Board and in particular, by the issue of bonds or debentures of the Company whether unsecured or secured by a mortgage or charge over all or any part of the property of the Company (both present and future) including its uncalled capital for the time being, and debentures and other securities may be made assignable free from any equities between the Company and the person to whom the same may be issued.

94.3 Terms of issue of Debentures

Any debentures or other securities may be issued or otherwise and may be issued on condition that they shall be convertible into shares of any denomination, and with any privileges and conditions to redemption , surrender, drawing, allotment of shares and attending (but not voting) at General Meetings. Debentures with the right to conversion into or allotment of shares shall be issued only with the consent of the Company in

General Meetings accorded by special resolution.

94.4 Register of charges to be Kept

The Board shall cause a proper Register to be kept in accordance with the provisions of Section 85 of the Act of all charges and floating charges affecting the property or assets of the Company or any of its undertakings and shall cause the requirements of Sections 77, 79, and 81 to 87 (both inclusive) of the Act in that behalf to be duly complied with, so far as they are required to be complied with by the Board.

94.5 Register of Debenture holders

The Company shall, if at any time it issues debentures, keep a Register and Index of Debenture holders in accordance with Section 88 of the Act. The Company shall have the power to keep in any Country outside India a Register of Debenture holders residing outside India, in such manner as may be prescribed.

94.6 Application to Debentures and other securities

The provisions of the Articles shall apply mutatis mutandis to debentures, bonds or other securities issued by the company.

95. Dematerialization of Securities

95.1 Definitions :
For the purpose of this Article :

"Depository" means a depository as defined in clause (e) of sub-section (1) of section 2 of the Depositories Act, 1996.

"Beneficial Owner" means a person or persons whose name is recorded in the Register maintained by a Depository under the Depository Act, 1996.

"SEBI" means the Securities and Exchange Board of India established under section 3 of the Securities& Exchange Board of India Act, 1992.

"Securities" means the securities as defined in clause (h) of section 2 of the Securities Contracts (Regulation) Act, 1956;

95.2 Dematerialization of Securities

Notwithstanding anything contained in these Articles, the Company shall be entitled to dematerialize its existing securities, rematerialize its securities held in the Depositories and / or offer its fresh securities in dematerialized form pursuant to the provisions of the Depositories Act, 1996 and the rules framed there under, if any.

95.3 Option for investors

Every person subscribing to or holding securities of the Company shall have the option to receive securities certificates or to hold the securities with the Depository. Such a person who is the beneficial owner of the securities can at any time opt out of the Depository, if permitted by the law, in respect of any security in the manner and within the time prescribed, issued to the beneficial owner the required certificate of the securities. If a person opts to hold his securities with a Depository, the Company shall intimate such Depository, the details of allotment of the security and on receipt of the information, the depository shall enter in its records the name of the allottees as the beneficial owner of the securities.

95.3 Securities in Depository to be in Fungible Form

All securities held by a Depository shall be dematerialized and be in fungible form. Nothing contained in Section 88, 89, 112 and 186 of the Act shall apply to a Depository in respect of the securities held by it on behalf of the Beneficial Owners.

95.4 Rights and Liabilities of Beneficial Owner

(a) Notwithstanding anything to the contrary contained in the Act or these Articles, a Depository shall be deemed to be the registered owner for the purposes of effecting transfer of ownership of security on behalf of the beneficial owners.

		89	(b) Save as otherwise provided in (a) above, the Depository as the registered owner of the securities shall not have any voting rights or any other rights in respect of the securities held by it. (c) Every person holding securities of the Company and whose name is entered as the beneficial owner in the records of the Depository shall be deemed to be a member of the Company. The beneficial owner of securities shall be entitled to all the rights and benefits and be subject to all the liabilities in respect of his securities, which are held, by a Depository. 95.5 Service of Documents Notwithstanding anything to the contrary contained in the Act or Articles to the contrary, where securities are held in a Depository, the records of the beneficial ownership may be served by such Depository on the Company by means of electronic mode or by delivery of floppies or discs. 95.6 Provisions of Articles to apply to shares held in Depository Nothing contained in Section 56 of the Act or these Articles shall apply to a transfer of securities effected by a transferor and transferee both of whom are entered as beneficial owners in the records of a Depository. 95.7 Allotment of Securities dealt within a Depository Notwithstanding anything in the Act or these Articles, where securities are dealt with by the Depository, the Company shall intimate the details thereof to the Depository immediately on allotment of such securities. 95.8 Distinctive numbers of securities held in the depository Mode Nothing contained in the Act or these Articles regarding the necessity of having distinctive numbers on securities issued by the Company shall apply to securities held with a Depository. 95.9 Register and Index of Beneficial Owners The Register and Index of Beneficial Owners maintained by a Depository under the Depositories Act, 1996 shall be deemed to be the Register and Index of member and security holder for the purpose of these Articles. 96. Conversion of Shares into Stock and Reconversion 96.1 Shares may be converted into stock and reconverted The Company in General Meeting may convert any paid up shares into stock and when any shares shall have been converted into stock, the several holders of such stock may henceforth transfer their respective interest therein, or any part of such interest, in the same manner and subject to the same regulations, as if no such conversion had taken place, or as near thereto as circumstances will admit. The Company may at any time reconvert any stock into paid-up shares. 96.2 Rights of stock holders The holders of stock shall, according to the amount of stock held by them, have the same rights, privileges and advantages as regards dividends, voting at meetings of the Company, and other matters, as if they held the shares from which the stock arose 97 Audit 97.1 Accounts to be audited The Auditors of the Company shall be appointed or reappointed by the Comptroller and Auditor General of India and their remuneration, rights and duties shall be regulated by Section 139 to 143 and 145 to 148 of the Act. 97.2 Powers of the Comptroller and Auditor General of India. The Comptroller and Auditor General of India shall have the powers:- (a) to direct the manner in which the Company's accounts shall be audited by the auditors appointed in pursuance of Article hereof and to give such auditors instruction in regard to any matter relating to the performance of their functions as such. (b) to conduct a supplementary or test audit of the financial statement of the Company by such person or

persons as he may authorize in this behalf, and for the purposes of such audit, to have access at all reasonable times, to all accounts, account books, vouchers, documents and other papers of the Company and to require information or additional information to be furnished to any person or persons so authorized on such matters, by such person or persons and in such form as the Comptroller and Auditor General may, by general or special order, direct.

97.3 Comments upon or supplement to audit report by the Comptroller & Auditor General of India to be placed before the annual general meeting

The auditors aforesaid shall submit a copy of his / her audit report to the Comptroller and Auditor General of India who shall have the right to comment upon or supplement such audit report in such manner as he may think fit. Any such comments upon or supplement to the audit report shall be placed before the Annual General Meeting of the Company at the same time and in the same manner as the audit report.

98. Service of Documents

98.1 Manner of Service of Documents

A document or notice may be served or given by the Company to any Member either through speed post, registered post or through electronic mode to his registered address or (if he has no registered address in India) to the address, if any, in India supplied by him to the Company for serving documents or notices on him. Notice is to be sent by the company through its authorized and secured computer programme which is capable of producing confirmation and keeping record of such communication addressed to the person entitled to receive such communication at the last electronic mail address provided by the member.

The notice may be sent through e-mail as a text or as an attachment to e-mail or as a notification providing electronic link or Uniform Resource Locator for accessing such notice through in-house facility or its registrar and transfer agent or authorise any third party agency providing bulk e-mail facility.

98.2 When notices or documents served on Members

Where a document or notice is sent by post, service of the document or notice shall be deemed to be effected by properly addressing, prepaying and posting a letter containing the document or notice.

When notice or notifications of availability of notice are sent by e-mail, the company should ensure that it uses a system which produces confirmation of the total number of recipients e-mailed and a record of each recipient to whom the notice has been sent and copy of such record and any notices of any failed transmissions and subsequent re-sending shall be retained by or on behalf of the company as "proof of sending".

Provided that the member shall provide the updated email address to the company and for that company will provide an advance opportunity atleast once in a financial year, to the member to register his e-mail address and changes therein and such request may be made by only those members who have not got their email id recorded or to update a fresh email id. Notice will also be simultaneously updated in the website of the company.

98.3 By Advertisement

A document or notice advertised in a newspaper circulating in the neighborhood of the Registered Office shall be deemed to be duly served or sent on the day on which the advertisement appears on or to every Member who has no registered address in India and has not supplied to the Company an address within India for the serving of documents on sending the notices to him. Explanatory Statement of material facts under Section 102 need not be advertised but it will be mentioned in the advertisement that the Statement has been forwarded to the Members.

98.4 On personal representatives etc.

A document or notice may be served or given by the Company on or to the persons entitled to a share in consequence of the death or insolvency of a Member by sending it through the post in prepaid letter addressed to them by name or by the title of representative of the deceased, or assignee of the insolvent or by any like description, at the address (if any) in India supplied for the purpose by the persons claimed to be entitled, or until such an address has been so supplied by serving the document or notice in any manner in which the same might have been given if the death or insolvency had not occurred.

98.5 To whom documents or notices must be served or given

Documents or notices of every General Meeting shall be served or given in same manner as herein before or

			to (a) every member of the company, legal representative of any deceased member or the assignee of an insolvent member,(b) the auditor or auditors of the company; and (c) every director of the company. 98.6 Members bound by documents or notices served on or given to previous holders Every person who, by operation of law, transfer or other means whatsoever, shall become entitled to any share, shall be bound by every document or notice in respect of such share, which previously to his name and address being entered in the Register of Members, shall have been duly served on or given to the person from whom he derives his title to such shares 98.7 Documents or notice by Company and signature thereto Any document or notice to be served or given by the Company may be signed by a director or key managerial personnel or an officer of the company duly authorised by the Board in this behalf. 98.8 Service of document or notice by Member All documents or notices to be served or given by Members on or to the Company or any officer thereof shall be served or given by sending it to the Company or Officer at the Office by post or through electronic mode under a certificate of posting or by registered post, or through email. 99. Secrecy (a) Every Director, Manager, Auditor, Treasurer, Trustee, member of a committee, officer, servant, agent, accountant or other person employed in the business of the Company, shall, if so required by the Directors, before entering upon his duties, sign a declaration pledging himself to observe strict secrecy respecting all transactions and affairs of the Company with the customers and the state of the accounts with individuals and in matters relating thereto, and shall by such declaration pledge himself not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required so to do by the Directors or by law or by the person to whom such matters relate and except so far as may be necessary in order to comply with any of the provisions in these presents contained. (b) No Member shall be entitled to visit or inspect any work of the Company without the permission of the Directors or to require discovery of or any information respecting any details of the Company s trading, or any matter which is or may be in the nature of a trade secret, mystery of trade, secret process or any other matter which may relate to the conduct of the business of the Company and which in the opinion of the Directors, it would be in expedient in the interest of the Company to disclose. 100. Copies of Memorandum and Articles of Association to be sent by the Company Copies of the Memorandum and Articles of Association of the Company and other documents referred to in Section 17 of the Act shall be sent by the Company to every Member at his request within seven days of the request on payment of such fees as may be prescribed.

	Subscriber Details				
S. NO	Name, Address, Description and Occupation	DIN/PAN/Passport Number	Place	DSC	Dated
1	PFC CONSULTING LIMITED, having its Registered office at First Floor, Urjanidhi, 1 Barakhamba Lane, Cannaught Place ND 110001, through Sh. Manish Kumar Agarwal, S/o Sh, Narender Agarwal, R/o 41, 2nd floor, Gyan Khand-III, Indirapuram, Shipra Sun City, Ghaziabad, Uttar Pradesh 201014, Occupation Service(as Authorised Signatory of PFC Consulting Limited)	AIEPK3387Q	NEW DELHI	MANISH KUMAR AGARWAL Digitally signed by MANISH KUMAR AGARWAL Date: 2021.05.14 13:03:55 +05'30'	14/05/2021
2	MANOJ KUMAR RANA, R/o A-32/E, DDA Flats, Munirka ND 110067, Description (As a Nominee of PFC CONSULTING LIMITED), Occupation : Service	02263302	NEW DELHI	MANISH KUMAR AGARWAL Digitally signed by MANISH KUMAR AGARWAL Date: 2021.05.14 13:11:56 +05'30'	14/05/2021
3	DHARUMAN MANAVALAN, R/o A-703, Saheta Apartment, Plot No-30, Dwarka Sector 4 ND-110078, Description (As a Nominee of PFC CONSULTING LIMITED), Occupation : Service	08102722	NEW DELHI	D MANAVALAN Digitally signed by D MANAVALAN Date: 2021.05.14 13:01:38 +05'30'	14/05/2021
4	MILIND MADHUSUDAN DAFADIO, R/o Flat C-31, Aishwarya Appt. Sec-4 Plot No. 17, Dwarka, ND 110078, Description (As a Nominee of PFC CONSULTING LIMITED), Occupation : Service	AAHPD8722F	NEW DELHI	MILIND MADHUSUDAN DAFADE Digitally signed by MILIND MADHUSUDAN DAFADE Date: 2021.05.14 13:09:44 +05'30'	14/05/2021
5	NEERAJ SINGH, R/o C-703, F-2 , The Crescent Apartment Sec 50, Noida, Gautam Budha Nagar, UP- 201301 Description (As a Nominee of PFC CONSULTING LIMITED), Occupation : Service	08613892	NEW DELHI	NEERAJ SINGH Digitally signed by NEERAJ SINGH Date: 2021.05.14 12:56:32 +05'30'	14/05/2021
6	SANJAY NAYAK, R/o K-713, Jalvayu Tower Sec 56, Gurgaon, Haryana, 122011, Description (As a Nominee of PFC CONSULTING LIMITED), Occupation : Service	08197193	NEW DELHI	SANJAY KUMAR NAYAK Digitally signed by SANJAY KUMAR NAYAK Date: 2021.05.14 12:52:59 +05'30'	14/05/2021
7	SACHIN SHUKLA, R/o C 5/804 PW O Complex Sec 43, Galleria DLF-Iv Gurgaon 122009 Description (As a Nominee of PFC CONSULTING LIMITED), Occupation : Service	08613963	NEW DELHI	SACHIN SHUKLA Digitally signed by SACHIN SHUKLA Date: 2021.05.14 12:53:47 +05'30'	14/05/2021

Signed Before Me						
Name		Address, Description and Occupation	DIN/PAN/ Passport Number/ Membership Number	Place	DSC	Dated
ACS	ANURADHA JAIN	D-427, 2nd Floor, Ramphal Chowk, (Backside of Goyalsons) Palam Extn, Sector 7, Dwarka, New Delhi-110075, Occupation Practicing Company Secretary	36639	NEW DELHI	ANURADHA JAIN Digitally signed by ANURADHA JAIN 11:02:37 +05'30'	14/05/2021

Checkform Modify

AUJ TRANSMISSION LIMITED NEW DELHI

Khavda - Bhuj Transmission Limited

[Pursuant to Schedule I (see sections 4 and 5) to the Companies Act, 2013] FORM NO. INC-33

SPICe+MOA

(e-Memorandum of Association)

* **Table applicable to company as notified under schedule I of the companies Act, 2013** A

Table A- MEMORANDUM OF ASSOCIATION OF A COMPANY LIMITED BY SHARES

1. The Name of the Company is KHAVDA-BHUJ TRANSMISSION LIMITED

2.The Registered office of the company will be situated in the state of Delhi-DL

3.(a)The objects to be pursued by the company on its incorporation are

(i) To develop Power System Network
To plan, promote and develop an integrated and efficient power transmission system network in all its aspects including planning, investigation, research, design and engineering, preparation of preliminary, feasibility and definite project reports, construction, operation and maintenance of transmission lines, sub-stations, load dispatch stations and communication facilities and appurtenant works, coordination of integrated operation of state, regional and national grid system, execution of turn-key jobs for other utilities/organizations and wheeling of power in accordance with the policies, guidelines and objectives laid down by the Central Government from time to time.

(ii) To study, investigate, collect information and data
To study, investigate, collect information and data, review operation, plan, research, design and prepare Report, diagnose operational difficulties and weaknesses and advise on the remedial measures to improve, undertake development of new and innovative product connected with business of the Company as well as modernize existing EHV, HV lines and Sub-Stations.

(iii) To act as Consultants/ Technical Advisers of public/ private sector enterprises etc.
To act as consultants, technical advisors, surveyors and providers of technical and other services to Public or Private Sector enterprises engaged in the planning, investigation, research, design and preparations of preliminary, feasibility and definite project reports, manufacture of power plant and equipment, construction, generation, operation and maintenance of power transmission system from power generating stations and projects, transmission, distribution and sale of power.

3.(b)Matters which are necessary for furtherance of the objects specified in clause 3(a) are

(i) To obtain authority etc. to carry out its objects
To obtain license, approvals and authorization from Governmental Statutory and Regulatory Authorities, as may be necessary to carry out and achieve the Objects of the Company and connected matters which may seem expedient to develop the business interests of the Company in India and abroad.

(ii) To obtain charters, concession etc.
To enter into any arrangement with the Government of India or with any State Government or with other authorities/ commissions, local bodies or public sector or private sector undertakings, Power Utilities, Financial Institutions, Banks, International Funding Agencies and obtain such charters, subsidies, loans, advances or other money, grants, contracts, rights, sanctions, privileges, licenses or concessions whatsoever (whether statutory or otherwise) which the Company may think it desirable to obtain for carrying its activities in furthering the interests of the Company or its members.

(iii) To enter into Implementation/ Construction Agreement
To enter into any agreement, contract or any arrangement for the implementation of the power generation, evacuation, transmission and distribution system and network with Power/Transmission Utilities, State Electricity Boards, Vidyut Boards, Transmission Companies, Generation Companies, Licensees, Statutory bodies, other organizations (whether in Private, Public or Joint Sector Undertaking) and bulk consumers of power etc.

KHAVDA-BHUJ TRANSMISSION LIMITED NEW DELHI

Khavda - Bhuj Transmission Limited

(iv) To carry on the business or purchasing, importing, exporting and trading power
To carry on the business or purchasing, importing, exporting and trading of power subject to the provisions of Electricity Act,2003 and to supply electric power generated by other plants to distribution companies, trading companies, other generation companies and other Persons, and in this regard execute agreements with Central and State generating authorities, departments or companies, Independent Power Producers and other Persons.

(v) To enter into Agreements; etc.
To secure the payments of money, receivables on transmission and distribution of electricity and sale of fuel, as the case may be, to the State Electricity Boards, Vidyut Boards, Transmission Utilities, Generating Companies, Transmission Companies, Distribution Companies, State Governments, Licensees, statutory bodies, other organizations (whether in Private, Public or Joint Sector Undertaking) and bulk consumers of power etc. through Letter of Credits/ESCROW and other security documents.

(vi) To execute transmission service Agreements
To execute Transmission Service Agreements or other agreements for transmission of power to distribution, trading, and other companies, State Electricity Boards, State Utilities and any other organization and Persons.

(vii) To co-ordinate with Central Transmission Utility
To coordinate with the Central Transmission Utility for transmission of electricity under the provisions of Electricity Act 2003.

(viii) To borrow money
Subject to provisions of Sections 73, 179, 180 and other applicable provisions of the Companies Act, 2013 and subject to other laws or directives, if any, of SEBI/RBI, to borrow money in Indian rupees or foreign currencies and obtain foreign lines of credits/ grants/aids etc. or to receive money or deposits from public for the purpose of the Company's business in such manner and on such terms and with such rights, privileges and obligations as the Company may think fit. The Company may issue bonds/ debentures whether secured or unsecured; bills of exchange, promissory notes or other securities, mortgage or charge on all or any of the immovable and movable properties, present or future and all or any of the uncalled capital for the time being of the Company as the Company may deem fit and to repay, redeem or pay off any such securities or charges.

(ix) To lend money
To lend money on property or on mortgage of immovable properties or against Bank guarantee and to make advances of money against future supply of goods and services on such terms as the Directors may consider necessary and to invest money of the Company in such manner as the Directors may think fit and to sell, transfer or to deal with the same.

(x) To acquire, own, lease or dispose off the property
To own, possess, acquire by purchase, lease or otherwise rights, title and interests in and to, exchange or hire real estate, equipment, Transmission lines, lands, buildings, apartments, plants, equipment, machinery, fuel blocks and hereditaments of any tenure or descriptions situated in India or abroad or any estate or interest therein and any right over or connected with land so situated and turn the same to account in any manner as may seem necessary or convenient for the purpose of business of the Company and to hold, improve, exploit, re-organize, manage, lease, sell, exchange or otherwise dispose of the whole or any part thereof.

(xi) To deal in Scrips/Govt. Securities
Subject to applicable provisions of law, to subscribe for, underwrite, or otherwise acquire, hold, dispose of and deal with the shares, stocks, debentures or other securities and titles of indebtedness or the right to participate in profits or other similar documents issued by any Government authority, Corporation or body or by any company or body of persons and any option or right in respect thereof.

(xii) To create funds and appropriate profits
To create any depreciation fund, reserve fund, sinking fund, insurance fund, gratuity, provident fund or any other fund, for depreciation or for repairing, improving extending or maintaining any of the properties of the Company or for any other purposes whatsoever conducive to the interests of the Company.

(xiii) To purchase or otherwise acquire companies
To acquire shares, stocks, debentures or securities of any company carrying on any business which this Company is entitled to carry on or acquisition of undertaking itself which may seem likely or calculated to promote or advance the interests of the Company and to sell or dispose of or transfer any such shares, stocks or securities and the acquired undertaking.

(xiv) To enter into partnership Agreement or Merge /amalgamate
To enter into partnership or into any agreement for joint working, sharing or pooling profits, joint venture, amalgamation, union of interests, co-operation, reciprocal concessions or otherwise or amalgamate with any person or company carrying on or engaged in or about to carry on or engaged in any business or transaction in India or abroad which the Company is authorized to carry on or engage in any business undertaking having objects identical or similar to, as are being carried on by this Company.

(xv) To have agencies and branch offices in India and abroad
To establish and maintain agencies, branch offices and local agencies, to procure business in any part of India and world and to take such steps as may be necessary to give the Company such rights and privileges in any part of the world as deemed proper in the interest of the Company.

(xvi) To promote institutions or other companies
To promote and undertake the formation of any institution or Company or subsidiary company or for any aforesaid objects intended to benefit the Company directly or indirectly and to coordinate, control and guide their activities.

(xvii) (a) To acquire know how and import-export of machinery and tools etc.
To negotiate and enter into agreements and contracts with domestic and foreign companies, persons or other organizations, banks and

financial institutions, in relation to the business of the Company including that of technical know-how, import, export, purchase or sale of plant, machinery, equipment, tools, accessories and consumables, financial assistance and for carrying out all or any of the objects of the Company.

(xvii) (b) To negotiate and enter into agreements etc.
To negotiate and enter into agreements and contracts for execution of turnkey jobs, works, supplies and export of plant, machinery, tools and accessories etc.

(xviii) To enter into contracts/arrangements in connection with issue of shares/securities. Upon and for the purpose of any issue of shares, debentures or any other securities of the Company, to enter into agreement with intermediaries including brokers, managers of issue/commission agents and underwriters and to provide for the remuneration of such persons for their services by way of payment in cash or issue of shares, debentures or other securities of the Company or by granting options to take the same or in any other manner as permissible under the law.

(xix) To enter into contracts of indemnity and/or guarantee
To enter into contracts of indemnity and get guarantee and allocations for the business of the Company.

(xx) To arrange for Training and Development
To make arrangements for training of all categories of employees and to employ or otherwise engage experts, advisors, consultants etc. in the interest of achieving the Company's objects.

(xxi) To promote conservation, protect environment, theft etc.
To promote conservation and protection of electricity from theft, safety of life and to protect environments including air, land and water etc.

(xxii) To provide for welfare of employees
To pay and provide for the remuneration, amelioration and welfare of persons employed or formerly employed by the Company and their families providing for pension, allowances, bonuses, other payments or by creating for the purpose from time to time the Provident Fund, Gratuity and other Funds or Trusts. Further to undertake building or contributing to the building or houses, dwellings or chawls by grants of money, or by helping persons employed by the Company to effect or maintain insurance on their lives by contributing to the payment of premium or otherwise and by providing or subscribing or contributing towards educational institutions, recreation, hospitals and dispensaries, medical and other assistance as the Company may deem fit.

(xxiii) To take Insurance
To ensure any rights, properties, undertakings, contracts, guarantees or obligations or profits of the Company of every nature and kind in any manner with any person, firm, association, institution or company.

(xxiv) To share the profits pay, dividends and provide bonus etc
To distribute among members of the Company dividend including bonus shares out of profits, accumulated profits or funds and resources of the Company in any manner permissible under law.

(xv) To institute and defend the legal proceedings
To institute, conduct, defend, compound or abandon any legal proceedings by or against the Company or its officers or otherwise concerning the affairs of the Company and also to compound and to allow time for payment or satisfaction of any debts or recovery due, claims or demands by or against the Company and to refer any claims or demands by or against the Company or any differences arising in execution of contracts to conciliation and arbitration and to observe, comply with and/or challenge any awards preliminary, interim or final made in any such arbitration.

(xxvi) To pay and subsequently write off preliminary expenses
To pay out of the funds of the Company all costs, charges, expenses and preliminary and incidental to the promotion, formation, establishment and registration of the Company or other expenses incurred in this regard.

(xvii) To contribute and make donations
Subject to provisions of Companies Act, 2013 to contribute money or otherwise assist to charitable, benevolent, religious, scientific national, defense, public or other institutions or objects or purposes.

(xviii) To open accounts in Banks
To open an account or accounts with any individual, firm or company or with any bank bankers or shrofs and to pay into and withdraw money from such account or accounts.

(xix) To accept gifts, donations etc.
To accept gifts, bequests, devises and donations from members and others and to make gifts to members and others of money, assets and properties of any kind.

(xxx) To pursue the objects of the Company as principal, agents, trustee or in any other capacity
To carry out all or any of the objects of the company and do all or any of the above things in any part of the world and either as principal, agent, contractor or trustee or otherwise and either alone or in conjunction with others.

(xxxi) To enter into Contracts
To negotiate and/or enter into agreement and contract with individuals, companies, corporations, foreign or Indian, for obtaining or providing technical, financial or any other assistance for carrying on all or any of the objects of the Company and also for the purpose of activating, research, development of projects on the basis of know-how and/or financial participation and for technical collaboration, and to acquire or provide necessary formulate and patent rights for furthering the objects of the company.

(xxxii) To contribute towards promotion of trade and industry
To aid pecuniary or otherwise, any association, body or movement having for its object the solution, settlement or surmounting of industrial or labour problems or trouble or the promotion of industry or trade.

(xxxiii) To take all necessary steps for winding up of the company
Subject to the provisions of Companies Act, 2013 or any amendment or re-enactment thereof in the event of winding up to distribute among the members in specie any property of the Company or any proceeds of sale on disposal of any property in accordance with the provisions of the Act.

(xxxiv) To do and perform all coincidental and ancillary acts for the attainment of its objects
To do all such other things as may be deemed incidental or conducive to the attainment of the above Objects or any of them and to carry on any business which may seem to the Company capable of being conveniently carried in connection with any of the Company's Objects or calculated directly or indirectly to enhance the value of or render profitable any of the Company's property or rights.

(xxxv) To take up studies and research experiments.
To establish, provide, maintain and conduct or otherwise subsidies research laboratories and experimental workshops for scientific, technical or researches, experiments and to undertake and carry on directly or in collaboration with other agencies scientific and technical research experiments and tests of all kinds and to process, improve and invent new products and their techniques of manufacture and to promote, encourage, reward in every manner studies and research, scientific and technical investigations and inventions of any kind that may be considered likely to assist, encourage and promote rapid advances in technology, economies, import substitution or any business which the Company is authorized to carry on.

(xxxvi) To evolve scheme for restructuring or arrangement.
Subject to provisions of the Companies Act,2013, to evolve scheme for restructuring or arrangement, to amalgamate or merge or to enter into partnership or into any consortium or arrangement for sharing of profits, union of interests, co-operation, joint venture with any Person or Persons, partnership firm/firms, or company or companies carrying on or engaged in any operation capable of being conducted so conveniently in co-operation with the business of the Company or to benefit the Company or to the activities for which the Company has been established.

(xxxvii) To apply for purchase, or otherwise acquire.
To apply for purchase, or otherwise acquire any trademarks, patents, brevets, inventions, licenses, concessions and the like, conferring any exclusive or nonexclusive or limited rights to use, or any secret or other information as to any invention which may be capable of being used for any of the purposes of the Company, or the acquisition of which may benefit the Company and to use, exercise, develop or grant licenses in respect of or otherwise turn to account the property, rights or information so acquired.

(xxxviii) To sell, dispose or hive off an undertaking of the Company
To sell, dispose or hive off an undertaking of the Company or any part thereof for such consideration as the Company may think fit and in particular for shares, debentures or securities of any other association, corporation or company.

(xxxix)To sell, improve, manage, develop
To sell, improve, manage, develop, exchange, loan, lease or let, under-lease, sub - let, mortgage, dispose of, deal with in any manner, turn to account or otherwise deal with any rights or property of the Company.

(xxxx)To outsource parts of its activities
To outsource parts of its activities to achieve higher efficiencies and throughputs in the achievement of its business goals.

4.The liability of the member(s) is limited and this liability is limited to the amount unpaid, if any, on the shares held by them.

5.The share capital of the company is 100,000.00 rupees, divided into,

10,000.00	Equity	shares of	10.00	rupees each	,and

6 ☒ We, the several persons, whose names and addresses are subscribed, are desirous of being formed into a company in pursuance of this memorandum of association, and we respectively agree to take the number of shares in the capital of the company set against our respective names:

☐ I, whose name and address is given below, am desirous of forming a company in pursuance of this memorandum of association and agree to take all the shares in the capital of the company (Applicable in case of one person company):

S.No.	Subscriber Details					
	Name, Address, Description and Occupation	DIN/PAN/Passport Number	No. of shares taken		DSC	Dated
1	PFC CONSULTING LIMITED, having its Registered Office at First Floor Urjanidhi 1, Barakhamba Lane, Cannaught palace, ND 110001. through Sh. Manish Kumar Agarwal, S/o Sh. Narender Agarwal, R/o 41, 2nd Floor, Gyan Khand-III, Indirapuram, Shipra Sun City, Ghaziabad, Uttar Pradesh 201014 Occupation: Service (as Authorised Signatory of PFC Consulting Limited)	AIEPK3387Q	9,400	Equity	MANISH KUMAR AGARWAL Digitally signed by MANISH KUMAR AGARWAL Date: 2021.05.14 13:06:01 +05'30'	14/05/21
				Preference		
2	MANOJ KUMAR RANA A-32/E DDA Flats, Munirka, ND-110067 Occupation: Service (as Nominee of PFC Consulting Limited)	02263302	100	Equity	MANOJ KUMAR RANA Digitally signed by MANOJ KUMAR RANA Date: 2021.05.14 13:15:43 +05'30'	14/05/21
				Preference		
3	DHARUMAN MANAVALAN A-703, Saheta Apartment Plot No. 30, Dwarka Sector-4 Delhi 110078 Occupation: Service (as Nominee of PFC Consulting Limited)	08102722	100	Equity	D MANAVALAN Digitally signed by D MANAVALAN Date: 2021.05.14 12:58:55 +05'30'	14/05/21
				Preference		
4	MILIND MADHUSUDAN DAFADE C-31, Aishwarayan Apartment Sec-4, Plot No. 17, Dwarka, ND 110078 Occupation: Service (as Nominee of PFC Consulting Limited)	AAHPD8722F	100	Equity	MILIND MADHUSUDAN DAFADE Digitally signed by MILIND MADHUSUDAN DAFADE Date: 2021.05.14 13:07:04 +05'30'	14/05/21
				Preference		
5	NEERAJ SINGH, C-703, F-2 the Cresent Apartment, Sec 50, Noida Gautam Buddha Nagar UP- 201301 Occupation: Service (as Nominee of PFC Consulting Limited)	08613892	100	Equity	NEERAJ SINGH Digitally signed by NEERAJ SINGH Date: 2021.05.14 12:58:01 +05'30'	14/05/21
				Preference		
6	SANJAY NAYAK K713, Jalvayu Tower Sec.56 , Gurgaon 122011 Occupation: Service (as Nominee of PFC Consulting Limited)	08197193	100	Equity	SANJAY KUMAR NAYAK Digitally signed by SANJAY KUMAR NAYAK Date: 2021.05.14 12:50:52 +05'30'	14/05/21
				Preference		
7	SACHIN SHUKLA C/5 804, PW O House Complex Sec-43 Galleria DLF-Iv, gurgaon 122009 Occupation: Service (as Nominee of PFC Consulting Limited)	08613963	100	Equity	SACHIN SHUKLA Digitally signed by SACHIN SHUKLA Date: 2021.05.14 12:55:19 +05'30'	14/05/21
				Preference		
	Total Shares taken		10,000.0	Equity		
				Preference		

Signed before Me				
		DIN/PAN/Passport		

Khavda - Bhuj Transmission Limited

Name		Address, Description and Occupation	Number/ Membership Number	DSC	Dated
ACS	ANURADHA JAIN	D-427, 2nd Floor, Ramphal Chowk, (Backside of Goyalsons) Palam Extn, Sector 7, Dwarka, New Delhi-110075 Occupation: Practicing Company Secretary	36639	ANURADHA JAIN Digitally signed by ANURADHA JAIN Date: 2021.05.14 11:05:23 +05'30'	14/05/21

Modify Check Form

Annexure - 11

adani
Transmission

CERTIFIED TRUE COPY OF THE RESOLUTION PASSED AT THE MEETING OF THE BOARD OF DIRECTORS OF KHAVDA-BHUJ TRANSMISSION LIMITED HELD ON 18TH JANUARY 2022

SUB: AUTHORISATION TO MAKE APPLICATION BEFORE CENTRAL ELECTRICITY REGULATORY COMMISSION

"**RESOLVED THAT** Mr. M.R. Krishna Rao, Mr Hitesh Vaghasiya, Mr. Sameer Ganju, Mr. Tanmay Vyas, Mr. Anupam Sawhney, Mr. Praveen Tamak, Mr. Narendra Ojha, Mr. Bhavesh Kundalia, Mr. Matulya Shah, Mr. Rajesh Sirigirishetty, Mr Atul Kumar Singh, and Mr. Afak Pothiawala, (hereinafter referred to as Authorised Signatories) be and are hereby severally authorised to sign and submit petitions, affidavits, agreements, declarations, undertakings, deeds, Bills, Availability Certificates and other documents in connection therewith or incidental thereto before Central Electricity Regulatory Commission (CERC) or Appellate Tribunal for Electricity (APTEL) and other regulatory authorities for and on behalf of the Company.

RESOLVED FURTHER THAT Authorised Signatories be and are hereby severally authorised (a) to issue notices, affidavit and other documents, communications to Long Term Transmission Customers and other Parties / agencies, including Central Transmission Utility of India Limited. and WRLDC/SRLDC (b) to file Petition, Affidavit, Notices and other documents before Regulatory Commission or other Electricity body, Appellate Tribunal for Electricity and Supreme Court for issues arising out of Transmission Service Agreement and Bulk Power Transmission Agreement, (c) to engage, appoint or remove any pleaders or advocates, and sign vakalatnamas, power of attorney for such engagement or appointment and (d) to file appeal and defend the interest of the Company."

Certified True Copy
For Khavda-Bhuj Transmission Limited

Shashank Sharma
Director
(DIN: 09336142)

Khavda - Bhuj Transmission Limited

KHAVDA-BHUJ TRANSMISSION LIMITED
Adani Corporate House
Shantigram, Near Vaishnav Devi Circle,
S. G. Highway, Khodiyar,
Ahmedabad 382 421
Gujarat, India
CIN: U40108DL2021GOI381217

Registered Office: C-105, Anand Niketan, New Delhi - 110 021.

Tel +91 79 2555 7555
Fax +91 79 2555 7177
info@adani.com
www.adanitransmission.com

Khavda - Bhuj Transmission Limited