



**भारत सरकार Govt. of India**  
**विद्युत् मंत्रालय Ministry of Power**  
**केन्द्रीय विद्युत प्राधिकरण Central Electricity Authority**  
**नई दिल्ली New Delhi**

**Monthly progress Report of  
Transmission Projects awarded through  
Tariff Based Competitive Bidding (TBCB)  
Route  
(Under Construction Projects)  
(As on 30.09.2023)**

(Published in fulfilment of CEA's obligation under section 73(i) & (j) of the Electricity Act, 2003)

(Disclaimer: The information published in this report is for indicative purpose only and shall not be used as a ground to claim time & cost overrun. Further, in no way this information, as per article 5.8 (Remedial measures) of TSA, relieves the TSP of its obligations in the agreement.)

In this report single star mark (\*) represent that as per Ministry of Power, Govt. of India circular No. 3/1/2020-Trans dated 27th July, 2020, all inter-state projects whose SCOD is beyond 25<sup>th</sup> March, 2020 and which were under construction on 25<sup>th</sup> March, 2020, have been given an extension of 5 months in respect of SCOD.

In this report double star mark (\*\*) represent that as Ministry of Power, Govt. of India circular No. 3/1/2020-Trans dated 12th June, 2021, all inter-state transmission projects which are under construction with SCOD coming after 01 April, 2021 shall get an extension of 3 months in respect of their SCOD.

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### **Summary**

<b>Total Transmission Projects Awarded</b>	<b>88</b>
<b>Transmission Projects Commissioned/Ready for commissioning</b>	<b>46</b>
<b>Transmission Projects Under Construction</b>	<b>38</b>
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# POWERGRID

# **1. Transmission system associated with LTA applications from Rajasthan SEZ Part-A, Phase-II**

## **Background**

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. This includes solar generation potential of about 20 GW in Rajasthan. Transmission system for evacuation of 8.9 GW under phase-I has already been taken up for implementation. Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (11.1 GW – 3 GW through intra state) under Phase II, inter-alia includes evacuation of 1.05GW in Bhadla complex, 2.2GW in Fatehgarh complex, 1.9GW in Ramgarh and 2.95 GW in Bikaner.

For integration and evacuation of power from generation projects in the above areas, a high capacity 765 kV and 400 kV transmission system interconnecting Bhadla-II, Fatehgarh-II, Sikar & Khetri along with establishment of 765/400 kV new substation at Sikar-II & Narela and 400/220 kV new substation at Bikaner-II & Ramgarh-II have been planned.

The subject transmission scheme involves establishment of 400/220 kV Ramgarh-II S/s & implementation of Ramgarh-II PS – Fatehgarh-II PS 400 kV D/c & Ramgarh –II PS– Jaisalmer-II (RVPN) 400 kV D/c lines which shall facilitate in transfer of power from RE sources in Ramgarh complex for onward dispersal of power to various beneficiaries.

## **Scope of Transmission Project-**

### **Transmission Line**

Ramgarh II – Fatehgarh II 400 kV D/C line (Twin HTLS)

Ramgarh II – Jaisalmer-II (RVPNL) 400 kV D/C line (Twin HTLS)

### **Substation**

Establishment of 400/220 kV , 4X 500 MVA substation at Ramgarh –II (Fatehgarh –III) with 2x 125 M6VAr Bus reactors

02 No 400 kV line bays at Fatehgarh II & Jaisalmer-II

### **General Details**

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	: POWERGRID Ramgarh Transmission Limited (A
Bid Process Coordinator (BPC)	: REC Ltd.
Estimated Cost	: ₹ 353.85 Cr.
Levellised Tariff	: ₹ 39.053 Cr.
Request for Proposal	: 11.05.20
Letter of Intent	: 29.01.21
Transmission Service Agreement (TSA)	: 11.11.20
SPV acquisition	: 09.03.21
Transmission License by CERC	: 31.05.21
Tariff adoption by CERC	: 05.05.21
Clearance u/s 164	: 20.12.21

Execution plan submitted to CEA	:	To be submitted.
NIT issued on	:	NIT for all Pkges issued.
EPC awarded on	:	NOAs issued
Scheduled Date of Completion	:	Sep'22/Dec'22**

### **Status of progress of transmission project:-**

#### **1. Ramgarh II – Fatehgarh II 400 kV D/C line ( Twin HTLS)**

Length:	44 km
Locations:	114 Nos.
Foundation completed	114 Nos.
Towers erected	114 Nos.
Stringing completed	38 km
Scheduled COD	Sep'22/Dec'22**
Anticipated COD	Oct'23

### **Status of statutory approvals:**

#### **River Crossings**

Total No. of crossings	:	NIL	Nos.
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#### **Power line crossing**

Total No. of crossings	:	10	Nos.
Proposal submitted	:	10	Nos.
Approval obtained	:	10	Nos.

#### **Railway crossing**

Total No. of crossings	:	NIL
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#### **National Highway Crossing**

Total No. of crossings	:	1	Nos.
Proposal submitted	:	1	Nos.
Approval obtained	:	1	Nos.

#### **Forest:**

Forest (0.0920 Ha): Online Submission:28.04.21. Stage-I accorded from O/o Sec (Forest), Govt. of Raj on 18.11.2021 Stage-II issued on 20.01.23.

<b>PTCC approval</b>	:	Proposal submitted , under approval.
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<b>Defence Aviation</b>	:	NOC Received
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<b>Civil Aviation</b>	:	NOC Received
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#### **2. Ramgarh II – Jaisalmer-II (RVPNL) 400 kV D/C line (Twin HTLS)**

Award placed to M/s KPTL

Length:	50 km
Locations:	129 Nos.
Scheduled COD	Sep'22/Dec'22**
Actual COD	Sep'23



### **3. Status of progress of Substation and Bay Extensions:-**

#### **(a) 400/220 kV New Ramgarh II Substation ( Fatehgarh -III)**

Land Acquisition	:	Land Taken over
Civil work completed	:	98%
Equipment supplied	:	98%
Equipment erection	:	95%
Scheduled COD	:	Sep'22/Dec'22**
Anticipated COD	:	Oct'23

#### **(b) Extension of 400 Fatehgarh-II Substation**

Land Acquisition	:	Available
Civil work completed	:	99%
Equipment supplied	:	99%
Equipment erection	:	99%
Scheduled COD	:	Sep'22/Dec'22**
Anticipated COD	:	Oct'23

#### **(c) Extension of 400 kV Jaisalmer II Substation**

Scheduled COD	:	Sep'22/Dec'22**
Actual COD	:	Sep'23

#### **Constraints being faced during execution:**

1. Work affected due to COVID-19 pandemic.
2. Complete project lies in the GIB Potential area. Clearance from the Supreme court committee received on 18.07.22.

## 2. Transmission system associated with LTA applications from Rajasthan SEZ Part-B, Phase-II

### Background

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. This includes solar generation potential of about 20 GW in Rajasthan. Transmission system for evacuation of 8.9 GW under phase-I has already been taken up for implementation. Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (11.1 GW – 3 GW through intra state) under Phase II, inter-alia includes evacuation of 1.05GW in Bhadla complex, 2.2GW in Fatehgarh complex, 1.9GW in Ramgarh and 2.95 GW in Bikaner.

For integration and evacuation of power from generation projects in the above areas, a high capacity 765 kV and 400 kV transmission system interconnecting Bhadla-II, Fatehgarh-II, Sikar & Khetri along with establishment of 765/400 kV new substation at Sikar-II & Narela and 400/220 kV new substation at Bikaner-II & Ramgarh-II have been planned.

The subject transmission scheme involves establishment of 400/220 kV Bikaner-II S/s & implementation of Bikaner-II – Khetri 400 kV D/c & Khetri - Bhiwadi 400 kV D/c lines.

### Scope of Transmission Project-

#### Transmission Line

- Fatehgarh II – Bhadla II 765 kV D/C line (2<sup>nd</sup>)

#### Substation

- Construction of 02 Nos. of 765 kV line bays at Fatehgarh II for Fatehgarh II – Bhadla II 765 kV D/c line along with 2 x 240 MVAR switchable line reactors.
- Construction of 02 Nos. of 765 kV line bays at Bhadla II for Fatehgarh II – Bhadla II 765 kV D/c line along with 2 x 240 MVAR switchable line reactors.

#### General Details

Special Purpose Vehicle (SPV) (A subsidiary of POWERGRID)	:	<b>POWERGRID Bhadla Transmission Limited</b>
Bid Process Coordinator (BPC)	:	REC Transmission Projects Company Ltd..
Estimated Cost	:	₹ 713.82 Cr.
Levelling Tariff	:	₹ 72.893 Cr.
Request for Proposal	:	05.03.20
Letter of Intent	:	29.01.21
Transmission Service Agreement (TSA)	:	11.11.20
SPV acquisition	:	04.06.21
Transmission License by CERC	:	25.11.22
Tariff adoption by CERC	:	Applied on 16.06.21
Clearance u/s 164	:	22.02.22
Execution plan submitted to CEA	:	To be submitted.
NIT issued on	:	NIT for all Pkges issued.
EPC awarded on	:	NOAs issued

Scheduled Date of Completion : Dec'22

**Status of progress of transmission project:-**

**Fatehgarh II – Bhadla II 765 kV D/C line (Twin HTLS)**

Award placed to M/s L&T and M/s KEC

- Length: 202.3 km
- Locations: 532 Nos.
- Foundation completed 376 Nos.
- Towers erected 291 Nos
- Stringing completed 3.5 km
- Scheduled COD Dec'22
- Anticipated COD Feb'24

**Status of statutory approvals:**

**River Crossings**

Total No. of crossings : NIL Nos.

**Power line crossing**

Total No. of crossings : 21 Nos.

Proposal submitted : 21 Nos.

Approval obtained : 21 Nos.

**Railway crossing**

Total No. of crossings : 02 Nos.

Proposal submitted : 02 Nos.

Approval obtained : 02 Nos.

**National Highway Crossing**

Total No. of crossings : 02 Nos.

Proposal submitted : 02 Nos.

Approval obtained : 02 Nos.

**Forest:**

Division Name: Jaisalmer & Jodhpur (0.2216)

Forest type: PF (NH-1, Jaisalmer)

Online Proposal submission: 26.04.21. Stage-I accorded on 01.02.2022 from State Govt. of Raj.

Stage-II accorded on 23.11.2022.

**PTCC approval** : Proposal submitted , under approval.

**Defence Aviation** : Proposal approved.

**Civil Aviation** : Proposal approved.

**Constraints being faced during execution:**

1. Work affected due to COVID-19 pandemic.
2. Supreme Court committee clearance in GIB case received on 18.07.22 with diverted route. Transmission license received on 25.11.22.

## **Status of progress of Substation and Bay Extensions:-**

### **1. Extension of 765 kV Fatehgarh II Substation**

Land Acquisition	:	Available.
Civil work completed	:	85%
Equipment supplied	:	85%
Equipment erection	:	70%
Scheduled COD	:	Dec'22
Anticipated COD		Feb'24

### **2. Extension of 765 kV Bhadla II Substation**

Land Acquisition	:	Available
Civil work completed	:	85%
Equipment supplied	:	85%
Equipment erection	:	65%
Scheduled COD	:	Dec'22**
Anticipated COD		Feb'24

### **Constraints being faced during execution:**

1. Work affected due to COVID-19 pandemic.

### 3. Transmission system associated with LTA applications from Rajasthan SEZ Part-C, Phase-II

#### Background

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. This includes solar generation potential of about 20 GW in Rajasthan. Transmission system for evacuation of 8.9 GW under phase-I has already been taken up for implementation. Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (11.1 GW – 3 GW through intra state) under Phase II, inter-alia includes evacuation of 1.05GW in Bhadla complex, 2.2GW in Fatehgarh complex, 1.9GW in Ramgarh and 2.95 GW in Bikaner.

For integration and evacuation of power from generation projects in the above areas, a high capacity 765 kV and 400 kV transmission system interconnecting Bhadla-II, Fatehgarh-II, Sikar & Khetri along with establishment of 765/400 kV new substation at Sikar-II & Narela and 400/220 kV new substation at Bikaner-II & Ramgarh-II have been planned.

The subject transmission scheme involves establishment of 400/220 kV Bikaner-II S/s & implementation of Bikaner-II – Khetri 400 kV D/c & Khetri - Bhiwadi 400 kV D/c lines.

#### Scope of Transmission Project-

##### Transmission Line

- Bhadla II – Sikar II 765 kV D/C line
- Sikar II – Neemrana 400 kV D/C (Twin HTLS)

##### Substation

- Establishment of 765/400 kV Sikar II Substation with 2x 1500 MVA 765/400 kV ICTS, 2x 330 MVar, 765 kV Bus Reactors and 1x 125 MVar, 400 kV Bus Reactor and 2x 330MVar Switchgear line reactors for Bhadla II – Sikar II transmission Line.
- Construction of 02 No 765 kV bays at Bhadla II for Bhadla II – Sikar II 765 kV D/C Line along with 2/240MVar switchable line reactors.
- Construction of 02 No 400 kV bays at Neemrana for Sikar II – Neemrana 400 kV D/C line.

##### General Details

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	:	POWERGRID Sikar Transmission Limited (A
Bid Process Coordinator (BPC)	:	REC Transmission Projects Company Ltd.
Estimated Cost	:	₹ 1562 Cr.
Levelling Tariff	:	₹ 163.705 Cr.
Request for Proposal	:	05.03.20
Letter of Intent	:	01.02.21
Transmission Service Agreement (TSA)	:	14.12.20
SPV acquisition	:	04.06.21
Transmission License by CERC	:	27.05.22
Tariff adoption by CERC	:	05.05.22
Clearance u/s 164	:	19.04.23
Execution plan submitted to CEA	:	Submitted.
NIT issued on	:	NIT for all Pkges issued.

EPC awarded on	:	NOAs issued
Scheduled Date of Completion	:	Dec'22

### **Status of progress of transmission project:-**

#### **1. Bhadla II – Sikar II 765 kV D/C line**

Award placed to M/s KEC

Length:	307 km
Locations:	779 Nos.
Foundation completed	620 No.
Towers erected	507 Nos.
Stringing completed	82 km
Scheduled COD	Dec'22
Anticipated COD	Jun'24

### **Status of statutory approvals:**

#### **River Crossings**

Total No. of crossings	:	NIL	Nos.
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#### **Power line crossing**

Total No. of crossings	:	17	Nos.
Proposal submitted	:	17	Nos.
Approval obtained	:	17	Nos.

#### **Railway crossing**

Total No. of crossings	:	03	Nos.
Proposal submitted	:	03	Nos.
Approval obtained	:	03	Nos.

#### **National Highway Crossing**

Total No. of crossings	:	04	Nos.
Proposal submitted	:	04	Nos.
Approval obtained	:	04	Nos.

#### **Forest:**

**Forest (0.6231 Ha):** Online Submission:01.06.2021; Marked to DFO Jodhpur, Nagaur, Sikar:08.07.2021. DFO, Sikar raised query on 15.07.21 & replied on 09.08.21. DFO, Nagaur raised query on 07.09.21. Reply to concern DFO submitted on 04.02.2022. Documents related to change of area from 0.6231 Ha to 0.7912 Ha are uploaded on 04.02.2022. DFO, Nagaur inspection completed. Vide letter dated 07.03.22, DFO, Sikar has sought additional information from Power Grid.

DFO, Sikar on 20.02.2023 had requested Power Grid to submit hardcopies of forest proposals as per revised area & same were submitted to DFO on 26.04.23. DFO Sikar forwarded proposal on 24.05.23. Compliance of query raised on 05.07.23 by DFO, Nagaur submitted on 07.08.23. DFO, Nagaur has forwarded proposal to CCF, Ajmer on 31.08.23. On 11.09.23, CCF, Jodhpur has requested to submit hard copies of forest proposal and same has been to submitted to CCF, Jodhpur on 29.09.23.

<b>PTCC approval</b>	:	Proposal under finalization due to change in land
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<b>Defence Aviation</b>	:	Proposal under finalization due to change in land
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<b>Civil Aviation</b>	:	Proposal under finalization due to change in land
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## 2. Sikar II - Neemarana 400 kV D/C line (Twin HTLS)

Award placed to M/s KEC

Length:	142.3 km
Locations:	395 Nos.
Foundation completed	276Nos
Towers erected	215 Nos.
Stringing completed	12.5 km
Scheduled COD	Dec'22
Anticipated COD	Jun'24

### Status of statutory approvals:

#### River Crossings

Total No. of crossings : NIL Nos.

#### Power line crossing

Total No. of crossings : 19 Nos.  
Proposal submitted : 19 Nos.  
Approval obtained : 19 Nos.

#### Railway crossing

Total No. of crossings : 02 Nos.  
Proposal submitted : 01 Nos.  
Approval obtained : 01 Nos.

#### National Highway Crossing

Total No. of crossings : 04 Nos.  
Proposal submitted : 03 Nos.  
Approval obtained : 03 Nos.

**Forest (13.013 Ha, Rajasthan):** Online proposal submitted on 29.06.2021 & accepted by Nodal on 19.08.2021. Stage-I clearance accorded on 22.12.2022. Compliance Submitted on 11.04.2023. Compliance to FRA (Forest Rights Act) under submission for Stage-II approval.

**Forest (0.483 Ha, Haryana):** Online proposal submitted on 08.08.2021 & accepted by Nodal on 20.08.2021 Stage-I issued on 07.08.23. Demand letter received on 21.08.23. Payment done on 26.9.23.

**PTCC approval** : Proposal under preparation.

**Defence Aviation** : Proposal under preparation.

**Civil Aviation** : Proposal under preparation.

### Constraints being faced during execution:

1. Work affected due to COVID-19 pandemic.
2. Supreme Court Committee clearance received on 13.01.22.
3. Transmission Licence by CERC received on 27.05.22.

### Status of progress of Substation and Bay Extensions:-

#### 1. 765/400 kV Sikar II New Substation

Land Acquisition	:	Land being purchased through open tender.
Civil work completed	:	to Start
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Dec'22**
Anticipated COD	:	Jun'24

## **2. Extension of 765 kV Bhadla II Substation**

Land Acquisition	:	Available
Civil work completed	:	99%
Equipment supplied	:	99 %
Equipment erection	:	99 %
Scheduled COD	:	Dec'22**
Anticipated COD	:	Jun'24

## **3. Extension of 400 kV Neemrana Substation**

Land Acquisition	:	Available
Civil work completed	:	99%
Equipment supplied	:	99%
Equipment erection	:	99%
Scheduled COD	:	Dec'22**
Anticipated COD	:	Jun'24

### **Constraints being faced during execution:**

1. Work affected due to COVID-19 pandemic.
2. Supreme Court Committee clearance received on 13.01.22. Transmission Licence received on 27.05.22.
3. POWERGRID was facing difficulty in purchase of land within BPC specified radius. Issue raised with MoP for increasing the radius. Direction for resolution of issue received in meeting held in May'23 under chairmanship of Secretary Power. Proposal of Govt. land approved in Cabinet meeting held in Sep'23. Persuasion with Govt. of Rajasthan for commencement of works is under progress.



## 4. Transmission system associated with LTA applications from Rajasthan SEZ Part-D, Phase-II

### Background

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. This includes solar generation potential of about 20 GW in Rajasthan. Transmission system for evacuation of 8.9 GW under phase-I has already been taken up for implementation. Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (11.1 GW – 3 GW through intra state) under Phase II, inter-alia includes evacuation of 1.05GW in Bhadla complex, 2.2GW in Fatehgarh complex, 1.9GW in Ramgarh and 2.95 GW in Bikaner.

For integration and evacuation of power from generation projects in the above areas, a high capacity 765 kV and 400 kV transmission system interconnecting Bhadla-II, Fatehgarh-II, Sikar & Khetri along with establishment of 765/400 kV new substation at Sikar-II & Narela and 400/220 kV new substation at Bikaner-II & Ramgarh-II have been planned.

The subject transmission scheme involves establishment of 400/220 kV Bikaner-II S/s & implementation of Bikaner-II – Khetri 400 kV D/c & Khetri - Bhiwadi 400 kV D/c lines.

### Scope of Transmission Project-

#### Transmission Line

Sikar II- Aligarh 765 kV D/C line

#### Substation

- Construction of 02 No 765 kV bays at Sikar II for Sikar II- Aligarh 765 kV D/C Line along with 2x330 MVAR switchable line reactors.
- Construction of 02 No 765 kV bays at Aligarh for Sikar II- Aligarh 765 kV D/C Line along with 2x330 MVAR switchable line reactors

#### General Details

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	:	Sikar II – Aligarh Transmission Limited (A
Bid Process Coordinator (BPC)	:	PFC Consulting Ltd.
Estimated Cost	:	₹ 1006 Cr.
Levelling Tariff	:	₹ 99.701Cr.
Request for Proposal	:	06.03.20
Letter of Intent	:	16.02.21
Transmission Service Agreement (TSA)	:	02.11.20
SPV acquisition	:	08.06.21
Transmission License by CERC	:	28.05.22
Tariff adoption by CERC	:	06.05.22.
Clearance u/s 164	:	20.10.22
Execution plan submitted to CEA :		To be submitted.
NIT issued on	:	NIT for all Pkges issued.
EPC awarded on	:	NOAs issued
Scheduled Date of Completion	:	Dec'22

## Status of progress of transmission project:-

### 1. Sikar II – Aligarh 765 kV D/C line

Award placed to M/s KPTL

Length:	264.2 km
Locations:	704 Nos.
Foundation completed	666 Nos.
Towers erected	649 Nos.
Stringing completed	239 km
Scheduled COD	Dec'22
Anticipated COD	Jun'24

## Status of statutory approvals:

### River Crossings

Total No. of crossings	:	NIL	Nos.
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### Power line crossing

Total No. of crossings	:	36	Nos.
Proposal submitted	:	36	Nos.
Approval obtained	:	36	Nos.

### Railway crossing

Total No. of crossings	:	03	Nos.
Proposal submitted	:	03	Nos.
Approval obtained	:	03	Nos.

### National Highway Crossing

Total No. of crossings	:	06	Nos.
Proposal submitted	:	06	Nos.
Approval obtained	:	06	Nos.

**Forest (15.6043 Ha, Rajasthan):** Online proposal submitted on 26.07.2021 & accepted by Nodal on 03.09.2021. Stage-I issued on 10.08.23. Payment submission under process.

**Forest (15.8589 Ha, Haryana):** Online proposal submitted on 19.08.2021 & accepted by Nodal on 23.09.2021. Stage-I issued on 08.05.23. Stage-II issued on 13.07.23.

**Forest (1.3668 Ha, UP):** Online proposal submitted on 25.08.2021. Stage-I clearance accorded on 24.06.2022. Demand letter from DFO, Mathura received on 12.07.2022 and payment done on 08.08.22. Stage-I compliance submitted to respective DFOs on 16.08.2022. Working permission accorded on 17.11.22.

PTCC approval	:	Under approval
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Defence Aviation	:	NOC received.
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Civil Aviation	:	NOC received.
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**Constraints being faced during execution:**

1. Work affected due to COVID-19 pandemic.

**Status of progress of Substation and Bay Extensions:-****1. Extension of 765 kV Sikar II Substation**

Land Acquisition	:	Land being purchased through open tender.
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Dec'22
Anticipated COD	:	Jun'24

**2. Extension of 765 kV Aligarh Substation**

Land Acquisition	:	Available
Civil work completed	:	100%
Equipment supplied	:	100%
Equipment erection	:	100%
Scheduled COD	:	Dec'22**
Anticipated COD	:	Mar'24

**Constraints being faced during execution:**

1. Work affected due to COVID-19 pandemic.

## **5. Transmission system associated with LTA applications from Rajasthan SEZ Part-G, Phase-II**

### **Background**

The Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. This includes solar generation potential of about 20 GW in Rajasthan. Transmission system for evacuation of 8.9 GW under phase-I has already been taken up for implementation. Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (11.1 GW – 3 GW through intra state) under Phase II, inter-alia includes evacuation of 1.05GW in Bhadla complex, 2.2GW in Fatehgarh complex, 1.9GW in Ramgarh and 2.95 GW in Bikaner.

For integration and evacuation of power from generation projects in the above areas, a high capacity 765 kV and 400 kV transmission system interconnecting Bhadla-II, Fatehgarh-II, Sikar & Khetri along with establishment of 765/400 kV new substation at Sikar-II & Narela and 400/220 kV new substation at Bikaner-II & Ramgarh-II have been planned.

The subject transmission scheme involves establishment of 765/400 kV Narela S/s & implementation of Khetri – Narela 765 kV D/c Line & LILO of 765 kV S/c Meerut – Bhiwani line at Narela.

### **Scope of Transmission Project-**

#### **Transmission Line**

1. Khetri – Narela 765 kV D/c Line
2. LILO of 765 kV S/c Meerut – Bhiwani line at Narela.

#### **Substation**

1. Establishment of 765/400 kV , 3X1500 MVA GIS substation at Narela with 765 kV (2x330 MVAr) bus reactor and 400 kV (1x125 MVAR) bus reactor.
2. Construction of 02 No 765 kV bays at Khetri for Khetri – Narela 765 kV D/c Line

### **General Details**

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	:	Khetri Narela Transmission Limited (A
Bid Process Coordinator (BPC)	:	PFC Consulting Ltd.
Estimated Cost	:	₹ 1618 Cr.
Levelised Tariff	:	₹ 177Cr.
Request for Proposal	:	06.03.20
Letter of Intent	:	28.02.22
Transmission Service Agreement (TSA)	:	07.12.21

SPV acquisition	:	11.05.22
Transmission License by CERC	:	26.09.22
Tariff adoption by CERC	:	23.07.22
Clearance u/s 164	:	27.01.23
Execution plan submitted to CEA	:	To be Submitted.
NIT issued on	:	NIT for all Pkges issued.
EPC awarded on	:	NOAs for all package issued except Reactors
Scheduled Date of Completion	:	Nov'23

#### 1. **Khetri – Narela 765 kV D/C line**

Award placed to M/s TLL

Length:	170 km
Locations:	459 Nos.
Foundation completed	290 No.
Towers erected	214 Nos.
Stringing completed	8 km
Scheduled COD	Nov'23
Anticipated COD	Mar'24

#### **Status of statutory approvals:**

##### **Power line crossing:**

Total No. of crossings	:	34	Nos.
Proposal submitted	:	34	Nos.
Approval obtained	:	31	Nos.

##### **Railway crossing:**

Total No. of crossings	:	5	Nos.
Proposal submitted	:	2	Nos.
Approval obtained	:	0	Nos.

##### **National Highway Crossing:**

Total No. of crossings	:	6	Nos.
Proposal submitted	:	5	Nos.
Approval obtained	:	1	Nos.

**Forest Rajasthan (3.6619 Ha)** – Online proposal submitted in Nov'22. After submission of compliance, DFO forwarded proposal to Nodal Officer on 04.05.23. Nodal Officer forwarded proposal to State forest department on 18.08.23 for approval. On 12.09.23, Sec (F), govt. of Rajasthan has sought additional details & same has been forwarded to Nodal officer, Jaipur on 26.09.23

**Forest Haryana (15.95 Hectare)** – Proposal submitted on 03.02.23. Proposal discussed in PSC meeting dated 25.05.23. State Forest Deptt was insisting on providing No.n-forest land for CA which is time consuming. Issue discussed in Inter- ministerial meeting on 03.07.2023, in which submission of DO letter for seeking exemption for providing NFL was asked. DO letter in this regard has been given to Secretary MoEFCC on 15.07.23. Matter further discussed in FAC meeting held on 17.07.23 and proposal for DFL in-principally accepted. DO letter dated 29.08.23 from Secretary (Power), Govt. of India to PCCF (Land Management), Forest Dept. MP has requested to provide degraded land for CA from MP State. Vide letter dated 31.08.23, O/o PCCF (Land Management) issued letter to Secretary (Power), Govt. of India regarding availability of degraded land for CA. During PSC meeting held on 29.09.23, committee has informed that DFL for CA shall be identified by Haryana Forest Dept itself and same is under process.

**PTCC approval** : Under approval.

**Defence Aviation** : Under approval.

**Civil Aviation** : Under approval.

## **2. LILO of 765 kV S/c Meerut – Bhiwani line at Narela**

Award placed to M/s TLL

Length:	30 km
Locations:	97 Nos.
Foundation completed	26 Nos.
Towers erected	4 Nos.
Stringing completed	0 km
Scheduled COD	Nov'23
Anticipated COD	Mar'24

### **Status of statutory approvals:**

#### **Power line crossing:**

Total No. of crossings	:	6	Nos.
Proposal submitted	:	6	Nos.
Approval obtained	:	3	Nos.

#### **Railway crossing:**

Total No. of crossings	:	2	Nos.
Proposal submitted	:	2	Nos.
Approval obtained	:	1	Nos.

#### **National Highway Crossing:**

Total No. of crossings	:	4	Nos.
Proposal submitted	:	4	Nos.
Approval obtained	:	0	Nos.

**Forest Haryana (3.107 Ha)** – Online proposal submitted on 20.03.23. DFO, Sonipat has requested Power Grid to provide NFL for CA on 18.04.23. Due to non availability of land for CA, POWERGRID requested Nodal Officer, Panchkula on 29.05.23 to provide DFL for CA scheme & same has been forwarded to all CCF (T) except South Circle. On 15.06.23, NO, Panchkula has advised CCF, Hisar to identify DFL for CA. Further, CCF, Hisar has conveyed to DFO, Sirsa to identify DFL for CA. On 29.09.23, DFO, Sirsa has submitted report on CA land & its scheme to DFO, Sonipat for further necessary action.

### **Status of progress of Substation and Bay Extensions:-**

#### **1. 765/400 kV Narela Substation**

Land Acquisition	:	Land acquired in Mar'23
Civil work completed	:	45%
Equipment supplied	:	35%
Equipment erection	:	
Scheduled COD	:	Nov'23
Anticipated COD	:	Mar'24

## **2. Extension of 765 kV Khetri Substation**

Land Acquisition	:	Available
Civil work completed	:	60%
Equipment supplied	:	50%
Equipment erection	:	10%
Scheduled COD	:	Nov'23
Anticipated COD	:	Mar'24

## 6. Transmission system for evacuation of power from Neemuch Solar Park (1000 MW)

### Background

Establishment of inter-state transmission system for “Transmission System for Evacuation of Power from Neemuch (Special Economic Zone) SEZ”, on build, own, operate and transfer (BOOT) basis from the Bid Process Coordinator - REC Power Development and Consultancy.

The transmission system comprises establishment of around 277 Kms of two 400 kV DIC Transmission lines passing through the states of Rajasthan and Madhya Pradesh, a new 2X500 MVA, 400/220 kV pooling substation (AIS) at Neemuch (Madhya Pradesh) and 400 kV bay extension works. The project is targeted for implementation in 18 months.

### Scope of Works under Neemuch Project:

- a) Establishment of 2x500 MVA, 400/220 kV Pooling Station (AIS) at Neemuch (Singoli tehsil) with  
1x125 MVA Bus Reactor  
400/220 kV , 500 MVA ICT –2 Nos.  
400 kV ICT bays – 2 Nos.  
220 kV ICT bays – 2 Nos.  
400 kV line bays –4 Nos. (2 each for Chhittorgarh & Mandsaur lines)  
220 kV line bays – (2 Nos. of bays to 500 MW Connectivity/LTA granted to M/s RUMSL)  
220 kV Bus coupler bay- 1 No.  
220 kV Transfer Bus Coupler (TBC) bay - 1 No.  
125 MVAR, 420 kV reactor-1 No.  
420 kV reactor bay – 1 No.
- b) Associated Transmission System:
  - i) Neemuch PS – Chhittorgarh (PG) s/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at Nominal voltage).
  - ii) 2 Nos. of 400 kV line bays at Chhittorgarh (PG) 400 kV s/s for Neemuch PS – Chhittorgarh (PG) s/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at Nominal voltage).
  - iii) Neemuch PS- Mandsaur s/s 400 kV D/C line (conductor with minimum capacity of 2100 MVA/Ckt at Nominal voltage).
  - iv) 2 No. of 400 kV line bays at Mandsaur 400 kV s/s for Neemuch PS- Mandsaur s/s 400 kV D/c line (conductor with minimum capacity of 2100 MVA/Ckt at Nominal voltage).

### General Details

Special Purpose Vehicle (SPV)	:	Neemuch Transmission Limited (A subsidiary of POWERGRID)
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	₹ 547 Cr.
Levelized Tariff	:	₹ 78.378
Request for Proposal	:	28.01.22



Letter of Intent	:	07.07.22
Transmission Service Agreement (TSA)	:	24.08.22
SPV acquisition	:	24.08.22
Transmission License by CERC	:	Applied on 31.08.2022
Tariff adoption by CERC	:	Applied on 31.08.2022
Clearance u/s 164	:	19.07.2023
Execution plan submitted to CEA	:	Submitted.
NIT issued on	:	NIT for all Pkges issued.
EPC awarded on	:	Awarded
Scheduled Date of Completion	:	Feb'24

### **Status of progress of Transmission Line:**

#### **1. Neemuch PS- Mandsaur s/s 400 kV D/C line**

Award placed on M/s TLL.

Length	:	118.06 km
Locations	:	302 Nos.
Foundation completed	:	173 Nos.
Towers erected	:	153 Nos.
Stringing completed	:	19.15 km
Scheduled COD	:	Feb'24
Anticipated COD	:	Feb'24

#### **Status of statutory approvals:**

**River Crossings** : 3 Nos.

**Power line crossing** : 32 Nos.

**Railway crossing** : 1 No.

**National Highway Crossing** : 3 Nos.

#### **2. Neemuch PS - Chhittorgarh (PG) 400 kV D/c Line**

Award placed on M/s KEC & TLL

Length	:	117.5 km
Locations	:	306 Nos.
Foundation completed	:	208 Nos.
Towers erected	:	167 Nos.
Stringing completed	:	13 km
Scheduled COD	:	Feb'24
Anticipated COD	:	Feb'24

#### **Status of statutory approvals:**

#### **Status of statutory approvals:**

**Power line crossing** :

Total No. of crossings	:	15	Nos.
Proposal submitted	:	15	Nos.
Approval obtained	:	0	Nos.

<b>Railway crossing</b>	:		
Total No. of crossings	:	1	Nos.
Proposal submitted	:	0	Nos.
Approval obtained	:	0	Nos.

<b>National Highway Crossing</b>	:		
Total No. of crossings	:	2	Nos.
Proposal submitted	:	0	Nos.
Approval obtained	:	0	Nos.

**Forest Rajasthan (50 Ha.):** Online submitted on 02.06.23. Discussed in PSC meeting on 15.06.23. DFO, Chittorgarh forwarded proposal to CCF on 10.08.23. CCF inspection completed on 29.08.23. Proposal was discussed in PSC -II meeting held on 21.09.23 and same is recommended. Now proposal is pending for Part-III recommendation by Nodal officer, Jaipur.

**Forest MP (19 Ha.):** Online submitted on 28.02.23. DFO forwarded proposal to Nodal Officer on 08.06.23. Nodal Officer forwarded proposal to Govt. of MP on 13.07.23. Same is under examination.

#### **Status of progress of Substation and Bay Extensions:-**

#### **1. Establishment of 2x500 MVA, 400/220 kV Pooling Station (AIS) at Neemuch with 1x125 MVar Bus Reactor**

Land Acquisition	:	Land handed over by RUMS on 28.01.23
Civil work completed	:	50%
Equipment supplied	:	40%
Equipment erection	:	15%
Scheduled COD	:	Feb'24
Anticipated COD	:	Feb'24

#### **2. 2 Nos. 400 kV line bays at Mandsaur for Neemuch PS- Mandsaur s/s 400 kV D/c line**

Land Acquisition	:	Available
Civil work completed	:	25%
Equipment supplied	:	25%
Equipment erection	:	10%
Scheduled COD	:	Feb'24
Anticipated COD	:	Feb'24

#### **3. 2 Nos. 400 kV Line bays at Chittorgarh for Neemuch PS - Chhittorgarh 400 kV D/c Line**

Land Acquisition	:	Available
Civil work completed	:	75%
Equipment supplied	:	70%
Equipment erection	:	25%
Scheduled COD	:	Feb'24
Anticipated COD	:	Feb'24

## **7. System Strengthening Scheme for Eastern (ERSS-XXV) and North Eastern Region (NERSS-XV)**

### **Background**

Inter-State Transmission System - System Strengthening Scheme for Eastern and North Eastern Regions (hereinafter referred to as 'Project') on build, own, operate & transfer basis and to provide transmission service:

#### **A. Eastern Region Strengthening Scheme –XXV (ERSS-XXV):**

1. Creation of 220 kV GIS bus at Banka (POWERGRID) S/S
2. 400 kV Bus extension works at Banka (POWERGRID) 400/132 kV Substation
3. 400/220 kV , 2x500MVA ICTs along with associated bays (220 kV bays in GIS and 400 kV bays in AIS)  
400/220 kV , 500MVA ICT – 2 Nos.  
400 kV ICT(AIS) bays – 2 Nos.  
220 kV ICT (GIS) bays – 2 Nos.
4. 2 Nos. of 220 kV GIS line bays at Banka (POWERGRID) for termination of Banka (POWERGRID) – Goradih (Sabour New) 220 kV D/C line of BSPTCL  
Future provision: Space for future 220 kV GIS bays: 6 Nos.

#### **B. North Eastern Region Strengthening Scheme-XV (NERSS-XV):**

1. Upgradation of existing 132 kV Namsai (POWERGRID) S/S to 220 kV (with 220 kV side as GIS)  
**220 kV in GIS:**
  - i) ICTs: 220/132 kV , 2x160MVA
  - ii) ICT bay : 2 Nos.
  - iii) Bus Reactor: 220 kV , 1x50MVAr
  - iv) Bus Reactor Bay: 1 No.
  - v) Line bays: 2 Nos. [for termination of Kathalguri (NEEPCO) – Namsai (POWERGRID) 220 kV D/C line]
  - vi) Bus coupler bay: 1 No.
  - vii) Space for future line bays: 4 Nos.  
**132 kV :**
  - i) ICT bays: 2 Nos.
  - ii) Space for future line bays: 4 Nos.
2. Kathalguri (NEEPCO) – Namsai (POWERGRID) 220 kV D/C line
3. Extension at Kathalguri (NEEPCO) switchyard: 2 Nos. of 220 kV GIS line bays for termination of Kathalguri (NEEPCO) – Namsai

**General Details**

Special Purpose Vehicle (SPV) <b>subsidiary of POWERGRID)</b>	:	<b>ER NER Transmission Limited (ENTL) (A</b>
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	₹307.87
Levelized Tariff /Annual Trans. charges	:	₹ 35 Cr
Request for Proposal	:	09.11.2021
Letter of Intent	:	30.08.22
Transmission Service Agreement (TSA)	:	10.10.2022
SPV acquisition	:	10.10.2022
Transmission License by CERC	:	Applied on 17.10.2022
Tariff adoption by CERC	:	Applied on 17.10.2022
Clearance u/s 164	:	Under Application
Execution plan submitted to CEA	:	19.10.2022
NIT issued on	:	NIT for S/s Pkgs issued.
EPC awarded on	:	Awarded
Scheduled Date of Completion	:	09.10.2025

**Status of progress of Transmission Line:****Kathalguri (NEEPCO) – Namsai (POWERGRID) 220 kV D/C line**

Length	:	69.6 kms
Locations	:	219 Nos.
Foundation completed	:	26 Nos.
Towers erected	:	0 No.
Stringing completed	:	0 km
Scheduled COD	:	Oct'2025
Anticipated COD	:	Oct'2025

**Status of statutory approvals:****River Crossings**

Total no. of crossings	:	0 No.
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**Power line crossing**

Total no. of crossings	:	3 Nos.
Proposal submitted	:	0 No.
Approval obtained	:	0 No.

**Railway crossing**

Total no. of crossings	:	1 Nos.
Proposal submitted	:	0 No.
Approval obtained	:	0 No.

**National Highway Crossing**

Total no. of crossings	:	3 Nos.
Proposal submitted	:	0 No.
Approval obtained	:	0 No.

**Extn. of 400 kV AIS switchyard and Creation of 220 kV GIS at 400/132 kV Banka (PG) S/s**

Land Acquisition	:	Available
Civil work completed	:	40%
Equipment supplied	:	05%
Equipment erection	:	-
Scheduled COD	:	Oct'2024
Anticipated COD	:	Oct'2024

**Extn. of 132 kV AIS switchyard and Upgradation of existing 132 kV Namsai (POWERGRID)**

Land Acquisition	:	Available
Civil work completed	:	10%
Equipment supplied	:	05%
Equipment erection	:	-
Scheduled COD	:	Oct'2025
Anticipated COD	:	Oct'2025

**Extn. of 220 kV Kathalguri SS (NEEPCO)**

Land Acquisition	:	Available
Civil work completed	:	05%
Equipment supplied	:	02%
Equipment erection	:	-
Scheduled COD	:	Oct'2025
Anticipated COD	:	Oct'2025

## 8. Transmission Scheme for evacuation of 4.5GW RE injection at Khavda PS under Phase II- Part B

### Background

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

Transmission Scheme for evacuation of 4.5GW RE injection at Khavda PS under Ph-II (Part-A to D) would cater to additional 5GW (beyond 3GW) in Khavda area. The scheme comprises KPS2-Lakadia-Ahmedabad-Navsari (new) 765 kV D/c corridor. Further, 3x1500MVA, 765/400 kV Ahmedabad substation shall be established along with LILO of Pirana(PG)-Pirana(T) 400 kV D/c line at Ahmedabad S/s and reconductoring of Pirana(PG)-Pirana(T) line, both with twin HTLS conductor.

### Scope of Transmission Project-

#### Transmission Line

1. 765 KV D/C Lakadia PS-Ahmedabad line

#### Substation

2. 2 Nos. 765 kV Line Bays at Lakadia PS for 765 kV D/C Lakadia PS-Ahmedabad Line
3. 2 Nos. 765 kV Line Bays at Ahmedabad for 765 kV D/C Lakadia PS-Ahmedabad Line along with 240MVAR Line Reactor on each ckt.

### General Details

Special Purpose Vehicle (SPV) of POWERGRID)	:	Khavda II-B Transmission Limited(A subsidiary
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	1711.04 cr.
Levelized Tariff	:	110.64 cr.
Request for Proposal	:	06.05.22
Letter of Intent	:	16.02.23
Transmission Service Agreement (TSA)	:	21.03.23
SPV acquisition	:	21.03.23
Transmission License by CERC	:	
Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	17.02.22 - 04.03.22

EPC awarded on : 18.03.23 - 28.03.23  
Scheduled Date of Completion : Mar'25

**Status of progress of Transmission Line:**

**1. 765 KV D/C Lakadia PS-Ahmedabad line**

Length : 184 km  
Locations : 478 Nos.  
Foundation completed : 19 Nos.  
Towers erected :  
Stringing completed :  
Scheduled COD : Mar'25  
Anticipated COD : Mar'25

**Status of statutory approvals:**

River Crossings : Survey in progress  
Power line crossing : Survey in progress  
Railway crossing : Survey in progress  
National Highway Crossing : Survey in progress

**Status of progress of Substation and Bay Extensions:-**

**2. 2 Nos. 765 kV Line Bays at Lakadia PS for 765 kV D/C Lakadia PS-Ahmedabad Line**

Land Acquisition :  
Civil work completed :  
Equipment supplied :  
Equipment erection :  
Scheduled COD : Mar'25  
Anticipated COD : Mar'25

**3. 2 Nos. 765 kV Line Bays at Ahmedabad for 765 kV D/C Lakadia PS-Ahmedabad Line along with 240MVAR Line Reactor on each ckt.**

Land Acquisition :  
Civil work completed :  
Equipment supplied :  
Equipment erection :  
Scheduled COD : Mar'25  
Anticipated COD : Mar'25

## 9. Transmission Scheme for evacuation of 4.5GW RE injection at Khavda PS under Phase II- Part C

### Background

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

Transmission Scheme for evacuation of 4.5GW RE injection at Khavda PS under Ph-II (Part-A to D) would cater to additional 5GW (beyond 3GW) in Khavda area. The scheme comprises KPS2-Lakadia-Ahmedabad-Navsari (new) 765 kV D/c corridor. Further, 3x1500MVA, 765/400 kV Ahmedabad substation shall be established along with LILO of Pirana(PG)-Pirana(T) 400 kV D/c line at Ahmedabad S/s and reconductoring of Pirana(PG)-Pirana(T) line, both with twin HTLS conductor.

### Scope of works under Khavda Phase II- Part C project:

#### Transmission Line

1. 765 KV D/C Ahmedabad-South Gujarat (New Navsari) line

#### Substation

2. 765/400 kV 3x1500MVA Ahmedabad New SS with 1x330MVAR 765 kV Bus Reactor & 1x125MVAR 400 kV Bus Reactor
3. 765 kV Line Bays at Ahmedabad for 765 kV D/C Ahmedabad-South Gujarat (New Navsari) line along with 240MVAR Line Reactor on each ckt.
4. 765 kV Line Bays at South Gujarat (New Navsari) for 765 kV D/C Ahmedabad-South Gujarat (New Navsari) line

#### General Details

Special Purpose Vehicle (SPV) of POWERGRID)	:	Khavda II-C Transmission Limited(A subsidiary of POWERGRID)
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	2810.38 cr.
Levelized Tariff	:	281.69 cr.
Request for Proposal	:	06.05.22
Letter of Intent	:	16.02.23
Transmission Service Agreement (TSA)	:	21.03.23
SPV acquisition	:	21.03.23
Transmission License by CERC	:	



Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	01.02.22 - 17.05.22
EPC awarded on	:	10.03.23 - 06.04.23
Scheduled Date of Completion	:	Mar'25

#### **Status of progress of Transmission Line:**

##### **1. 765 KV D/C Ahmedabad-South Gujarat (New Navsari) line**

Length	:	288 km
Locations	:	798 Nos.
Foundation completed	:	36 Nos.
Towers erected	:	
Stringing completed	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

#### **Status of statutory approvals:**

River Crossings	:	Survey in progress
Power line crossing	:	Survey in progress
Railway crossing	:	Survey in progress
National Highway Crossing	:	Survey in progress

#### **Status of statutory approvals:**

River Crossings	:	Survey in progress
Power line crossing	:	Survey in progress
Railway crossing	:	Survey in progress
National Highway Crossing	:	Survey in progress

#### **Status of progress of Substation and Bay Extensions:-**

##### **2. 765/400 kV 3x1500MVA Ahmedabad New SS with 1x330MVAr 765 kV Bus Reactor & 1x125MVAr 400 kV Bus Reactor**

Land Acquisition	:	under process
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

3. 765 kV Line Bays at Ahmedabad for 765 kV D/C Ahmedabad-South Gujrat (New Navsari) line along with 240MVAR Line Reactor on each ckt.

Land Acquisition	:	under process
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

4. 765 kV Line Bays at South Gujarat (New Navsari) for 765 kV D/C Ahmedabad-South Gujrat (New Navsari) line

Land Acquisition	:	Available
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

## 10. Transmission Network Expansion in Gujarat associated with integration of RE projects from Khavda potential RE zone

### Background

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

Transmission Scheme for evacuation of 4.5GW RE injection at Khavda PS under Ph-II (Part-A to D) would cater to additional 5GW (beyond 3GW) in Khavda area. The scheme comprises KPS2-Lakadia-Ahmedabad-Navsari (new) 765 kV D/c corridor. Further, 3x1500MVA, 765/400 kV Ahmedabad substation shall be established along with LILO of Pirana(PG)-Pirana(T) 400 kV D/c line at Ahmedabad S/s and reconductoring of Pirana(PG)-Pirana(T) line, both with twin HTLS conductor.

### Scope of works under Khavda Potential RE project:

#### Transmission Line

1. 765 KV D/C Banaskantha-Ahmedabad line

#### Substation

1. 2 Nos. 765 kV line bays at Banaskantha S/s for 765 kV D/C Banaskantha-Ahmedabad line
2. 2 Nos. 765 kV line Bays at Ahmedabad SS for 765 kV D/C Banaskantha-Ahmedabad line along with 330MVAR line Reactor on each ckt.

#### **General Details**

Special Purpose Vehicle (SPV) of POWERGRID)	:	Khavda RE Transmission Limited(A subsidiary
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	1220.14
Levelized Tariff	:	77.33 cr.
Request for Proposal	:	06.05.22
Letter of Intent	:	15.02.23
Transmission Service Agreement (TSA)	:	21.03.23
SPV acquisition	:	21.03.23
Transmission License by CERC	:	
Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	03.03.22 - 02.06.22

EPC awarded on	:	10.03.23 - 28.03.23
Scheduled Date of Completion	:	Mar'25

### **Status of progress of Transmission Line:**

#### **1. 765 KV D/C Banaskantha-Ahmedabad line**

Length	:	134.6km
Locations	:	348 Nos.
Foundation completed	:	25 Nos.
Towers erected	:	
Stringing completed	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

### **Status of statutory approvals:**

River Crossings	:	Survey in progress
Power line crossing	:	Survey in progress
Railway crossing	:	Survey in progress
National Highway Crossing	:	Survey in progress

### **Status of progress of Substation and Bay Extensions:-**

#### **2. 2 Nos. 765 kV line bays at Banaskantha S/s for 765 kV D/C Banaskantha-Ahmedabad line**

Land Acquisition	:	Available
Civil work completed	:	2%
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

#### **3. 2 Nos. 765 kV line Bays at Ahmedabad SS for 765 kV D/C Banaskantha-Ahmedabad line along with 330MVAR line Reactor on each ckt.**

Land Acquisition	:	
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

## 11. Establishment of Khavda Pooling Station-2 (KPS2) in Khavda RE park

### Background:

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

Transmission Scheme for evacuation of 4.5GW RE injection at Khavda PS under Ph-II (Part-A to D) would cater to additional 5GW (beyond 3GW) in Khavda area. The scheme comprises KPS2-Lakadia-Ahmedabad-Navsari (new) 765 kV D/c corridor. Further, 3x1500MVA, 765/400 kV Ahmedabad substation shall be established along with LILO of Pirana(PG)-Pirana(T) 400 kV D/c line at Ahmedabad S/s and reconductoring of Pirana(PG)-Pirana(T) line, both with twin HTLS conductor.

### Scope of works under KPS2 project:

#### Substation

1. 765/400 kV 4x1500MVA KPS2 New SS (GIS) with 2x330MVAr 765 kV Bus Reactor & 2x125MVAr 400 kV Bus Reactor

#### **General Details**

Special Purpose Vehicle (SPV) POWERGRID)	:	KPS2 Transmission Limited(A subsidiary of
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	867.78 cr.
Levelized Tariff	:	69.68 cr.
Request for Proposal	:	28.01.22
Letter of Intent	:	16.02.23
Transmission Service Agreement (TSA)	:	21.03.23
SPV acquisition	:	21.03.23
Transmission License by CERC	:	
Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	01.02.22 - 05.12.22
EPC awarded on	:	17.03.23 - 27.03.23
Scheduled Date of Completion	:	Dec'24

#### **Status of progress of Substation and Bay Extensions:-**

1. 765/400 kV 4x1500MVA KPS2 New SS (GIS) with 2x330MVA 765 kV Bus Reactor & 2x125MVA 400 kV Bus Reactor

Land Acquisition	:	Completed
Civil work completed	:	3%
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Dec'24
Anticipated COD	:	Dec'24

**Constraints being faced during execution:**

1. ROU for approach road to KPS2 Pooling Station

## 12. Establishment of Khavda Pooling Station-3 (KPS3) in Khavda RE park

### Background

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

Transmission Scheme for evacuation of 4.5GW RE injection at Khavda PS under Ph-II (Part-A to D) would cater to additional 5GW (beyond 3GW) in Khavda area. The scheme comprises KPS2-Lakadia-Ahmedabad-Navsari (new) 765 kV D/c corridor. Further, 3x1500MVA, 765/400 kV Ahmedabad substation shall be established along with LILO of Pirana(PG)-Pirana(T) 400 kV D/c line at Ahmedabad S/s and reconductoring of Pirana(PG)-Pirana(T) line, both with twin HTLS conductor.

### Scope of works under KPS3 project:

#### Transmission Line

1. 765 KV D/C KPS2-KPS3 line

#### Substation

2. 765/400 kV 3x1500MVA KPS-3 S/s with 1x330MVA 765 kV Bus Reactor & 1x125MVA 400 kV Bus Reactor
3. 2 Nos. 765 kV Line Bays at KPS-2 for 765 kV D/C KPS-2 KPS3 line

### General Details

Special Purpose Vehicle (SPV) (POWERGRID)	:	KPS3 Transmission Limited(A subsidiary of
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	888.54 cr.
Levelized Tariff	:	75.53 cr.
Request for Proposal	:	28.01.22
Letter of Intent	:	27.02.23
Transmission Service Agreement (TSA)	:	21.03.23
SPV acquisition	:	21.03.23
Transmission License by CERC	:	
Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	31.01.22 - 01.02.22
EPC awarded on	:	23.03.23 - 27.03.23

Scheduled Date of Completion : Dec'24

**Status of progress of Transmission Line:**

1. 765 KV D/C KPS2-KPS3 line

Length	:	15.2 km
Locations	:	40 No.
Foundation completed	:	
Towers erected	:	
Stringing completed	:	
Scheduled COD	:	Dec'24
Anticipated COD	:	Dec'24

**Status of statutory approvals:**

River Crossings	:	Survey in progress
Power line crossing	:	Survey in progress
Railway crossing	:	Survey in progress
National Highway Crossing	:	Survey in progress

**Status of progress of Substation and Bay Extensions:-**

2. 765/400 kV 3x1500MVA KPS-3 S/s with 1x330MVAr 765 kV Bus Reactor & 1x125MVAr 400 kV Bus Reactor

Land Acquisition	:	Available
Civil work completed	:	1%
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Dec'24
Anticipated COD	:	Dec'24

3. 2 Nos. 765 kV Line Bays at KPS-2 for 765 kV D/C KPS-2 KPS3 line

Land Acquisition	:	Available
Civil work completed	:	2%
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Dec'24
Anticipated COD	:	Dec'24



## 13. Inter-Regional ER-WR Interconnection

### Background

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

### Scope of works under ER-WR Interconnection project:

#### Transmission Line

1. 400 kV D/C Jeypore (POWERGRID)-Jagdalpur (CSPTCL) line

#### Substation

2. 2 Nos. 400 kV Line bays (GIS) at Jeypore (POWERGRID) SS for 400 kV D/C Jeypore (POWERGRID)-Jagdalpur (CSPTCL) line
3. 2 Nos. 400 kV Line bays at Jagdalpur (CSPTCL) SS for 400 kV D/C Jeypore (POWERGRID)-Jagdalpur (CSPTCL) line

#### **General Details**

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	:	ERWR Power Transmission Limited(A
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Ltd
Estimated Cost	:	381.33 cr.
Levelized Tariff	:	29.01 cr.
Request for Proposal	:	21.09.22
Letter of Intent	:	15.02.23
Transmission Service Agreement (TSA)	:	21.03.23
SPV acquisition	:	21.03.23
Transmission License by CERC	:	
Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	
EPC awarded on	:	
Scheduled Date of Completion	:	Mar'25

#### **Status of progress of Transmission Line:**

1. 400 kV D/C Jeypore (POWERGRID)-Jagdalpur (CSPTCL) line

Length : 68 km

Locations	:	172
Foundation completed	:	
Towers erected	:	
Stringing completed	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

**Status of statutory approvals:**

River Crossings	:	Survey in progress
Power line crossing	:	Survey in progress
Railway crossing	:	Survey in progress
National Highway Crossing	:	Survey in progress

**Status of progress of Substation and Bay Extensions:-**

- 2 Nos. 400 kV Line bays (GIS) at Jeypore (POWERGRID) SS for 400 kV D/C Jeypore (POWERGRID)-Jagdalpur (CSPTCL) line

Land Acquisition	:	Available
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

- 2 Nos. 400 kV Line bays at Jagdalpur (CSPTCL) SS for 400 kV D/C Jeypore (POWERGRID)-Jagdalpur (CSPTCL) line

Land Acquisition	:	Available
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

## 14. Transmission System associated with Western Region Expansion Scheme- XXVII (WRES-XXVII)

### Background

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

### **Scope of works under Raipur Pool Dhamtari Transmission Limited (RPTL) project:**

#### **Transmission Line**

1. 400 KV (Q) D/C Raipur Pool-Dhamtari line

#### **Substation**

2. 400 kV Line bays at Raipur Pool (POWERGRID) S/s for termination of Raipur Pool-Dhamtari 400 KV (Q) D/C line
3. 400 kV Line bays at Dhamtari (CSPTCL) S/s for termination of Raipur Pool-Dhamtari 400 KV (Q) D/C line

#### **General Details**

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	:	Raipur Pool Dhamtari Transmission Limited(A
Bid Process Coordinator (BPC)	:	PFCCCL
Estimated Cost	:	380 Cr.
Levelized Tariff	:	29.72 cr.
Request for Proposal	:	28.10.22
Letter of Intent	:	01.03.23
Transmission Service Agreement (TSA)	:	28.03.23
SPV acquisition	:	28.03.23
Transmission License by CERC	:	
Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	
EPC awarded on	:	
Scheduled Date of Completion	:	Sep'24

### **Status of progress of Transmission Line:**

1. 400 KV (Q) D/C Raipur Pool-Dhamtari line

Length	:	
Locations	:	225
Foundation completed	:	
Towers erected	:	
Stringing completed	:	
Scheduled COD	:	Sep'24
Anticipated COD	:	Sep'24

**Status of statutory approvals:**

River Crossings	:	Survey in progress
Power line crossing	:	Survey in progress
Railway crossing	:	Survey in progress
National Highway Crossing	:	Survey in progress

**Status of progress of Substation and Bay Extensions:-**

2. 400 kV Line bays at Raipur Pool (POWERGRID) S/s for termination of Raipur Pool-Dhamtari 400 KV (Q) D/C line

Land Acquisition	:	Available
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Sep'24
Anticipated COD	:	Sep'24

3. 400 kV Line bays at Dhamtari (CSPTCL) S/s for termination of Raipur Pool-Dhamtari 400 KV (Q) D/C line

Land Acquisition	:	Available
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Sep'24
Anticipated COD	:	Sep'24

## 15. Transmission System associated with Western Region Expansion Scheme- XXVIII (WRES-XXVII) & XIX (WRES-XIX)

### Background

Govt. of India has set a target to establish 500GW renewable capacity by 2030. To fulfill the above target, MNRE/SECI has identified potential RE zones (REZ) comprising solar and wind capacity of about 66.5GW in various renewable resource rich states in the country. Out of 16GW potential identified in Gujarat, 10.5GW potential REZ has been reviewed and earmarked in Khavda area of Gujarat. Further, Khavda RE park in Kutch, Gujarat with a total capacity of 27.7GW is also being taken up. For pooling of RE power from various RE developers, 3 Nos. of locations have already been identified for development of ISTS Pooling stations in Khavda area.

The Transmission Scheme for evacuation of above potential is planned to be implemented in three phases, namely Phase-A (8GW), Phase-B (7GW) and Phase-C (12.7GW). Phase-A (8GW) has been planned to be implemented in two phases, namely Phase-I (3 GW) and Phase-II (5GW). The scheme for evacuation of 3GW of Phase-A is already under implementation.

### Scope of works under Dharamjaigarh Transmission Limited (DTL) project:

#### Substation

1. Creation of 220 KV level at 765/400 KV Dharamjaigarh S/s with installation of 2x500MVA, 400/220 KV ICTs along with associated bays
2. 2 Nos. 220 KV line bays at Dharamjaigarh S/s for termination of 220 KV D/c Dharamjaigarh-Chhuri line

#### **General Details**

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	:	Dharamjaigarh Transmission Limited(A
Bid Process Coordinator (BPC)	:	PFC
Estimated Cost	:	251 cr.
Levelized Tariff	:	28.69 cr.
Request for Proposal	:	26.09.22
Letter of Intent	:	01.03.23
Transmission Service Agreement (TSA)	:	28.03.23
SPV acquisition	:	28.03.23
Transmission License by CERC	:	
Tariff adoption by CERC	:	
Clearance u/s 164	:	
Execution plan submitted to CEA	:	
NIT issued on	:	16.09.22 - 19.10.22
EPC awarded on	:	14.03.23 - 19.04.23
Scheduled Date of Completion	:	Mar'25

#### **Status of progress of Substation and Bay Extensions:-**

1. Creation of 220 KV level at 765/400 KV Dharamjaigarh S/s with installation of 2x500MVA, 400/220 KV ICTs along with associated bays

Land Acquisition	:	Available
Civil work completed	:	20%

Equipment supplied	:	5%
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

2. 2 Nos. 220 KV line bays at Dharamjaigarh S/s for termination of 220 KV D/c  
Dharamjaigarh-Chhuri line

Land Acquisition	:	Available
Civil work completed	:	5%
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Mar'25
Anticipated COD	:	Mar'25

## 16. Transmission system associated with LTA applications from Rajasthan SEZ Part-E, Phase-II

### Background

The Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. This includes solar generation potential of about 20 GW in Rajasthan. Transmission system for evacuation of 8.9 GW under phase-I has already been taken up for implementation. Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (11.1 GW – 3 GW through intra state) under Phase II, inter-alia includes evacuation of 1.05GW in Bhadla complex, 2.2GW in Fatehgarh complex, 1.9GW in Ramgarh and 2.95 GW in Bikaner.

For integration and evacuation of power from generation projects in the above areas, a high capacity 765 kV and 400 kV transmission system interconnecting Bhadla-II, Fatehgarh-II, Sikar & Khetri along with establishment of 765/400 kV new substation at Sikar-II & Narela and 400/220 kV new substation at Bikaner-II & Ramgarh-II have been planned.

The subject transmission scheme involves 765 kV D/c Bhadla-II Sikar-II line (2nd)

### Scope of Transmission Project-

#### Transmission Line

1. Bhadla II - Sikar II 765 kV D/C line (2<sup>nd</sup>)

#### Substation

2. Construction of 02 Nos. of 765 kV line bays at Bhadla II for Bhadla II - Sikar II 765 kV D/c line along with 2 x 240 MVAR switchable line reactors.
3. Construction of 02 Nos. of 765 kV line bays at Sikar II for Bhadla II - Sikar II 765 kV D/c line along with 2 x 330 MVAR switchable line reactors.

### General Details

Special Purpose Vehicle (SPV) subsidiary of POWERGRID)	:	Bhadla Sikar Transmission Limited (A
Bid Process Coordinator (BPC)	:	PFC Consulting Ltd..
Estimated Cost	:	₹ 1644 Cr.
Levelised Tariff	:	₹ 163 Cr.
Request for Proposal	:	06.03.20
Letter of Intent	:	03.03.23
Transmission Service Agreement (TSA)	:	26.05.22
SPV acquisition	:	28.03.23
Transmission Licence by CERC	:	Applied on 10.04.23
Tariff adoption by CERC	:	Applied on 10.04.23
Clearance u/s 164	:	
Execution plan submitted to CEA	:	

NIT issued on	:	NIT for all Pkges issued.
EPC awarded on	:	NOAs issued for Line & Reactor
Scheduled Date of Completion	:	Sep'24

### **Status of progress of transmission project:-**

Fatehgarh II – Bhadla II 765 kV D/C line (Twin HTLS)  
Award placed to M/s L&T

Length:	300 km
Locations:	786 Nos.
Foundation completed	51 Nos.
Towers erected	0 No.
Stringing completed	0 km
Scheduled COD	Sep'24
Anticipated COD	Sep'24

### **Status of statutory approvals:**

#### **River Crossings**

Total No. of crossings	:	Survey in progress
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<b>Power line crossing</b>	Survey in progress
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<b>Railway crossing</b>	Survey in progress
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<b>National Highway Crossing</b>	Survey in progress
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<b>Forest:</b>	Survey in progress
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<b>PTCC approval</b>	:	Survey in progress
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<b>Defence Aviation</b>	:	Survey in progress
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<b>Civil Aviation</b>	:	Survey in progress
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### **Status of progress of Substation and Bay Extensions:-**

#### **1. Extension of 765 kV Bhadla II Substation**

Land Acquisition	:	Available.
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	
Scheduled COD	:	Sep'24
Anticipated COD	:	Sep'24

#### **2. Extension of 765 kV Sikar II Substation**

Land Acquisition	:	Available
Civil work completed	:	
Equipment supplied	:	
Equipment erection	:	



Scheduled COD	:	Sep'24
Anticipated COD		Sep'24

# Sterlite Power Transmission Ltd.

## **17. Additional 400 kV Feed to Goa and Additional System for Power Evacuation from Generation Projects pooled at Raigarh (Tamnar) Pool**

### **Background**

Additional 400 kV feed to Goa. The peak demand met by Goa during the year 2014-15 was 489 Mega Watt (MW) and as per the 18th Electric Power Survey (EPS), the peak demand of 815 MW was expected by the end of 12th Plan and 1192 MW by the end of 13th plan.

At present demand of Goa is mainly catered through Mapusa 3x315 Mega Volt Ampere (MVA), 400/220 kV substation, which gets feed from Kolhapur 400 kV substation through a 400 kV line.

Goa system is also connected with Maharashtra and Karnataka through 220 kV lines. To supply the projected power requirement of Goa with reliability, an additional 400 kV in feed to Goa was required. The matter was discussed in the 38th meeting of Standing Committee on Power System Planning in Western Region, held on 17-07-2015 at New Delhi wherein the provision for a new 400 kV Substation in Goa at Xeldem along with its interconnections with the Inter State Transmission System was agreed.

Accordingly, following transmission system was discussed and approved in the 39th and 40th Standing Committee Meeting (SCM) of Western Region (WR) held on 30.11.2015 and 01.06.2016 respectively and 39th and 40th SCM of Southern Region (SR) held on 28-29.12.2015 and 19.11.2016 respectively.

Additional System for Power Evacuation from Generation Projects pooled at Raigarh (Tamnar) Pool - Raigarh (Tamnar) Power Station (PS) has been planned to pool about 3000MW power from Jindal Power Limited (4x600) and TRN Energy Pvt. Ltd. (2X300) generation project and onward transfer of same through 765 kV D/c line to Raigarh (Kotra) generation complex. For evacuation of power reliably from Raigarh (Tamnar) PS, a second corridor was planned from this pooling station to Dharamjaygarh 765 kV S/s through 765 kV D/c line. Dharamjaygarh sub-station is further connected to Western Region (WR) and Northern Region (NR) grid through Dharamjaygarh – Jabalpur PS 765 kV 2xD/c line and onward 765 kV transmission system.

Accordingly, Raigarh Pool (Tamnar) – Dharamjaygarh PS (Section B) 765 kV D/c Line was agreed in 38th and 39th SCM of WR held on 17.07.2015 and 30.11.2015 respectively as Additional System for Power Evacuation from Generation Projects pooled at Raigarh (Tamnar) Pool. Original TDC was 07.06.2018.

The transmission scheme was ratified in 31st Western Regional Power Committee (WRPC) meeting held on 31.03.2016 at Raipur.

### **Scope of transmission project**

1. LILO of one ckt. of Narendra (existing) - Narendra (New) 400 kV D/c quad line at Xeldem
2. Xeldem - Mapusa 400 kV D/c (quad) line
3. Xeldem (existing) – Xeldem (new) 220 kV D/C line
4. Establishment of 2x500MVA, 400/220 kV substation at Xeldem
5. Dharamjaygarh Pool section B - Raigarh (Tamnar) Pool 765 kV D/c line

## General Details

Special Purpose Vehicle	: Goa-Tamnar Transmission Project Limited (Sterlite Grid 5 Limited; a subsidiary of Sterlite Power Transmission Limited)
Bid Process Coordinator (BPC)	: Power Finance Corporation
Estimated Cost (Rs. Cr)	: 1531
Levelized Tariff (Rs. Cr)	: 164.775
Request for Qualification	: 01.02.2017
Request for Proposal	: 01.05.2017
Letter of Intent	: 30.11.2017
Transmission Service Agreement (TSA)	: 28.06.2017
SPV acquisition	: 14.03.2018
Transmission License by CERC	: 13.07.2018
Tariff adoption by CERC	: 13.07.2018
Contract Performance Guarantee	: 05.01.2018
Clearance u/s 164	: 29.11.2018
Execution plan submitted to CEA	: 10.07.2018
NIT issued on	:
EPC contract awarded on	: 29.12.2017
Scheduled Date of Completion	: Nov'21/Jul'22*
Anticipated Date of Completion	: May'25

## Status of progress of transmission project

### 1. LILO of one ckt of Narendra (Existing) - Narendra (New) 400 kV D/C Quad line at Xeldem

Length	: 196 ckm
Locations	: 249 Nos.
Foundation completed	: 72 Nos.
Tower erected	: 0 No.
Stringing completed	: 0 ckm
Scheduled COD	: Nov'21/Jul'22*
Anticipated COD	: May'25

### Constraints/Approval if any:

1. Delay in grant of Forest clearance for Diversion of 177.091 Ha of forest land. The Proposal was forwarded by Nodal Officer to Govt of Karnataka and the State Govt had returned the proposal to Nodal officer for modification of proposal as per SC order dated 7.4.2022 on CEC recommendation.
2. Delay in grant of Wildlife clearance for Diversion of 33.273 Ha of wildlife area. The Proposal was pending with Govt of Karnataka due to petition filed by Goa Foundation in Central Empowered Committee (CEC).
3. The petition filed by Goa Foundation in Central Empowered Committee (CEC) constituted by Supreme court and High Court of Mumbai & Goa. Central Empowered Committee (CEC) has submitted their report to Supreme Court on 23<sup>rd</sup> April 2021 and has recommended some modifications in LILO of one ckt of Narendra (existing) – Narendra (new) 400 kV D/C line at Xeldem (XN line). SC vide its order in hearing dated 07.04.2022 has approved the

recommendation made by CEC and directed GTTPL to take suitable steps in accordance with the recommendation made therein.

4. As per Supreme Court order to use Right of way (ROW) of 110 kV line of Supa-Ponda & 220 kV line of Ambewadi -Ponda line for construction of Xeldem-Narendra line, the survey on CEC recommended route is done and TSP has submitted modified proposal for Wild Life in Karnataka to DFO Dandeli.
5. Revised proposal of Forest for Goa State as per CEC Recommendation submitted on 25.08.2022. Parivash Portal was No.t working due to some technical problem in, resubmitted the proposal on 23.09.2022.
6. As per Supreme court order to use Right of way (ROW) of 110 kV line of Supa-Ponda & 220 kV line of Ambewadi -Ponda line for construction of Xeldem-Narendra line, TSP has applied for permission to use co-orridor to GED, Goa and KPTCL, Karnataka, permission received for GED Portion. Permission from KPTCL is awaited. In principal approval received from KPTCL On 08.09.2022.
7. A letter submitted to PCCF Goa and Karnataka on 05.09.2022 for seeking permission in Eco Sensitive Zone of Bhagwan Mahavir wildlife sanctuary and Dandeli wildlife sanctuary respectively. In preview of Hon'ble Supreme court order dated 03.06.2002 "No permanent Structure is permitted in ESZ area".
8. DCF conveyed his concurrence vide letter dated 26.05.2023 for finalization of forest route in Karnataka as suggested by forest Department.
9. To follow the route suggested by DCF Dandeli concurrence from GED and KPTCL is required to utilize the existing corridor of 220 kV line as proposed by the Karnataka Forest Department.
10. A joint site visit by GTTPL & KPTCL was completed on 10.07.2023 for utilization of 110 & 220 kV corridor and survey report was submitted to GM (Tech) KPTCL by CE (Elec) on 27.07.2023.

### **Status of statutory approvals:**

#### **Forest area**

Details of Tr. Line Falling under Forest	:	
Locations	:	145 Nos. ; Length : 54.705 km
Forest area (Ha)	:	Karnataka: 174.652 Ha Goa: 76.998 Ha
Forest proposals submitted on	:	Karnataka : 20 Jul'22 ; Goa : 25 Aug'22 (as per CEC Route)
Current status	:	Goa State Forest : Revised Proposal submitted on 25.08.2022.-accepted by Project Screening committee on 22 <sup>nd</sup> Nov'2022. FDP is currently at DFO North Goa.  Karnataka Forest : DFO Dandeli vide letter dated 26.05.2023 provided the concurrence of route. Modified FDP submitted on 03.07.2023 at all the divisions. Currently, the proposal is with DFO for part-II processing.

**Wildlife area**

Details of Tr. Line Falling under Forest	:	
Locations	:	33 nos ; Length : 12.852 Kms
Wildlife area (Ha)	:	59.118 Ha (Karnataka: 32.026 Ha; Goa: 27.092 Ha)
Wildlife proposals submitted on	:	Wild Life Goa :-25 Sep'22 Wild Life Karnataka : 20th Jul'22
Current status	:	GOA: Wild Life proposal submitted on 25.09.2022. FDP is currently at DFO North Goa.

Karnataka: Revised proposal submitted on 20th July'22 at DFO Dandeli. Modified FDP submitted on 03.07.2023 at all the divisions. Currently, the proposal is with DFO for part-II processing.

**Power line crossing**

Total No. of crossings	:	5 Nos. (Subjected to change as per Route change)
Proposal submitted	:	5 Nos.
Approval obtained	:	5 Nos.

**Railway crossing**

Total No. of crossings	:	1 Nos. (Subjected to change as per Route change)
Proposal submitted	:	1 Nos.
Approval obtained	:	1 Nos.

**National Highway / SH Crossing**

Total No. of crossings	:	4 Nos. (Subjected to change as per Route change)
Proposal submitted	:	4 Nos.
Approval obtained	:	4 Nos.

**River Crossings**

Total No. of crossings	:	0 No.
Proposal submitted	:	0 No.
Approval obtained	:	0 No.

**PTCC approval**

Proposal submitted to Defence	:	Yes
Proposal submitted to BSNL	:	Yes
Proposal submitted to Railways	:	Yes
Current status	:	Received CEA (PTCC) recommendation for Goa portion and received PTCC Approval for Karnataka Portion. (Revised approval Required due to change as per CEC route)

**Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	:	Yes proposal submitted
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Current Status : Approved (Revised approval Required due to change as per CEC route)

## **2. Xeldem - Mapusa 400 kV D/C Quad Line**

Length : 105.488 ckm  
Locations : 141 Nos.  
Foundation completed : 109 Nos.  
Tower erected : 81 Nos.  
Stringing completed : 4.12 ckm  
Scheduled COD : May'21 /Jan22\*  
Anticipated COD : Jun'24

### **Constraints/Approval if any:**

1. The progress is suffered due to petition filed by Goa Foundation in Central Empowered Committee (CEC) constituted by Supreme court and High Court of Mumbai & Goa. Central Empowered Committee (CEC) has submitted their report to Supreme Court on 23<sup>rd</sup> April 2021 and have cleared 400 kV D/C Xeldem – Mapusa Line.
2. 9 Location are under Right of way 6 Loc in Amona, 1 Loc in Piligaon, 1 loc in Karapur and 1 loc. In Virdi Village) of Bicholim Taluka of North Goa District.

### **Status of statutory approvals:**

#### **Forest area**

Details of Tr. Line Falling under Forest :  
Locations : 29 Nos.; Length : 7.991 Kms (Changed due to change in SS location)  
Forest area (Ha) : 36.39 Ha.  
Forest proposals submitted on : Goa : 01 July'18  
Current status : Stage-1, Working permission and Stage-2 Approval Received.  
As per recent Supreme Court order dated 03-06-2022, "No. new permanent structure shall be permitted to come up for whatsoever the purpose within the ESZ". XM Line is falling in ESZ of Bondla wild life sanctuary. Revised survey avoiding ESZ. Revised proposal submitted on 26.09.2022. Proposal has been accepted by Project Screening Committee on 22<sup>nd</sup> Nov'2022. Proposal processed by State Govt. and currently under process at MOEF &CC Regional office Bengaluru.

#### **Wildlife area**

Details of Tr. Line Falling under Forest : N/A  
Locations :  
Wildlife area (Ha) :  
Wildlife proposals submitted on :

Current status :

**Power line crossing**

Total No. of crossings : 5 Nos.  
Proposal submitted : 5 Nos.  
Approval obtained : 5 Nos.

**Railway crossing**

Total No. of crossings : 1 Nos.  
Proposal submitted : 1 Nos.  
Approval obtained : 1 Nos.

**National Highway / SH Crossing**

Total No. of crossings : 1 Nos.  
Proposal submitted : 1 Nos.  
Approval obtained : 1 Nos.

**River Crossings**

Total No. of crossings : 5 Nos.  
Proposal submitted : 5 Nos.  
Approval obtained : 5 Nos.

**PTCC approval**

Proposal submitted to Defence : Yes  
Proposal submitted to BSNL : Yes  
Proposal submitted to Railways : Yes  
Current status : Approved (Revised approval Required due to change in Substation Location)

**Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation : Yes proposal submitted  
Current Status : Approved (Revised approval Required due to change in Substation Location)

**3. Dharamjaygarh Pool Section B - Raigarh (Tamnar) Pool 765 kV D/C Line**

Length : 137 ckm  
Locations : 179 Nos.  
Scheduled COD : July '21 /Mar '22\*  
Anticipated COD : 23.06.2022 (Line Charging Completed)

**4. Xeldem (existing) – Xeldem (new) 220 kV D/C line**

Length : 44.19 ckm  
Locations : 65 Nos.  
Foundation completed : 33 Nos.  
Tower erected : 2 Nos.  
Stringing completed : 0 ckm  
Scheduled COD : May'21 /Jan'22\*



Anticipated COD : Jun'24

**Constraints/Approval if any:**

1. The progress is suffered due to petition filed by Goa Foundation in Central Empowered Committee (CEC) constituted by Supreme court and High Court of Mumbai & Goa. Central Empowered Committee (CEC) has submitted their report to Supreme Court on 23<sup>rd</sup> April 2021 and have cleared 220 kV D/C Xeldem – Xeldem Line and Working permission received on 19th Aug 2021.
2. 2 Locations are under the Right of way (1 Loc in Xeldem Village of Quepem Taluka, 1 Loc in Sanvordem Village of Sanguem Taluka), of South Goa District.

**Status of statutory approvals:**

**Forest area**

Details of Tr. Line Falling under Forest	:	
Locations	:	33 Nos. ; Length : 11.45 Kms
Forest area (Ha)	:	40.09 Ha
Forest proposals submitted on	:	Goa : 02 Aug'18
Current status	:	TSP has submitted revised proposal for avoiding ESZ, on 26.09.2022 in line with above SC order. Proposal accepted by Project Screening committee on 22 <sup>nd</sup> Nov'2022. Proposal processed by State Govt. and currently under process at MOEF&CC Regional office Bengaluru.

**Wildlife area**

Details of Tr. Line Falling under Forest	:	N/A
Locations	:	
Wildlife area (Ha)	:	
Wildlife proposals submitted on	:	
Current status	:	

**Power line crossing**

Total No. of crossings	:	3 Nos.
Proposal submitted	:	3 Nos.
Approval obtained	:	3 Nos.

**Railway crossing**

Total No. of crossings	:	1 Nos.
Proposal submitted	:	1 Nos.
Approval obtained	:	1 Nos.

**National Highway / SH Crossing**

Total No. of crossings	:	1 Nos.
Proposal submitted	:	1 Nos.
Approval obtained	:	1 Nos.

**River Crossings**

Total No. of crossings	: 1 Nos.
Proposal submitted	: 1 Nos.
Approval obtained	: 1 Nos.

**PTCC approval**

Proposal submitted to Defence	: Yes
Proposal submitted to BSNL	: Yes
Proposal submitted to Railways	: Yes
Current status	: Pending

**Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: Proposal submitted
Current Status	: Approved

**5. 2x500 MVA, 400/220 kV S/s at Xeldem (Goa)**

Land Acquired	: 100 %
Civil work completed	: 67%
Equipment supplied	: 80 %
Equipment erection	: 15 %
Scheduled COD	: May'21/ Jan'22*
Anticipated COD	: Jun'24

**Constraints/Approval if any:**

1. The construction work will be started after getting Conversion Sanad from District Collector, South Goa.
2. The progress is suffered due to petition filed by Goa Foundation in Central Empowered Committee (CEC) constituted by Supreme court and High Court of Mumbai & Goa. Central Empowered Committee (CEC) has submitted their report to Supreme Court on 23<sup>rd</sup> April 2021 and have cleared 400/220 kV Xeldem Substation.

## **18. Establish Transmission System for 400 kV Udupi (UPCL) – Kasargode D/C Line**

### **Background :**

Udupi– Kasargode 400 kV (Quad) D/c line was planned for improving reliability of power supply & stability in Northern area of Kerala and relieving congestion between S1 (Andhra Pradesh, Telangana & Karnataka) – S2 (Tamil Nadu & Kerala) corridor.

### **Scope of transmission project**

1. Mangalore (Udupi PCL) – Kasargode 400 kV (Quad) D/c line
2. Establishment of 2x500MVA, 400/220 kV GIS substation at Kasargode
3. 2 Nos. of 400 kV line bays and Bus Bar Extension Works at UPCL switchyard

### **General Detail**

Special Purpose Vehicle	: Udupi Kasargode Transmission Limited. (Sterlite Grid 14 Limited; a subsidiary of Sterlite Power Transmission Limited)
Bid Process Coordinator (BPC)	: REC Transmission Projects Co. Ltd
Estimated Cost (Rs. Cr)	: 754.87
Levelized Tariff (Rs. Cr)	: 84.744
Request for Qualification	: 15.09.2018
Request for Proposal	: 31.12.2018
Letter of Intent	: 31.07.2019
Transmission Service Agreement (TSA)	: 28.02.2019
SPV acquisition	: 12.09.2019
Transmission License by CERC	: 24-01-2020
Tariff adoption by CERC	: 28-01-2020
Contract Performance Guarantee	: 12.09.2019
Clearance u/s 164	: 14-10-2021
Execution plan submitted to CEA	: 08-01-2020
NIT issued on	:
EPC contract awarded on	: 13-08-2020 (Transmission Line) 12-08-2020 (S/s and Bay extension)
Scheduled Date of Completion	: 12.11.2022 (38 months from Effective Date)/Jul'23
Anticipated COD	: Dec'24

### **Status of progress of transmission project**

#### **1. Udupi (Mangalore) – Kasargode 400 kV D/C line**

Length	: 230.94 ckm
Locations	: 278 Nos.
Foundation completed	: 96 Nos.
Tower erected	: 78 Nos.
Stringing completed	: 1.68 ckm
Scheduled COD	: 11 <sup>th</sup> Nov 2022/ Feb'23

**Constraints/Approval if any:**

1. Delay due to stay interim order from Hon'ble High Court dated 19/11/2021 has directed UKTL to not take any step to lay the subject transmission line.
2. As per HC order dated 20.03.2023, survey work shall be conducted in the presence of petitioners of WP 19432/2022 and WP 3186/2023, and they shall assist the survey work. Survey report shall be placed on this court before next date of hearing 06.04.2023, based on final report submitted to DC Dakshina Kannada on dtd. 19.04.2023. Survey report submitted to the high court and further hearing date scheduled on 6<sup>th</sup> Oct'23.
3. Hon'ble HC of Karnataka vide its final Order dated 29.03.2023 has quashed the prior approval by CEA under Section 68 citing the reason that central government in delegating the authority of granting prior approval to CEA under section 68 of the Act for laying overhead transmission lines is one without authority of law. Further, the Order clearly mentions that the delegate can't sub-delegate an essential function of decision making. Further, in this regard, clarification has been issued on 21.04.2023 by the Hon'ble HC of Karnataka that the Order is confined only on land of Petitioner of WP20819/2021. Appeal submitted to high court and further hearing completed on 14.06.2023. Vide order dated 27.07.2023 Hon'ble High court of Karnataka has dismissed the orders passed for WP 20819/2021 on dated 29.03.2023 i.e. approval under section 68 for petition land has been treated valid.
4. Court cases listed on 6<sup>th</sup> Oct'23: 19432/2022(Dakshin Kannada),4679/2023(Udupi), 13921(Udupi).
5. TSP is facing Severe Row issues in 139 locations in Dakshina Kannada district due to tree/crop compensation.
6. TSP is facing Severe Row issues in 6 locations in Udupi district due to demand of high land compensation
7. **Karnataka:** Stage-I received on 27.10.2022. Tree Cutting and working permission pending.  
**Kerala:** Stage-I received on 27.10.2022. Tree Cutting clearance pending, Demand Notices received and payment for Demand Note made on 21.12.2022.  
As the Non-forest CA land was already approved by the REC before issuance of Stage-I clearance, the new degraded forest land also needs to be approved by the REC before replacing it with the Non-forest CA land. The matter was discussed in 30th FRCM of IRO Bengaluru in which MoEFCC directed Nodal Officer to submit a request letter to MoEFCC regarding this change. MoEFCC put the case in upcoming REC meeting and conveyed the approval for regularizing the same. Forest tree cutting permission issue is pending with forest department.

**Status of statutory approvals:****Forest area**

Details of Tr. Line Falling under Forest	:
Locations	: 24 Nos. ; Length : 9.45 Kms
Forest area (Ha)	: 48.152 Ha

Forest proposals submitted on	: Kerela : 03 Nov'20 Karnataka : 18 Dec'20
Current status	: Kerela : Stage-I received on 27.10.2022. Tree cutting clearance yet to receive. Karnataka : Stage-I received on 27.10.2022. Tree cutting clearance yet to receive.

### **Wildlife area**

Details of Tr. Line Falling under Forest	: N/A
Locations	:
Wildlife area (Ha)	:
Wildlife proposals submitted on	:
Current status	:

### **Power line crossing**

Total No. of crossings	: 8 Nos.
Proposal submitted	: 8 Nos.
Approval obtained	: 7 Nos.

### **Railway crossing**

Total No. of crossings	: 1 Nos.
Proposal submitted	: 1 Nos.
Approval obtained	: 1 Nos.

### **National Highway / SH Crossing**

Total No. of crossings	: 10 No.
Proposal submitted	: 9 Nos.
Approval obtained	: 7 Nos.

### **River Crossings**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

### **PTCC approval**

Proposal submitted to Defence	: Yes
Proposal submitted to BSNL	: Yes
Proposal submitted to Railways	: Yes
Current status	: PTCC Proposal submitted to DET, (PTCC), Chennai. DET(PTCC), Chennai has registered the proposal and forwarded to concerned offices i.e. BSNL & railway. (PTCC)Railway- 1. Southern railway-NOC forwarded to DE,  4. NOC from Southern Railway-Chennai has been received

### **Defence/Civil Aviation**

Current Status	: Defence Aviation : Approved
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**2. Establishment of 2\*500MVA, 400/220 kV GIS S/s at Kasargode**

Land Acquired	: 100 %
Civil work completed	: 97.86%
Equipment supplied	: 100%
Equipment erection	: 97.81%
Scheduled COD	: 11 <sup>th</sup> Nov 2022
Anticipated COD	: Dec'24

**Constraints / approval; if any:**

**3. 2 Nos. of 400 kV line bays and Bus Bar extension works at UPCL Switchyard**

Land Acquired	: Space will be provided by UPCL
Civil work completed	: 100%
Equipment supplied	: 100 %
Equipment erection	: 99.44%
Scheduled COD	: 11 <sup>th</sup> Nov 2022/ Feb'23
Anticipated COD	: Test charging completed on 30.07.2023

## **19. Western Region Strengthening Scheme-XIX (WRSS-XIX) and North Eastern Region Strengthening Scheme-IX (NERSS-IX)**

### **Background -**

CERC vide order in Petition Number 151/RC/2022 Dated 25.08.2022 has approved change of name of "Vapi-II - North Lakhimpur Transmission Limited" to "Mumbai Urja Marg Limited". The Project comprises of four parts (Viz. Part-A, Part-B, Part-C, Part-D)

Part A is under Western Region Strengthening Scheme-XIX and planned to address the high loading under high RE scenario.

Part B is under Western Region strengthening scheme-XIX and planned to strengthening the evacuation system associated with Kakrapar Atomic Power Plant (KAPP) and further to meet the increasing demand of Southern Gujarat, UT of Dadra & Nagar Haveli (DNH) and to address the issue of critical loading at Vapi and Kala 400/220 kV substations.

Part C is under Western Region Strengthening Scheme-XIX and planned to ensure supply of power to Mumbai area with reliability and security by providing additional ISTS feed to Navi Mumbai 400/220 kV sub- station along-with 220 kV outlets from the substation.

Part D is under North-Eastern Region Strengthening Scheme – IX and planned to reduce overloading of Pare – Naharlagun / Nirjuli 132 kV S/c line. Accordingly, the additional transmission system was identified for strengthening the evacuation system associated with Pare HEP.

### **Scope of transmission project-**

- (i) LILO of second circuit of Zerda –Ranchodpura 400 kV D/c line at Banaskantha (PG) PS
- (ii) LILO of KAPP – Vapi 400 kV D/c line at Vapi – II
- (iii) Vapi-II – Sayali D/C 220 kV D/C line
- (iv) Padghe (PG) – Kharghar 400 kV D/c (quad) line to be terminated into one ckt. of Kharghar – Vikhroli 400 kV D/c (quad) line (thus forming Padghe (PG) - Kharghar 400 kV S/c (quad) line, Padghe (PG) - Vikhroli 400 kV S/c (quad) line)
- (v) LILO of Padghe (PG) – Vikhroli 400 kV S/c line at Navi Mumbai GIS (PG)
- (vi) LILO of Apta – Kalwa/Taloja 220 kV D/c line (i.e. Apta – Kalwa and Apta Taloja 220 kV lines) at Navi Mumbai (PG)
- (vii) Pare HEP (NEEPCO) (from near LILO point)– North Lakhimpur (AEGCL) 132 kV D/c line (with ACSR Zebra conductor) along with 2 No. 132 kV line bays at North Lakhimpur end
- (viii) LILO of one circuit of Pare HEP – North Lakhimpur (AEGCL) 132 kV D/c line (with ACSR Zebra) at Nirjuli (POWERGRID) substation.
- (ix) Establishment of 2 x 500 MVA, 400/220 kV S/s near Vapi / Ambheti (Vapi – II)
- (x) 125 MVA bus reactor at Vapi – II Substation

### **General Detail**

Special Purpose Vehicle	: Mumbai Urja Marg Limited (erstwhile, Vapi II-North Lakhimpur Transmission Limited) (Sterlite Grid 13 Limited; A Subsidiary of Sterlite Power Trans. Limited)
Bid Process Coordinator (BPC)	: PFCCCL

Estimated Cost (Rs. Cr)	: 2600
Levelized Tariff (Rs. Cr)	: 256.592
Request for Qualification	: 14.08.2018
Request for Proposal	: 13.11.2018
Letter of Intent	: 02.03.2020
Transmission Service Agreement (TSA)	: 07.12.2018
SPV acquisition	: 23.06.2020
Transmission License by CERC	: 01.04.2021
Tariff adoption by CERC	: 01.04.2021
Contract Performance Guarantee	: 23.06.2020
Clearance u/s 164	: 26.10.2021
Execution plan submitted to CEA	: 20.10.2020
NIT issued on	:
EPC contract awarded on	:
Scheduled Date of Completion	: Part-A : Oct-22, Part-B : Apr-23, Part-C : Dec-23 & Dec-22, Part-D : Jun-23

#### **Part A - Additional 400 kV outlets from Banaskantha 765/400 kV S/s**

##### **1. LILO of second circuit of Zerda –Ranchodpura 400 kV D/c line at Banaskantha (PG) PS**

Length	: 34.7 ckm
Locations	: 51 Nos.
Scheduled COD	: 23 Oct'22
Anticipated COD	: 29 Jun'22 (Charging Completed)

#### **Part B - Establishment of new substation at Vapi/Ambethi area and its associated transmission line**

##### **2. Establishment of 2 x 500 MVA, 400/220 kV S/s near Vapi / Ambheti (Vapi – II)**

Land Acquired	: 100 %
Civil work completed	: 29.16%
Equipment supplied	: 96.74%
Equipment erection	: 0 %
Scheduled COD	: 22-Apr-2023
Anticipated COD	: Mar-24

##### **3. LILO of KAPP – Vapi 400 kV D/c line at Vapi – II**

Length	: 0.314 ckm (As per revised substation location)
Locations	: 2 Nos. (As per revised substation location)
Foundation completed	: 0 No.
Tower erected	: 0 No.
Stringing completed	: 0 ckm
Scheduled COD	: 22-Apr-2023



Anticipated COD : Mar-24

**Status of statutory approvals:**

**Forest area**

Details of Tr. Line Falling under Forest : N/A  
Locations :  
Forest area (Ha) :  
Forest proposals submitted on :  
Current status :

**Wildlife area**

Details of Tr. Line Falling under Forest : N/A  
Locations :  
Wildlife area (Ha) :  
Wildlife proposals submitted on :  
Current status :

**Power line crossing**

Total No. of crossings : 0 No.  
Proposal submitted : 0 No.  
Approval obtained : 0 No.

**Railway crossing**

Total No. of crossings : 0 No.  
Proposal submitted : 0 No.  
Approval obtained : 0 No.

**National Highway / SH Crossing**

Total No. of crossings : 0 No.  
Proposal submitted : 0 No.  
Approval obtained : 0 No.

**River Crossings**

Total No. of crossings : 0 No.  
Proposal submitted : 0 No.  
Approval obtained : 0 No.

**PTCC approval**

Proposal submitted to Defence : Yes  
Proposal submitted to BSNL : Yes  
Proposal submitted to Railways : Yes  
Current status : Received on 28-09-2023

**Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation : Proposal submitted  
Current Status : Defence Aviation : NOC received  
Civil Aviation : NOC received

#### **4. 125 MVAR bus reactor at Vapi – II Substation**

Land Acquired	: 100 %
Civil work completed	: 85%
Equipment supplied	: 100%
Equipment erection	: 0 %
Scheduled COD	: 22-Apr-2023
Anticipated COD	: Mar-24

#### **5. Vapi-II – Sayali D/C 220 kV D/C line**

Length	: 45.4 ckm
Locations	: 77 Nos.
Foundation completed	: 64 Nos.
Tower erected	: 58 Nos.
Stringing completed	: 13.32 ckm
Scheduled COD	: 22-Apr-2023
Anticipated COD	: Mar-24

#### **Status of statutory approvals:**

##### **Forest area**

Details of Tr. Line Falling under Forest	:
Locations	: 6 Nos. ; Length : 2 Kms
Forest area (Ha)	: 5 Ha
Forest proposals submitted on	: DNH : 19 Jan'21, Hard copy submission Gujarat : 06 Jan'21, Hard copy submission
Current status	: DNH : Stage-1 and working permission received. Gujarat : Stage-2 and working permission Received

##### **Wildlife area**

Details of Tr. Line Falling under Forest	:
Locations	: 5 Nos. ; Length : 1.6 Kms
Wildlife area (Ha)	: 4.388 Ha
Wildlife proposals submitted on	: DNH : 23 Mar'21,
Current status	: Stage-I and working permission received.

##### **Power line crossing**

Total No. of crossings	: 9 Nos.
Proposal submitted	: 8 Nos.
Approval obtained	: 8 Nos.

##### **Railway crossing**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

#### **National Highway / SH Crossing**

Total No. of crossings	: 1 Nos.
Proposal submitted	: 1 Nos.
Approval obtained	: 1 Nos.

#### **River Crossings**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

#### **PTCC approval**

Proposal submitted to Defence	: Yes
Proposal submitted to BSNL	: Yes
Proposal submitted to Railways	: Yes
Current status	: Received on 28-09-2023

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: Proposal submitted
Current Status	: Defence Aviation : NOC received Civil Aviation : NOC received

### **Part C - Additional ISTS feed to Navi Mumbai 400/220 kV substation of POWERGRID**

- 6. Padghe (PG) – Kharghar 400 kV D/c (quad) line to be terminated into one ckt. of Kharghar – Vikhroli 400 kV D/c (quad) line (thus forming Padghe (PG) - Kharghar 400 kV S/c (quad) line, Padghe (PG) - Vikhroli 400 kV S/c (quad) line)**

Length	: 140 ckm
Locations	: 222 Nos.
Foundation completed	: 107 Nos.
Tower erected	: 88 Nos.
Stringing completed	: 5.5 ckm
Scheduled COD	: 22-Dec-2023
Anticipated COD	: Jun-2024

**Current Status:** Detailed Survey completed

#### **Constraints / Approval; if any:**

1. ROW issues at all No.n-forest locations (16 locations in Raigad and 62 locations in Thane).

#### **Forest area**

Details of Tr. Line Falling under Forest	:
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Locations	: 67 Nos. ; Length : 26.09 Kms
Forest area (Ha)	: 119.99 Ha
Forest proposals submitted on	: MH: 03 Jun'21, Hard copy submission
Current status	: Stage-1 approval received on 30.12.2022. Tree Cutting and working permission received from CCF Thane on 23.01.2023.

#### **Wildlife area**

Details of Tr. Line Falling under Forest	: N/A
Locations	:
Wildlife area (Ha)	:
Wildlife proposals submitted on	:
Current status	:

#### **Power line crossing**

Total No. of crossings	: 19 Nos.
Proposal submitted	: 18 Nos.
Approval obtained	: 18 Nos.

#### **Railway crossing**

Total No. of crossings	: 4 Nos.
Proposal submitted	: 4 Nos.
Approval obtained	: 1 Nos.

#### **National Highway / SH Crossing**

Total No. of crossings	: 7 Nos.
Proposal submitted	: 6 Nos.
Approval obtained	: 2 Nos.

#### **River Crossings**

Total No. of crossings	: 4 Nos.
Proposal submitted	: 4 Nos.
Approval obtained	: 0 No.

#### **PTCC approval**

Proposal submitted to Defence	: Submitted on 21.06.23
Proposal submitted to BSNL	: Submitted on 21.06.23
Proposal submitted to Railways	: Submitted on 21.06.23
Current status	: Submitted on 21.06.23

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: Civil Aviation submitted
Current Status	: Defence Aviation Proposal yet to submit Civil Aviation under scrutiny at authority

### **7. LILO of Padghe (PG) – Vikhroli 400 kV S/c line at Navi Mumbai GIS (PG)**

Length	: 38 ckm
Locations	: 60 No.

Foundation completed	: 23 Nos.
Tower erected	: 21 Nos.
Stringing completed	: 2.144 ckm
Scheduled COD	: 22-Dec-2023
Anticipated COD	: 22-June-2024

**Current Status:** Detailed Survey completed.

**Constraints / Approval; if any:**

1. ROW issues at all non-forest locations (27 Locations in Raigad).).

**Status of statutory approvals:**

**Forest area**

Details of Tr. Line Falling under Forest	:
Locations	: 23 Nos. ; Length : 7.6 Kms
Forest area (Ha)	: 35.224 Ha
Forest proposals submitted on	: MH : 03 Jun'21, Hard copy submission
Current status	: Stage-1 approval received on 30.12.2022. Tree Cutting working permission received from CCF Thane on 23.01.2023.

**Wildlife area**

Details of Tr. Line Falling under Forest	: N/A
Locations	:
Wildlife area (Ha)	:
Wildlife proposals submitted on	:
Current status	:

**Power line crossing**

Total No. of crossings	: 3 Nos.
Proposal submitted	: 3 Nos.
Approval obtained	: 3 Nos.

**Railway crossing**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

**National Highway / SH Crossing**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

**River Crossings**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

**PTCC approval**

Proposal submitted to Defence	: Submitted on 21.06.23
Proposal submitted to BSNL	: Submitted on 21.06.23
Proposal submitted to Railways	: Submitted on 21.06.23
Current status	: Submitted on 21.06.23

**Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: Civil Aviation submitted
Current Status	: Defence Aviation Proposal yet to submit Civil Aviation under scrutiny at authority

**8. LILO of Apta – Kalwa/Taloja 220 kV D/c line (i.e. Apta – Kalwa and Apta Taloja 220 kV lines) at Navi Mumbai (PG)**

Length	: 4.8 ckm
Locations	: 8 Nos.
Foundation completed	: 0 No.
Tower erected	: 0 No.
Stringing completed	: 0 ckm
Scheduled COD	: 22-Dec-2022
Anticipated COD	: Mar'24

**Current Status:** Detailed Survey completed**Constraints / Approval; if any:**

1. ROW issues at all 8 locations.

**Status of statutory approvals:****Forest area**

Details of Tr. Line Falling under Forest	: N/A
Locations	:
Forest area (Ha)	:
Forest proposals submitted on	:
Current status	:

**Wildlife area**

Details of Tr. Line Falling under Forest	: N/A
Locations	:
Wildlife area (Ha)	:
Wildlife proposals submitted on	:
Current status	:

**Power line crossing**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

**Railway crossing**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

**National Highway / SH Crossing**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

**River Crossings**

Total No. of crossings	: 0 No.
Proposal submitted	: 0 No.
Approval obtained	: 0 No.

**PTCC approval**

Proposal submitted to Defence	: No
Proposal submitted to BSNL	: No
Proposal submitted to Railways	: No
Current status	: Proposal is yet to submit

**Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: No
Current Status	: Proposal is yet to submit

**Part D - North Eastern Region Strengthening Scheme – IX**

**9. Pare HEP (NEEPCO) (from near LILO point)– North Lakhimpur (AEGCL) 132 kV D/c line (with ACSR Zebra conductor) along with 2 No. 132 kV line bays at North Lakhimpur end**

Length	: 61.99 ckm
Locations	: 91 Nos.
Scheduled COD	: 22-Jun-2023
Actual COD	: Aug-23

**9(a). Status of 2 No. 132 kV line bays at North Lakhimpur end**

Scheduled COD	: 22-Jun-2023
Actual COD	: Aug-23

**10. LILO of one circuit of Pare HEP – North Lakhimpur (AEGCL) 132 kV D/c line (with ACSR Zebra) at Nirjuli (POWERGRID) substation**

Length	: 33.42 ckm
Locations	: 56 Nos.
Scheduled COD	: 22-Jun-2023
Actual COD	: Aug-23





## 20. Establishment of new 220/132 kV substation at Nangalbibra

### Background -

Presently, the state of Meghalaya has one 400/220 kV S/s at Byrnihat (MePTCL) and one 132 kV S/s at Khlierhat (POWERGRID). Both of these ISTS substations are on eastern part of Meghalaya. Due to increasing power demand and for providing reliable power supply in the western part of Meghalaya, necessity of 220 kV grid substation in the East Garo Hills district of western Meghalaya was felt to further strengthen its interconnection with grid, which is presently connected through 132 lines in radial manner.

System Studies have been carried out for 2022-23 timeframe. The anticipated peak demand of Meghalaya for 2022-23 timeframe is 478MW and the envisaged installed capacity of about 360MW, majority of these are from hydro generations. In low Hydro scenarios, the dispatch from these stations are expected to be limited to about 180MW, thereby creating a deficit in the supply of about 300MW. Accordingly, to simulate the worst case, low hydro peak demand scenario has been chosen to study the requirement of additional connections to meet the growing demand of Meghalaya. Due to the proximity of Bongaigaon TPS from the western part of Meghalaya, a large quantum of power flows through BTPS – Agia – Medinipathar – Nangalbibra corridor making it N-1 No.n-compliant.

Therefore, a new 220/132 kV substation may be required at Nangalbibra which would be fed from Bongaigaon 400/220 kV Substation through 400 kV D/c line (initially operated at 220 kV ). This interconnection would reduce the critical loading on BTPS – Agia 220 kV D/c line of AEGCL and improve the voltage profile as well as reliability of power supply in the western part of Meghalaya. Further, for drawal of power from Nangalbibra (ISTS), MePTCL has planned to develop Nangalbibra (ISTS) – Nangalbibra (Meghalaya) 132 kV (Single Moose) D/c line. In addition, MePTCL has planning to develop Nangalbibra (ISTS) – Mawngap 220 kV D/c line so that Bongaigaon (POWERGRID) – Nangalbibra (ISTS) – Mawngap (MePTCL) – Byrnihat (MePTCL) – Bongaigaon (POWERGRID) ring would be completed for power transfer with reliability. Considering future load growth, space for expansion of Nangalbibra (ISTS) 220/132 kV S/s to 400 kV at a later date would also be kept.

The western most part of Meghalaya is connected through long radial line from Nangalbibra (MePTCL) – Rongkhon – Ampati – Phulbari 132 kV link. For reliable supply of power and improved voltage profile in western most part of Meghalaya, a second source from Assam side through Hatsinghmari (AEGCL) – Ampati (MePTCL) 132 kV D/c line may be required.

### Scope of transmission project

1. Establishment of new 220/132 kV , 2x160MVA substation at Nangalbibra
2. Extension at 220 kV GIS in Bongaigaon (POWERGRID) 400/220 kV S/s: 2 No. of GIS line bays for termination of Bongaigaon (POWERGRID) – Nangalbibra 400 kV D/c line (initially operated at 220 kV )
3. Extension at Hatsinghmari (Assam) S/s: 2 No. of 132 kV line bays for termination of Hatsinghmari (Assam) – Ampati (Meghalaya) 132 kV D/c line
4. Extension at Ampati (Meghalaya) S/s: 2 No. of 132 kV line bays for termination of Hatsinghmari (Assam) – Ampati (Meghalaya) 132 kV D/c line
5. Bongaigaon (POWERGRID) – Nangalbibra 400 kV D/c (Twin ACSR Moose) line (initially operated at 220 kV )
6. Hatsinghmari (Assam) – Ampati (Meghalaya) 132 kV (Single ACSR Panther) D/c line

**General Details**

Special Purpose Vehicle	:	Nangalbibra-Bongaigaon Transmission Limited (Sterlite Grid 26 Limited; a subsidiary of Sterlite Power Transmission Limited)
Bid Process Coordinator (BPC)	:	Power Finance Corporation Consulting Ltd.
Estimated Cost (Rs. Cr)	:	560
Levelized Tariff (Rs. Cr)	:	55.9
Request for Qualification	:	NA
Request for Proposal	:	04.02.2021
Letter of Intent	:	16.12.2021
Transmission Service Agreement (TSA)	:	06.07.2021
SPV acquisition	:	16.12.2021
Transmission License by CERC	:	28.07.2022
Tariff adoption by CERC	:	27.05.2022
Contract Performance Guarantee	:	16.12.2021
Clearance u/s 164	:	28.12.2022.
Execution plan submitted to CEA	:	16.09.2022
NIT issued on	:	-
EPC contract awarded on	:	Nov-2021
Scheduled Date of Completion	:	Dec-2023

**Status of progress of transmission project****1. Bongaigaon (POWERGRID) - Nangalbibra 400 kV D/c (Twin ACSR Moose) line (initially operated at 220 kV )**

Length	:	245 ckm
Locations	:	310 No.
Foundation completed	:	234 Nos.
Tower erected	:	123 Nos.
Stringing completed	:	15.25 ckm
Scheduled COD	:	Dec'23
Anticipated COD	:	Jun'24

**Constraints/Approval if any:**

1. Facing severe ROW issues at 3 locations (AP40,41/1 & 46/3) in Dhubri Distric. 08 locations (AP1 to AP 7 & AP27) in Kokrajhar District, 05 locations (AP62, AP63, AP64, AP65 & AP66) in Bongaigaon District and 01 locations (AP86) in Goalpara District.

**Status of statutory approvals:****Forest area**

Details of Tr. Line Falling under Forest	:	
Locations	:	53 Nos. ; Length : 20.58 km
Forest area (Ha)	:	93.188 Ha
Forest proposals submitted on	:	Assam (61.6 Ha)-28.02.2022, Meghalaya (31.588 Ha)-15.05.2022,
Current status	:	Stage-1 clearance and working permission received for Assam and Meghalaya.

**Wildlife area**

Details of Tr. Line Falling under Forest	: NIL
Locations	: NIL
Wildlife area (Ha)	: NA
Wildlife proposals submitted on	: NA
Current status	:

#### **Power line crossing**

Total No. of crossings	: 13
Proposal submitted	: 13
Approval obtained	: 13

#### **Railway crossing**

Total No. of crossings	: 4
Proposal submitted	: 4
Approval obtained	: 4

#### **National Highway / SH Crossing**

Total No. of crossings	: 9
Proposal submitted	: 9
Approval obtained	: 0

#### **River Crossings**

Total No. of crossings	: 1
Proposal submitted	: 1
Approval obtained	: 1

#### **PTCC approval**

Proposal submitted to Defence	: Yes
Proposal submitted to BSNL	: Yes
Proposal submitted to Railways	: Yes
Current status	: Proposal submitted on 2nd May 2023

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: Civil aviation approved Defence Aviation proposal submitted on 07.08.2023
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### **2. Hatsinghmari (Assam) – Ampati (Meghalaya) 132 kV (Single ACSR Panther) D/c line**

Length	: 37 ckm
Locations	: 57 Nos.
Foundation completed	: 25 Nos.
Tower erected	: 4 Nos.
Stringing completed	: 0 ckm
Scheduled COD	: Dec'23
Anticipated COD	: Jun'24

## **Status of statutory approvals:**

### **Forest area**

Details of Tr. Line Falling under Forest	: N/A
Locations	: 0 No. ; Length : 0 Kms
Forest area (Ha)	:
Forest proposals submitted on	:
Current status	:

### **Wildlife area**

Details of Tr. Line Falling under Forest	: N/A
Locations	:
Wildlife area (Ha)	:
Wildlife proposals submitted on	:
Current status	:

### **Power line crossing**

Total No. of crossings	: 0
Proposal submitted	: N/A
Approval obtained	: N/A

### **Railway crossing**

Total No. of crossings	: 0
Proposal submitted	: N/A
Approval obtained	: N/A

### **National Highway / SH Crossing**

Total No. of crossings	: 0
Proposal submitted	: N/A
Approval obtained	: N/A

### **River Crossings**

Total No. of crossings	: 0
Proposal submitted	: N/A
Approval obtained	: N/A

### **PTCC approval**

Proposal submitted to Defence	: Yes
Proposal submitted to BSNL	: Yes
Proposal submitted to Railways	: Yes
Current status	: Proposal submitted on 2nd May 2023

### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: Civil Aviation approved
Current Status	: Defence Aviation Proposal submitted on 07.08.2023.

## **3. Establishment of new 220/132 kV , 2x160MVA substation at Nangalbibra**

Land Acquired	: 88%
Civil work completed	: 46 %
Equipment supplied	: 74 %
Equipment erection	: 0 %
Scheduled COD	: Dec'23
Anticipated COD	: Jun'24

**Constraints/Approval if any:**

Land acquisition for balance 3.4 Acre for S/S in Nengkhra, Distt. East Garo Hills, Meghalaya  
Land registry for 26.56 acre has been completed on 7th Sep'2022.

18.07.2023: DC East Garo Hills forwarded the application for the Acquisition of 1.65 acres land to the Secretariat Govt. of Meghalaya.

Landowner of balance 1.85 acres of land (one owner) are not willing to part with their lands.

**4. Extension at 220 kV GIS in Bongaigaon (POWERGRID) 400/220 kV S/s: 2 No. of GIS line bays for termination of Bongaigaon (POWERGRID) – Nangalbibra 400 kV D/c line (initially operated at 220 kV )**

Land Acquired	: Space provided by POWERGRID
Civil work completed	: 90 %
Equipment supplied	: 61.7 %
Equipment erection	: 0 %
Scheduled COD	: Dec'23
Anticipated COD	: Jun'24

**5. Extension at Hatsinghmari (Assam) S/s: 2 No. of 132 kV line bays for termination of Hatsinghmari (Assam) - Ampati (Meghalaya) 132 kV D/c line**

Land Acquired	: Space provided by AEGCL
Civil work completed	: 90 %
Equipment supplied	: 99 %
Equipment erection	: 75 %
Scheduled COD	: Dec'23
Anticipated COD	: Jun'24

**6. Extension at Ampati (Meghalaya) S/s: 2 No. of 132 kV line bays for termination of Hatsinghmari (Assam) – Ampati (Meghalaya) 132 kV D/c line**

Land Acquired	: Space provided by MePTCL
Civil work completed	: 96 %
Equipment supplied	: 97.6 %
Equipment erection	: 65 %
Scheduled COD	: Dec'23
Anticipated COD	: Jun'24

## **21. Transmission System for evacuation of power from Pakaldul HEP in Chenab Valley HEPs – Connectivity System**

### **Background -**

A comprehensive transmission system for providing connectivity to three Hydra Electric Projects (HEPs) viz Pakaldul (1000MW), Kiru (624 MW) and Kwar (540 MW) of Chenab Valley Power Projects Limited (CVPPL) in Union Territory of Jammu and Kashmir was agreed in the 1st Northern Region Power Committee- Transmission Planning (NRPC (TP)) meeting held on 24/01/2020. It was also agreed that the above projects would be connected to a common pooling station through 400 kV dedicated transmission line to be implemented by developer of these projects. Accordingly, establishment of common pooling station at Kishtwar by LILO of one circuit of Kishenpur — Dulhasti 400 kV D/c (Quad) line (Single Circuit Strung) was agreed to be implemented under ISIS to provide connectivity to above projects. Subsequently, during 2nd meeting of NRPC (TP) held on 01/09/2020, transmission system i.e. Kishtwar switching station - Kishenpur 400 kV S/c (Quad) line (stringing of second circuit of Dulhasti—Kishenpur 400 kV from Kishtwar upto Kishenpur) along with bays at both ends was also agreed to be implemented under ISIS for transfer of 1000MW from Pakaldul HEP to NR on target region on Long-term Access (LTA) basis.

Above transmission system for evacuation of Power from Pakaldul HEP in Chenab valley was also agreed in 48th Northern Region Power Committee (NRPC) meeting held on 02/09/2020 & 3rd National Committee on Transmission (NCT) held on 26th and 28th May, 2020. Subsequently, Ministry of Power, Government of India, vide its Gazette Notification No. CG-DL-E-28092020-222045 dated 25.09.2020 had declared establishment of Kishtwar Switching Station (GIS) including 400 kV bay at Kishtwar for stringing of second circuit of Dulhasti—Kishenpur 400 kV from Kishtwar upto Kishenpur through tariff based competitive bidding process route as part of "Transmission System for Evacuation of power from Pakaldul HEP in Chenab Valley HEPs – connectivity system".

Further, in 2nd meeting of NRPCTP held on 01.09.2020, JKPDD had intimated that presently, there are three Nos. of 132/33 kV GSS in vicinity to proposed Kishtwar Switching Station (GIS). In order to provide reliable power to the area, based on the request of JKPDD implementation of 2x200 MVA, 400/132 kV ICTs at Kishtwar Pooling Station along with 4 No. of 132 kV line bays at Kishtwar PS was agreed as system strengthening scheme in matching timeframe of Kishtwar PS. The matter was also discussed and agreed in. During the 4th meeting of NCT held on 20.01.2021 & 28.01.2021, it was also clarified that as per CERC Sharing Regulations, 2020 that transmission charges for the 400/132 transformers shall be apportioned to J&K only. Further, implementation of 400/132 kV transformer at Kishtwar Pooling Station was recommended to be combined with "Transmission system for evacuation of power from Pakaldul HEP in Chenab Valley HEPs - Connectivity System" which has already been No.tified by MoP in Gazette of India dated 25.09.2020 for implementation through TBCB.

### **Scope of transmission project**

1. Establishment of 400/132 kV pooling station at Kishtwar (GIS) along with Bus Reactors at Kishtwar pooling station by LILO of one circuit of Kishenpur -Dulhasti 400 kV D/C (Quad) line (Single Circuit Strung)
2. LILO of one circuit of Kishenpur – Dulhasti 400 kV D/c (quad) line at Kishtwar
3. 2 Nos. of 400 kV bays at Kishtwar (GIS) for LILO of one circuit of Kishenpur -Dulhasti 400 kV D/C (Quad) line (Single Circuit Strung)
4. 1 No of 400 kV line bay at Kishtwar (GIS) for 2<sup>nd</sup> Circuit stringing of Kishtwar – Kishenpur section

5. 7x66.67 MVA I-Phase, 400/132 kV ICT along with associated bays at Kishtwar Pooling Station
6. 4 Nos. of 132 kV line bays (GIS) at Kishtwar Pooling Station

### General Detail

Special Purpose Vehicle	: Kishtwar Transmission Limited. (Sterlite Grid 24 Limited; a subsidiary of Sterlite Power Transmission Limited)
Bid Process Coordinator (BPC)	: PFC Consulting Limited.
Estimated Cost (Rs. Cr)	: 311
Levelized Tariff (Rs. Cr)	: 38.846
Request for Qualification	: NA
Request for Proposal	: 04.02.2021
Letter of Intent	: 22.03.2022
Transmission Service Agreement (TSA)	: 17.02.2022*
SPV acquisition	: 06.12.2022
Transmission License by CERC	: 12.05.2023
Tariff adoption by CERC	: 23.03.2023
Contract Performance Guarantee	: 05.12.2022
Clearance u/s 164	: 31.08.2023.
Execution plan submitted to CEA	: 27.12.2022 (Revised plan submitted on 22.03.2023)
NIT issued on	: -
EPC contract awarded on	: 12.05.2023
Scheduled Date of Completion	: 01.04.2025

\*CTU, CVPPL and KTL signed the TSA unconditionally on 17.02.2022, however, JKPCL signed the TSA with conditions on 15.10.22 and withdrew those condition on 24.11.2022. Due to delay in signing of TSA, SPV acquisition got delayed.

### Status of progress of transmission project

#### 1. LILO of one circuit of Kishenpur – Dulhasti 400 kV D/c (Quad) line at Kishtwar

Length	: 1.72 ckm
Locations	: 5 Nos.
Foundation completed	: NIL
Tower erected	: NIL
Stringing completed	: NIL
Scheduled COD	: 01 Apr'25
Anticipated COD	: 01 Apr'25

### Constraints/Approval if any:

### Status of statutory approvals:

#### Forest area

Details of Tr. Line Falling under Forest	: NIL
Locations	: NA

Forest area (Ha)	: NA
Forest proposals submitted on	: NA
Current status	:

#### **Wildlife area**

Details of Tr. Line Falling under Forest	: NIL
Locations	: NA
Wildlife area (Ha)	: NA
Wildlife proposals submitted on	: NA
Current status	:

#### **Power line crossing**

Total No. of crossings	: NIL
Proposal submitted	: NA
Approval obtained	: NA

#### **Railway crossing**

Total No. of crossings	: NIL
Proposal submitted	: NA
Approval obtained	: NA

#### **National Highway / SH Crossing**

Total No. of crossings	: NIL
Proposal submitted	: NA
Approval obtained	: NA

#### **River Crossings**

Total No. of crossings	: NIL
Proposal submitted	: NA
Approval obtained	: NA

#### **PTCC approval**

Proposal submitted to Defence	: NIL
Proposal submitted to BSNL	: No
Proposal submitted to Railways	: No
Current status	: Proposal is yet to be submitted

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: Defence Aviation Proposal submitted on 4 Oct'23. Civil Aviation - NA
Current Status	:

## **2. 400/132 kV (GIS) Pooling Station at Kishtwar**

- Establishment of 400/132 kV pooling station at Kishtwar (GIS) along with Bus Reactor at Kishtwar pooling station by LILO of one circuit of Kishenpur – Dulhasti 400 kV D/c (Quad) line (Single Circuit Strung)
- 2Nos. of 400 kV bays at Kishtwar (GIS) for LILO of one circuit of Kishenpur – Dulhasti 400 kV D/c (Quad) line
- 1No. of 400 kV line bay at Kishtwar (GIS) for 2nd circuit stringing of Kishtwar-Kishenpur section



- d. 7X66.67MVA, I-Phase 400/132 kV ICT along with associated bays at Kishtwar pooling station
- e. 4Nos. of 132 kV bays

Land Acquired	: 70%
Civil work completed	: 0 %
Equipment supplied	: 0 %
Equipment erection	: 0 %
Scheduled COD	: 01Apr'25
Anticipated COD	: 01Apr'25

**Constraints/Approval if any:**

1. Acquisition of balance land (09 acre) is pending for substation.  
Order for Tree felling permission issued on 28<sup>th</sup> Aug'23.
2. Support sought from DC Kishtwar in resolution of bottle necks in the form of turning Radius or width of the road for substation equipment movement.

## **22. Establish Inter-State Transmission System for Transmission System for Evacuation of Power from REZ in Rajasthan (20GW) under Phase-III Part G**

### **Background –**

To integrate and evacuate power from additional 20 GW renewable potential of Renewable Energy Zones (Fatehgarh: 9.1 GW, Bhadla: 8GW, Ramgarh: 2.9 GW) in Rajasthan, various transmission alternatives were evolved and deliberated in the 3rd NRPC-TP meeting held on 19.02.21. Based on the discussion, hybrid (EHVAC& HVDC) transmission system was agreed in above meeting for evacuation of power from additional 20 GW REZ in Rajasthan (Phase-III).

As part of Phase-III system, Fatehgarh-4 & Bhadla-3 Polling stations (new) are to be established which will be interconnected with Fatehgarh-3 & Fatehgarh-2 PS respectively. Further, renewable sources in Ramgarh complex are also proposed to be pooled at Ramgarh PS which shall be interconnected with Bhadla-3 PS. In view of integration & evacuation of additional 20 GW RE in Rajasthan with reliability as well as taking care of RE variability, under Phase-III System, Hybrid transmission system comprising EHV AC (765 kV ) & HVDC corridors are planned towards Delhi & Southern UP.

The subject transmission scheme involves implementation of Fatehgarh-3– Beawar 765 kV D/c (2nd) line which shall facilitate evacuation of RE power from Fatehgarh complex through Fatehgarh-3 PS for onward dispersal of power to various beneficiaries.

Above transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III was also agreed in 49th Northern Region Power Committee (NRPC) meeting held on 27/09/2021 & 5th National Committee on Transmission (NCT) held on 25/08/2021 and 2/09/2021. Subsequently, Ministry of Power, Government of India, vide its Gazette Notification CG-DL-E-08122021-231686 (No. 4661) dated 06.12.2021 declared establishment of Transmission system for evacuation of power from REZ in Raj (20 GW) under Phase III Part G through tariff based competitive bidding process route as part of “Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III”.

### **Scope of transmission project**

1. Fatehgarh-III – Beawar 765 kV D/C (2nd) along with 330MVAR Switchable line reactor for each circuit at each end of Fatehgarh-III– Beawar 765 kV D/C line
2. 2 Nos. of 765 kV line bays at both at Beawar II & Fatehgarh-III Substation.

### **General Details**

Special Purpose Vehicle	: Fatehgarh III Beawar Transmission Limited (Sterlite Grid 19 Limited; a subsidiary of Sterlite Power Transmission Limited)
Bid Process Coordinator (BPC)	: Power Finance Corporation Consulting Ltd.
Estimated Cost (Rs. Cr)	: 1359
Levelized Tariff (Rs. Cr)	: 135.72
Request for Qualification	: NA
Request for Proposal	: 19.01.2022
Letter of Intent	: 03.03.2023
Transmission Service Agreement (TSA)	: 01.08.2023
SPV acquisition	: 01.08.2023
Transmission License by CERC	: Petition filed on 05.08.2023
Tariff adoption by CERC	: Petition filed on 05.08.2023

Contract Performance Guarantee	: 27.07.2023
Clearance u/s 164	: Under process
Execution plan submitted to CEA	:
NIT issued on	:
EPC contract awarded on	: April-2023
Scheduled Date of Completion	: Feb'2025
Anticipated COD	: Feb'2025

### **Current Status:**

Row clearance received for 293 locations.

#### **1. Fatehgarh III - Beawar 765 kV D/c line**

Length	: 627.06 ckm
Locations	: 805 Nos.
Foundation completed	: 132 Nos.
Tower erected	: 3 Nos.
Stringing completed	: 0 ckm
Scheduled COD	: Feb'25
Anticipated COD	: Feb'25

### **Constraints/Approval if any:**

#### **Status of statutory approvals:**

##### **Forest area**

Details of Tr. Line Falling under Forest	:
Locations	: 1 No.; Length : 3.451kms
Forest area (Ha)	: 23.122Ha
Forest proposals submitted on	: Not Submitted
Current status	: Proposal Under Preparation

##### **Wildlife area**

Details of Tr. Line Falling under Forest	: NIL
Locations	: NIL
Wildlife area (Ha)	: NA
Wildlife proposals submitted on	: NA
Current status	:

##### **Power line crossing**

Total No. of crossings	: 18
Proposal submitted	: 0
Approval obtained	: 0

##### **Railway crossing**

Total No. of crossings	: 1
Proposal submitted	: 0
Approval obtained	: 0

##### **National Highway / SH Crossing**

Total No. of crossings	: 17
Proposal submitted	: 0
Approval obtained	: 0

#### **River Crossings**

Total No. of crossings	: 1
Proposal submitted	: 0
Approval obtained	: 0

#### **PTCC approval**

Proposal submitted to Defence	: No
Proposal submitted to BSNL	: No
Proposal submitted to Railways	: No
Current status	: Proposal Under Preparation

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: No
Current Status	: Proposal Under Preparation

#### **2. 2 Nos. of Line Bays at Fatehgarh III Substation**

Land Acquired	:
Civil work completed	: 0 %
Equipment supplied	: 0 %
Equipment erection	: 0 %
Scheduled COD	: Feb'25
Anticipated COD	: Feb'25

#### **3. 2 Nos. of Line Bays at Beawar II Substation**

Land Acquired	:
Civil work completed	: 0 %
Equipment supplied	: 0 %
Equipment erection	: 0 %
Scheduled COD	: Feb'25
Anticipated COD	: Feb'25

#### **Current Status:**

#### **Constraints/Approval if any:**

## **23. Name of transmission project - Establish Inter-State Transmission System for “Transmission System for Evacuation of Power from REZ in Rajasthan (20GW) under Phase-III Part F**

**Background:** In order to integrate and evacuate power from additional potential of renewable energy zones (20 GW) in Rajasthan (Fatehgarh: 9.1GW, Bhadla: 8GW, Ramgarh: 2.9GW) over and above 17 GW Solar Energy Zones (SEZ), various transmission alternatives were evolved & discussed with stakeholders and deliberated in the 3rd NRPC-TP meeting held on 19.02.21. Based on the discussions, hybrid (EHVAC & HVDC) transmission system was agreed in above meeting for evacuation of power from additional 20 GW REZ in Rajasthan (Phase-III).

As part of Phase-III system, Fatehgarh-4 & Bhadla-3 Pooling stations (new) are to be established which will be interconnected with Fatehgarh-3 & Fatehgarh-2 PS respectively. Further, renewable sources in Ramgarh complex are also proposed to be pooled at Ramgarh PS which shall be interconnected with Bhadla-3 PS. In view of integration & evacuation of additional 20 GW RE in Rajasthan with reliability as well as taking care of RE variability, under Phase-III System, Hybrid transmission system comprising EHV AC (765 kV ) & HVDC corridors are planned towards Delhi & Southern UP.

The subject transmission scheme involves establishment of 765/400 kV Substation at suitable location near Beawar, implementation of Fatehgarh-3– Beawar 765 kV D/c line, LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar and LILO of 400 kV Kota–Merta line at Beawar S/s which shall facilitate evacuation of RE power from Fatehgarh complex to Beawar and onward dispersal of power beyond Beawar to various beneficiaries.

Above transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase III was also agreed in 49th Northern Region Power Committee (NRPC) meeting held on 27/09/2021 & 5th National Committee on Transmission (NCT) held on 25th Aug, 2021 and 2nd Sep, 2021.

The project is a major boost for the development of renewable energy in Rajasthan. It will help to harness the state's abundant renewable energy resources and contribute to the country's clean energy goals. The project will also help to improve the power supply situation in Rajasthan and reduce the state's dependence on imported coal.

### **Scope of transmission project**

1. Establishment of 2x1500MVA 765/400 kV Substation at suitable location near Beawar along with 2x330 MVA 765 kV Bus Reactor & 2x125 MVA 420 kV Bus Reactor.
2. LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar.
3. LILO of 400 kV Kota –Merta line at Beawar.
4. Fatehgarh-3– Beawar 765 kV D/c along with 330 MVA Switchable line reactor for each circuit at each end of Fatehgarh-3– Beawar 765 kV D/c line.
5. +/- 2x330 MVA STATCOM, 4x125 MVA MSC, 2x125 MVA MSR at Fatehgarh-3 PS along with 2 Nos. of 400 kV bays at Fatehgarh-3 PS.

### **General Details**

Special Purpose Vehicle	: Beawar Transmission Limited (BTL) (Sterlite Grid 27 Limited; a subsidiary of Sterlite Power Transmission Limited)
Bid Process Coordinator (BPC)	: REC Power Development and Consultancy Limited.

Estimated Cost (Rs. Cr)	: 2600
Levelized Tariff (Rs. Cr)	: 274.93
Request for Qualification	: NA
Request for Proposal	: 19.01.2022
Letter of Intent	: 25.08.2023
Transmission Service Agreement (TSA)	: 20.09.2023
SPV acquisition	: 20.09.2023
Transmission License by CERC	: Filed on 27.09.2023
Tariff adoption by CERC	: Filed on 27.09.2023
Contract Performance Guarantee	:
Clearance u/s 164	: Under Preparation
Execution plan submitted to CEA	:
NIT issued on	:
EPC contract awarded on	:
Scheduled Date of Completion	: 20.09.2025
Anticipated COD	: 20.09.2025

### **Status of progress of transmission project**

#### **1. Fatehgarh-3 PS– Beawar 765 kV D/c**

Length	: 619 ckm
Locations	: 782 nos
Foundation completed	: 0 nos
Tower erected	: 3 nos
Stringing completed	: 0 ckm
Scheduled COD	: Mar'25
Anticipated COD	: Mar'25

### **Constraints/Approval if any:**

1.

#### **Status of statutory approvals:**

##### **Forest area**

Details of Tr. Line Falling under Forest	:
Locations	: 1 No.; Length : 3.451kms
Forest area (Ha)	: 29.092Ha
Forest proposals submitted on	: Not Submitted
Current status	: Proposal Under Preparation

##### **Wildlife area**

Details of Tr. Line Falling under Forest	: NIL
Locations	: NIL
Wildlife area (Ha)	: NA
Wildlife proposals submitted on	: NA
Current status	:

#### **Power line crossing**

Total no. of crossings	: 19
Proposal submitted	: 0
Approval obtained	: 0

#### **Railway crossing**

Total no. of crossings	: 1
Proposal submitted	: 0
Approval obtained	: 0

#### **National Highway / SH Crossing**

Total no. of crossings	: 5
Proposal submitted	: 0
Approval obtained	: 0

#### **River Crossings**

Total no. of crossings	: 0
Proposal submitted	: 0
Approval obtained	: 0

#### **PTCC approval**

Proposal submitted to Defence	: No
Proposal submitted to BSNL	: No
Proposal submitted to Railways	: No
Current status	: Proposal Under Preparation

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: No
Current Status	: Proposal Under Preparation

## **2. LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c at Beawar**

Length	: 162 ckm
Locations	: 214
Foundation completed	: 0 nos
Tower erected	: 0 nos
Stringing completed	: 0 ckm
Scheduled COD	: Feb'25
Anticipated COD	: Feb'25

#### **Constraints/Approval if any:**

1.

#### **Status of statutory approvals:**

##### **Forest area**

Details of Tr. Line Falling under Forest	:
Locations	: Nil

Forest area (Ha)	: Nil
Forest proposals submitted on	: Nil
Current status	: Nil

#### **Wildlife area**

Details of Tr. Line Falling under Forest	: NIL
Locations	: NIL
Wildlife area (Ha)	: NA
Wildlife proposals submitted on	: NA
Current status	:

#### **Power line crossing**

Total no. of crossings	: 8
Proposal submitted	: 0
Approval obtained	: 0

#### **Railway crossing**

Total no. of crossings	: 2
Proposal submitted	: 0
Approval obtained	: 0

#### **National Highway / SH Crossing**

Total no. of crossings	: 2
Proposal submitted	: 0
Approval obtained	: 0

#### **River Crossings**

Total no. of crossings	: 0
Proposal submitted	: 0
Approval obtained	: 0

#### **PTCC approval**

Proposal submitted to Defence	: No
Proposal submitted to BSNL	: No
Proposal submitted to Railways	: No
Current status	: Proposal Under Preparation

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	: No
Current Status	: Proposal Under Preparation

### **3. LILO of 400 kV Kota –Merta line at Beawar**

Length	: 68 ckm
Locations	: 88 nos
Foundation completed	: 0 nos
Tower erected	: 0 nos
Stringing completed	: 0 ckm



Scheduled COD	: Feb'25
Anticipated COD	: Feb'25

**Constraints/Approval if any:**

1.

**Status of statutory approvals:**

**Forest area**

Details of Tr. Line Falling under Forest	:	
Locations	:	Nil
Forest area (Ha)	:	Nil
Forest proposals submitted on	:	Nil
Current status	:	Nil

**Wildlife area**

Details of Tr. Line Falling under Forest	:	NIL
Locations	:	NIL
Wildlife area (Ha)	:	NA
Wildlife proposals submitted on	:	NA
Current status	:	

**Power line crossing**

Total no. of crossings	:	2
Proposal submitted	:	0
Approval obtained	:	0

**Railway crossing**

Total no. of crossings	:	0
Proposal submitted	:	0
Approval obtained	:	0

**National Highway / SH Crossing**

Total no. of crossings	:	1
Proposal submitted	:	0
Approval obtained	:	0

**River Crossings**

Total no. of crossings	:	0
Proposal submitted	:	0
Approval obtained	:	0

**PTCC approval**

Proposal submitted to Defence	:	No
Proposal submitted to BSNL	:	No
Proposal submitted to Railways	:	No
Current status	:	Proposal Under Preparation

**Defence/Civil Aviation**

Proposal submitted to : No  
Defence/Civil Aviation  
Current Status : Proposal Under Preparation

**4. Establishment of 2x1500 MVA 765/400 kV Substation at suitable location near Beawar along with 2x330 MVar 765 kV Bus Reactor & 2x125 MVar 420 kV Bus Reactor**

:  
Land Acquired  
Civil work completed : 0 %  
Equipment supplied : 0 %  
Equipment erection : 0 %  
Scheduled COD : Feb'25  
Anticipated COD : Feb'25

**Constraints/Approval if any:****5. +/- 2x330 MVar STATCOM, 4x125 MVar MSC, 2x125 MVar MSR at Fatehgarh-3 PS along with 2 Nos. of 400 kV bays at Fatehgarh-3 PS.**

:  
Land Acquired  
Civil work completed : 0 %  
Equipment supplied : 0 %  
Equipment erection : 0 %  
Scheduled COD : Feb'25  
Anticipated COD : Feb'25

# Resurgent Power Venture Pte Limited

## **24. System strengthening in Northern region (NRSS XXXVI) along with LILO of Sikar-Neemrana 400 kV D/C line at Babai (RRVNL)**

### **Background**

400 kV AC link between Rishikesh and Koteshwar shall improve reliability. It shall improve the power supply to Uttarakhand and also obviate the power transfer constraint on 400 kV Roorkee - Muzaffarnagar line during low hydro generation condition. This link would provide additional outlet from Tehri/ Koteshwar generation complex and independent feed for providing reliable and quality power supply to Rishikesh area.

Babai 400/220 kV substation of RRVNL is under construction and the substation is associated with power evacuation system of Suratgarh Super Critical TPS (2x660MW) and shall be connected to Suratgarh through 400 kV D/C line. The 400 kV Sikar - Neemrana D/C line is crossing Babai S/s at a distance of approx. 1 Km. The proposal of LILO of one ckt of Sikar-Neemrana 400 kV line at Babai would be helpful for enhancing the reliability of power supply. The proposed LILO would increase the flexibility in this area.

### **Scope of Transmission project**

1. Koteshwar Pooling Station - Rishikesh 400 kV D/C (HTLS) line – 83.152 ckm.
2. 2 Nos. of bays at 400 kV Rishikesh S/S
3. LILO of one ckt of 400 kV D/C Sikar (PG)-Neemrana (PG) line at Babai- 2.922 ckm.
4. Babai (RRVNL) – Bhiwani (PG) D/C line – 248.61 ckm.
5. 4 Nos. of bays at 400 kV Babai (RRVNL) substation

### **General Details**

Special Purpose Vehicle (SPV)	:	NRSS XXXVI Trans.Ltd (a subsidiary of Resurgent Power venture Pte Limited)
Bid Process Coordinator (BPC)	:	RECTPCL
Estimated Cost (Rs. Cr.)	:	437
Request for Qualification	:	25.08.2015
Request for Proposal	:	12.11.2015
Date of Letter of Intent	:	29.03.2016
Transmission Service Agreement (TSA)	:	13.01.2016
SPV acquisition	:	22.08.2016
Transmission License by CERC	:	07.12.2016
Tariff adoption by CERC	:	14.12.2016
Contract Performance Guarantee	:	11.08.2016
Clearance u/s 164	:	01.11.2017
Execution plan submitted to CEA	:	20.12.2016
NIT issued on		
EPC awarded on	:	20.01.2017
Scheduled Date of Completion	:	June 2019/Dec 2019
Anticipated Date of Completion	:	Dec'24 / Minimum 27 No. of working months required from the date of resolution of CERC Petitions, IDPL -NOC from Uttarakhand State Govt, DFO (Tehri), DFO (Dehradun), Court proceedings etc

NRSS XXXVI Project has been successfully substituted by PFS (PTC India Financial Services Ltd.) to Resurgent Power Ventures Pte Limited which is a joint venture with TATA Power.

## Status of progress of transmission project

### 1. Koteswar Pooling Station - Rishikesh 400 kV D/C (HTLS) line

The route alignment & detailed survey is completed.

Tower Package is awarded. Check survey is under progress.

Length:	77 ckm
Locations:	102 Nos.
Foundation completed:	26 Nos.
Tower erected:	-17 Nos.
Stringing completed:	-
Scheduled COD:	Dec'19
Anticipated COD:	Dec'24 / Minimum 27 No. of working months required from the date of resolution of CERC Petitions, IDPL -NOC from Uttrakhand State Govt, DFO (Tehri), DFO (Dehradun), Court proceedings etc

### Constraints where Project Authority requires intervention:

**Severe RoW issues:** Severe RoW issues are existing in the following sections:

#### Foundation, Tower Erection & Stringing section

1. AP-1/0 – AP-4 - Sontiyal, Fafran, Mann Villages.
2. AP-10 to AP-13 - Amsari & Thaniyul Village
3. AP-22 - Phalsari Village
4. AP-30 to AP-33 - Raundeli Village
5. AP-35/0 - AP-39/0 - Agar & Bhingarki Village
6. AP-48/0 – AP-49/0 - Pater & Barkot Village

### Status of statutory approvals:

#### Forest

Details of Tr. Line Falling under Forest:-

Locations: 63 Nos.

Length: 22.2 Km.

Forest area affected (ha) : 103.453 ha

**Current status:** In the month of Dec 2022 online submission of FDP has been successfully done.

Tree enumeration under Tehri, Narendra Nagar & Dehradun forest division has been completed and tree enumeration is also completed. Hard copy of the proposal is yet to be submitted as PTCUL NOC is awaited. Matter escalated through Secretary Power, Govt. Of India to Chief Secretary (Uttarakhand) on 4 November 2022. The matter has been intervened by Joint Secretary (Transmission), Ministry of Power, Government of India, New Delhi in the month of July 2023 with Secretary (Energy), Government of Uttarakhand.

#### Power line crossing

Total No. of crossings	:	09 Nos.
Proposal submitted	:	09 Nos.

Approval obtained : 09 Nos.

**Railway crossing**

Total No. of crossings : 01 No.  
Proposal submitted : 00 No.  
Approval obtained : 00 No.

**National Highway Crossing**

Total No. of crossings : 04 Nos.  
Proposal submitted : 04 Nos.  
Approval obtained : 00 No.

**River Crossings**

Total No. of crossings : Nil  
Proposal submitted : Nos.  
Approval obtained : Nos.

**PTCC approval**

Proposal submitted to Defence on :  
Proposal submitted to BSNL on :  
Proposal submitted to Railways on :  
Current status:

**Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation on :  
Current Status:

**2. 2 Nos. 400 kV bays at Rishikesh S/S**

Land Acquired: NA  
Civil work completed: -  
Equipment supplied: -  
Equipment erection: -  
Scheduled COD Dec'19  
Anticipated COD: Dec 24

**Constraints where Project Authority requires intervention:**

Final NOC from PTCUL for construction of 2 Nos. of 400 kV bays at PTCUL Rishikesh substation is still awaited.

**3. LILO of one ckt of 400 kV D/C Sikar PG)–Neemrana(PG) line at Babai (Under Commercial operation).**

Length: 3 ckm  
Locations: 06 Nos.  
Scheduled COD: Dec'16  
Deemed COD: 30 Oct '17

**4. Babai (RRVNL) – Bhiwani (PG) D/C line**

The route alignment & detailed survey is completed.  
Tower Package is awarded.

Length:	222 ckm
Locations:	304 Nos.
Foundation completed:	304 Nos.
Tower erected:	303 Nos.
Stringing completed:	221.68 ckm
Scheduled COD:	Jun' 19
Anticipated COD:	Oct' 23

**Constarints where Project Authority requires intervention:**

**Status of statutory approvals:**

**Forest**

Details of Tr. Line Falling under Forest:- 3.37 Km

Locations: 06 Nos. (Rajsthan)

Length:

Forest area(ha) : 12.90 Ha (2.80 Kms) Rajsthan + 3.46 Ha (0.57 Kms) Haryana

Forest proposals submitted on 15.05.17 for Haryana and on 11.08.17 for Rajasthan.

**Current status:** Stage I final approval and working permission for both Haryana portion and Rajasthan portion has been received.

**Wildlife Clearance**

Details of Tr. Line Falling under Wildlife :-

Locations:

Length:

Wildlife area(ha) : 7.452 Ha (2.80 Kms) Khetri Bansyal Conversion Reserve

Wildlife proposals submitted on : 16-02-2018

Current status: Proposal recommended by NBWL ,recommendations forwarded to State Govt. (Rajasthan) and approval received on 14.02.2019.

**Power line crossing**

Total No. of crossings	:	21 Nos.	
Proposal submitted	:	21 Nos.	Date:
Approval obtained	:	21 Nos.	Date:

**Railway crossing**

Total No. of crossings	:	01 No.	
Proposal submitted	:	01 Nos.	Date:
Approval obtained	:	01 Nos.	Date:

**National Highway Crossing**

Total No. of crossings	:	01 Nos.	
Proposal submitted	:	01 Nos.	Date:
Approval obtained	:	01 Nos.	Date:

**State Highway Crossing**

Total No. of crossings	:	05 Nos.	
Proposal submitted	:	05 Nos.	Date:
Approval obtained	:	05 Nos.	Date:

**Canal Crossings (MiNo.r)**

Total No. of crossings	:	14 Nos.	
Proposal submitted	:	14 Nos.	Date:
Approval obtained	:	14 Nos.	Date:

**PTCC approval : Proposal Under Approval**

Proposal submitted to Defence.

Proposal submitted to BSNL.

Proposal submitted to Railways.

Current status:

**Defence/Civil Aviation**

Proposal submitted : 13.03.2018

Current Status : Civil Aviation approval received on 31.05.18

Approval from Defence received on 06.06.18

**5. 2 Nos. 400 kV bays at Babai (RRVPNL) substation for LILO Line**

Scheduled COD Dec'16

Deemed COD: 30 Oct'17

**Under commercial operation.**

**6. 2 Nos. 400 kV bays at Babai (RRVPNL) substation for Bhiwani Line**

Scheduled COD Jun'19

Actual COD: Aug'23



# Adani Transmission Limited

## 25. Immediate evacuation for North Karanpura (3x660MW) generation project of NTPC(ERSS-XIX)

### Background

NTPC Ltd. has planned to establish a 1980MW (3x660MW) thermal power project at North Karanpura in the state of Jharkhand. Accordingly, Immediate evacuation system for the same was finalized with following transmission system: (i) North Karanpura – Gaya 400 kV D/c (Quad) (ii) North Karanpura – Jharkhand Pool (Chandwa) 400 kV D/c (Quad) Further, under the 24x7 power for all scheme, Jharkhand has projected a requirement of about 1000MW in Dhanbad region. In view of the same it is proposed to establishment 400/220 kV , 2x500 MVA sub-station at Dhanbad along with LILO of both circuits of Ranchi – Maithon-RB 400 kV D/c line at Dhanbad. The same was agreed to be implemented as ISTS scheme to be built under TBCB. For drawl of power from Dhanbad, JUSNL would construct 2 No. 220 kV D/c lines, one each to Govindpur and Jainamore 220 kV sub-stations.

### Scope of transmission project:

1. North Karanpura – Gaya 400 kV D/c line with quad moose conductor.
  2. North Karanpura – Chandwa (Jharkhand) Pooling Station 400 kV D/c line with quad moose conductor.
  3. LILO of both circuits of Ranchi – Maithon-RB 400 kV D/c line at Dhanbad
  4. Creation of 400/220 kV sub-station at Dhanbad(ERSS-XIX)
- (i) Establishment of 400/220 kV , 2x500 MVA sub-station at Dhanbad

#### 400 kV

- ICTs: 400/220 kV , 2x500 MVA
- ICTs bays: 2 No.
- Line bays: 4 No.
- 400 kV bus reactor bays: 2 No.
- Bus reactor: 2x125 MVAR
- Space for future bays: 4 No.
- Space for future 400/220 kV , 500 MVA ICT along with associated bay

#### 220 kV

- ICTs bays: 2 No.
- Line bays: 4 No.
- Space for future bays: 4 No.

### General Details:

Special Purpose Vehicle (SPV)	: North Karanpura Transco Ltd. (A subsidiary of M/s Adani Transmission Limited)
Bid Process Coordinator (BPC)	: RECTPCL
Estimated Cost (Rs. cr)	: 472 crore for old scope
Request for Qualification	: 30.11.2015
Request for Proposal	: 03.02.2016
Letter of Intent	: 24.05.2016
Transmission Service Agreement (TSA)	: 06.07.2016
SPV acquisition	: 08.07.2016
Transmission License by CERC	: 29.09.2016
Tariff adoption by CERC	: 06.09.2016
Contract Performance Guarantee	: 03.06.2016
Clearance u/s 164	: Authorization on CCL / MoC suggested route received on 05.11.2019 after 80

Execution plan submitted to CEA	:	days from submission. 03.11.2016. Revised Execution plan discussed in meeting with CEA on 23.04.2019.
NIT issued on	:	
EPC contract awarded on	:	
Scheduled Date of Completion	:	30.09.2019
Revised Scheduled Date of Completion	:	As per CERC directive, it is finalized by CEA and in consultation with NTPC.

- In accordance with the provision of the TSA, NKTL had approached CERC and vide its order dated 20.03.2019 the matter has been disposed off with following decisions:
- NKTL is affected by force majeure on account of No.n-issue/delay in issue of NOC by MoC/CCL.
  - LTTCs are directed No.t to take any coercive measures in terms of the TSA till the SCODs are revised taking into account the force majeure events.
  - CERC directed MOC to issue NOC latest by week from issue of the order.
  - Compressed time schedule to implement the project shall be decided by CEA in consultation with NTPC and NKTL.
  - Granted liberty to approach with change in scope and its impact on cost and time overrun.
  - When required to shift line, alternate route shall be provided by MoC.

#### **Status of progress of transmission project:**

##### **1. North Karanpura – Chandwa (Jharkhand) Pooling Station 400 kV D/c line (including Multi-circuit portion)**

- Length (as per revised route): 102 ckm
- Locations (as per revised route): 115 Nos.
- Revised schedule completion date: 14 months from the date of NOC from CCL/MoC (considering receipt of forest approval within 200 days).
- Actual COD: 14.10.2022

##### **2. North Karanpura – Gaya 400 kV D/C line (only Double Circuit portion)**

- Length (as per revised route): 196 ckm
- Locations (as per revised route): 286 Nos.
- Foundation completed: 140 No.
- Tower erected: 132 Nos.
- Stringing completed: 37.3 ckm
- Revised schedule completion date: 23 months from the date of NOC from CCL/MoC (considering receipt of forest approval within 300 days). However, due to delayed Forest Clearance NKTL will be able to complete the NK-G line in 12 clear working months from the date of forest clearance (Working Permission).

#### **Constraints where Project Authority requires intervention:**

Nodal has completed Part-IV and forwarded the proposal to State Govt. Govt. Of Jharkhand for further Part-V process. Further, State Govt. had raised EDS, against which compliance has been submitted by Nodal office on 29.11.2022 to State Govt. State Govt has forwarded the proposal to IRO office on 27.01.2023 for further process. REC meeting was held on 21.02.2023 wherein forest proposal for NK-G JH line was discussed. MOM of the meeting has been received on 01.03.2023. EDS raised by IRO in REC meeting have been received by NKTL by 18.03.2023. Compliance against the same has been submitted by NKTL to respective DFOs by 23.03.2023. Stage-I approval was granted on 06.06.2023. Demand Notes have been received from DFO Chatra South on 23.06.2023, DFO Chatra North on 26.06.2023 and DFO Latehar on 02.07.2023. Upon verification, same were rejected by PCCF, Ranchi on 21.07.2023 due to errors in calculations. Revised demand Notes received from DFO Chatra South & Chatra North on 28.07.2023. and from Latehar forest division on 31.07.2023. Same were again rejected by PCCF office on 10.08.2023 in view of corrections. Again revised demand Notes with required corrections issued by DFO Latehar on 14.08.2023 and DFO Chatra North on 17.08.2023. Same were approved by PCCF office on 23.08.2023.

Final demand for cost against Wildlife Management Plan and Soil & Moisture Conservation Plan as per Stage-I conditions is awaited.

In Bihar portion, there was severe ROW at 5 Locations at Gaya end being faced. 3 Nos. of locations (116/0, 114/1, 115/0) have been resolved and foundation has been completed.

For location 114/2, ROW issue was being faced while carrying out the work. Support from DM Gaya is being sought for carrying out the work.

For another location (114/0), landowners are refusing to accept the compensation order issued by DM Gaya. 3 Nos. of Notices have been served to landowners. Work shall be started with police protection.

### **Status of statutory approvals:**

#### **Forest (envisaged based on route alignment & excluding multi-circuit portion)**

Details of Tr. Line Falling under Forest:-

Jharkhand(JH) - Locations: 143 Nos. and Length: 42 kms

Bihar(BH) - Location: 5 No. and Length: 1.2 Kms

Forest area affected (ha) : 197.0115 Ha. In JH portion & 5.437 Ha. in BH portion.

Forest proposals submitted on : 20.07.2019 for JH portion & 01.08.2019 for BH portion

**Current status:** Proposal submitted within the timeline committed to CEA on revised route. . JH portion, Stage-I issued on 06.06.2023. Approved demand Notes received from 3 No.s of DFOs for CA, NPV & Dwarf plantation on 23.08.2023. Demand Notes is awaited for WLMP & SMCP from DFOs. Working permission is awaited.. BH portion In-Principle Stage – I received on 02.09.2021. Working permission received on 08.02.2022.

#### **Power line crossing**

Total No. of crossings : 10 Nos.

Proposal submitted : 10 Nos.

Approval obtained : 10 Nos.

#### **Railway crossing**

Total No. of crossings : 1 No.

Proposal submitted	:	1	No.
Approval obtained	:	1	No.

### **National Highway Crossing**

Total No. of crossings	:	3	Nos.
Proposal submitted	:	3	Nos.
Approval obtained	:	3	Nos.

### **PTCC approval**

Proposal submitted to BSNL in

Proposal submitted to Railways in

Current status: Submitted on 23-07-2020

### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation

Current Status: NOC for Civil Aviation and Defence Aviation obtained

### **3. Establishment of 400/220 kV , 2x500 MVA sub-station at Dhanbad**

- Scheduled completion date: 07.05.2019
- Actual completion date: Progressively Charged from 23-07-2021 to 02-08-2021 and COD declared on 06-08-2021

### **4. LILO of both circuits of Ranchi – Maithon-RB 400 kV D/c line at Dhanbad**

- Length: 5.4 ckm
- Locations: 10 No.
- Revised schedule completion date: Jul-21,
- Actual completion date: Progressively Charged from 23-07-2021 to 27-07-2021 and COD declared on 06-08-2021

## **26. Transmission System for Karur Pooling Station (at a location in between Karur Wind zone and Tiruppur wind zone) along with LILO of both circuits of Pugalur – Pugalur (HVDC) 400 kV D/C line (with Quad Moose ACSR Conductor) at Karur PS**

### **Background**

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. Solar Energy Corporation of India (SECI) in association with MNRE has identified Solar Energy Zones (SEZ) and Wind Energy Zones (WEZ) of 66.5 GW in seven RE rich states (Tamil Nadu, Andhra Pradesh, Karnataka, Gujarat, Rajasthan, Maharashtra and Madhya Pradesh) to be evacuated through ISTS. Out of total 66.5 GW REZs, 18.5 GW (Solar-10 GW & Wind 8.5 GW) of potential has been identified in the states of Tamil Nadu, Andhra Pradesh and Karnataka in Southern Region. The transmission system was evolved for integration of 18.5 GW of identified prioritized SEZs and WEZs in states of Tamil Nadu, Andhra Pradesh and Karnataka with the ISTS network in Southern Region. The transmission system associated with potential RE capacity, based on inputs from SECI/ MNRE has been prioritized for implementation into three phases in the meeting held on 30.08.2019 at CEA, New Delhi. Out of the 18.5 GW REZ in Southern Region, 5.5 GW under Phase-I (Part-II) & 5 GW under Phase-II of the prioritized wind and solar zones has been targeted for completion by Dec'21 and balance 8 GW under Phase-III has been targeted for completion beyond Dec'21.

The proposal has been agreed in the 3rd NCT and 4<sup>th</sup> ECT meeting held on 21.12.2018 for implementation through TBCB route with a commissioning schedule of June, 2020.

The 2.5 GW wind potential identified in Karur / Tiruppur area of Tamil Nadu has been prioritized under Phase-III for implementation beyond Dec'21. The subject transmission scheme involves establishment of Karur Pooling Station and its interconnection with ISTS grid for evacuation of wind potential from Karur / Tiruppur area of Tamil Nadu. The transmission system has been agreed in the 1st meeting of Southern Region Standing Committee on Transmission (SRSCOT) held on 07.09.2018. The National Committee on Transmission in its 3rd meeting held on 01.03.2019 has recommended the implementation of the subject transmission scheme through TBCB route. The transmission scheme was also deliberated in the 4th meeting of Empowered committee on Transmission held on 12.07.2019. Ministry of Power vide its letter No. 15/3/2018-Trans-Pt (3) dated 15.10.2019 has forwarded the Gazette Notification dated 10.10.2019 appointing PFCCCL as BPC for implementation of the subject scheme through TBCB route.

### **Scope of transmission project:**

- A) Establishment of 2x500 MVA, 400/230 kV Karur Pooling Station (at a location in between Karur Wind zone and Tiruppur wind zone)
- B) LILO of both circuits of Pugalur – Pugalur (HVDC) 400 kV D/C line (with Quad Moose ACSR Conductor) at Karur PS
- C) Installation 2x125 MVAR, 420 kV Bus reactors at Karur PS 125 MVAR reactors.

## General Detail

Special Purpose Vehicle (SPV)	:	Karur Transmission Limited (A subsidiary of Adani Transmission Limited)
Bid Process Coordinator (BPC)	:	PFC Consulting Limited
Estimated Cost (Rs. cr)	:	
Request for Qualification	:	21.10.2019
Request for Proposal	:	20.02.2020
Letter of Intent	:	22.12.2021
Transmission Service Agreement (TSA)	:	08.11.2021
SPV acquisition	:	18.01.2022
Transmission License by CERC	:	
Tariff adoption by CERC	:	17.05.2022
Contract Performance Guarantee	:	11.01.2022
Clearance u/s 164	:	03.09.2022
Execution plan to CEA	:	05.05.2022
NIT issued on	:	
EPC contract awarded on	:	Mar-2022
Scheduled Date of Completion	:	July-2023
Anticipated completion	:	Oct-2023

## Status of progress of transmission project:

### A) Establishment of 2x500 MVA, 400/230 kV Karur PS

- Land acquisition : 100% (Present Scope)
- Engineering : 100%
- Civil Works : 100%
- Equipment supplied : 100%
- Erection works : 100%
- Schedule completion : July-2023
- Anticipated completion : Oct-2023 (SRLDC has suggested to take shutdown in the month of Oct'23 considering high wind generation in Karur region.)

### B) LILO of both circuits of Pugalur – Pugalur (HVDC) 400 kV D/C line (with Quad Moose ACSR Conductor) at Karur PS

- Length: 8.51 ckm
- Locations: 9 Nos.
- Foundation completed: 9 Nos.
- Tower erected: 7 Nos. balance 2 towers shall be erected during shutdown.
- Stringing completed: 7.43 ckm
- Schedule completion: July-2023
- Anticipated Completion: Oct-2023 (SRLDC has suggested to take shutdown in the month of Oct'23 considering due to high wind generation in Karur region.)

**Constraints where Project Authority requires intervention :** Facing severe Right of Way (RoW) issues in transmission line. Landowners have planted coconut trees alongside of corridor and asking undue compensation demand. Matter already appraised to local administration.

**Delay in shutdown for tapping proposal:** Due to heavy wind generation from Jul -Sept'23, shutdown of existing 400 kV D/C Pugalur HVAC– Pugalur HVDC for tapping shall No.t be granted due to system constraints. SRLDC has suggested to take shutdown in the month of Oct'23.

- **Status of statutory approvals:**

- **Defence Aviation** : NOC received on 10.11.2022.
- **Civil Aviation** : Application submitted on 10.11.2022.
- **Current Status** : NOC received on 22.03.2023.
- **PTCC** : Final NOC received on 13.04.2023.
- **LILO Proposal (POWERGRID)** : Final NOC received on 18.04.2023.

**C) Installation 2x125 MVAR, 420 kV Bus reactors at Karur PS 125 MVAR reactors.**

- Land acquisition : 100%
- Engineering : 100%
- Civil Works : 100%
- Equipment supplied : 100%
- Erection works : 100%
- Schedule completion : July-2023
- Anticipated completion : Completed, Charging upon approval of shutdown.



## 27. Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I

### Background :

Govt. of India has set a target to establish 175GW renewable capacity by 2022. To fulfil above target, MNRE/SECI has identified potential Renewable Energy Zone(REZ) comprising Solar & Wind capacity of about 66.5 GW in various renewable resource rich States in the country. Out of 28GW REZs identified in Western Region, 16GW potential has been identified in the state of Gujarat and transmission system has been taken up for implementation for about 3.5 GW REZ (Bhuj-II: 2GW & Jam Khambhaliya 1.5GW) and implementation of Transmission system for Lakadia (2GW) has been deferred due to land issues. For the balance 10.5GW, Govt. of Gujarat has proposed for allocation of land for new RE projects in Khavda area, instead of the already planned pooling stations under ISTS at Lakadia, Jamnagar, Rapar & Radhanesda.

Transmission schemes for Khavda REZ (8GW) were deliberated and finalised in the 1st WRPC(TP) held on 11.01.2020 and in the 3rd NCT meeting held on 26.05.2020 & 28.05.2020. Out of 8GW, 3GW shall be pooled at Khavda under Phase-I and 4.5GW shall be pooled at Khavda under Ph-II. Balance 0.5GW in Khavda region was agreed to be evacuated through dedicated transmission lines of RE developers at existing Bhuj S/s.

The current scheme is for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I. The subject scheme includes establishment of a new 765/400 kV , 3x1500MVA & 400/220 kV , 2x500MVA substation at Khavda along with Khavda PS (GIS) – Bhuj PS 765 kV D/c line. The scheme will enable integration of 3 GW REZ in Khavda area under Ph-I with Bhuj PS. Beyond Bhuj PS, onward dispersal of power would be through under implementation Bhuj – Lakadia –Banaskantha/Vadodara 765 kV D/c corridor.

### Scope of transmission project:

- Establishment of 3X1500 MVA 765/400 kV Khavda (GIS) with 1X330 MVAR 765 kV bus reactor and 1X125 MVAR 420 kV bus reactor
- Khavda PS (GIS) – Bhuj PS 765 kV D/c line
- 2 Nos. of line bays each at Bhuj PS for termination of Khavda PS (GIS) – Bhuj PS 765 kV D/c line

### General Detail

Special Purpose Vehicle (SPV) (A subsidiary of Adani Transmission Limited)	:	Khavda Bhuj Transmission Limited
Bid Process Coordinator (BPC)	:	PFC Consulting Limited
Estimated Cost (Rs. Cr.)	:	Rs. 1180 Cr.
Request for Qualification	:	NA (Single Stage Bidding)
Request for Proposal	:	06.05.2021
Letter of Intent	:	22.12.2021
Transmission Service Agreement (TSA)	:	14.10.2021
SPV acquisition	:	18.01.2022

Transmission License by CERC	:	
Tariff adoption by CERC	:	10.05.2022
Contract Performance Guarantee	:	Submitted
Clearance u/s 164	:	02.09.2022
Execution plan to CEA	:	Submitted on 10.05.22
NIT issued on	:	
EPC contract awarded on	:	Awarded
Scheduled Date of Completion	:	Jan 2024
Anticipated completion	:	Jan 2025

#### **Status of progress of transmission project :**

##### **A) Establishment of 3X1500 MVA 765/400 kV Khavda (GIS)**

- Land acquisition : Land lease approval received on 16.06.2023 from revenue department, Gandhinagar. Accordingly, land lease payment intimation received from DC Office-Bhuj, Kutch on 22.06.2023. Demand Drafts for corresponding amount were submitted on dt. 15.07.2023 & 25.07.2023. Necessary Land lease formalities to take place post finalization of stamp duty charges which is under finalization at DC, Kutch.
- Engineering : 97 %
- Civil Works : 75 %
- Equipment supplied : 90%
- Erection works : 40%
- Schedule completion : Jan-2024
- Anticipated completion : Jan 2025

##### **B) Khavda PS GIS – Bhuj PS 765 kV D/C Line -**

- Length: 218 ckm
- Locations: 275 Nos.
- Foundation completed: 274 Nos.
- Tower erected: 258 Nos.
- Stringing completed: 130.71 ckm
- Schedule completion: Jan-2024
- Anticipated Completion: Jan-2024

#### **2 Nos. of line bays each at Bhuj PS for termination of Khavda PS (GIS) – Bhuj PS 765 kV D/c line**

- Land acquisition : Space for bay construction issued vide mail dated 18.08.2022 by POWERGRID, Bhuj
- Engineering : 100 %
- Civil Works : 100 %
- Equipment supplied : 98 %
- Erection works : 70%
- Schedule completion : Jan-2024
- Anticipated completion : Jan-2024

#### **Issues:**

1. ROU for approach road for substation at Khavda yet to be handed over by Govt of Gujarat for execution of Substation Work. TSP has received demand Note on 21.08.2023 from Collector, Kutch for payment of ROU charges. Payment done vide DD dated 01.09.2023.
2. Severe RoW issue at loc no- 44/8 through survey no- 768 which is Govt land in village Loriya, Taluka- Bhuj, District- Kutch. The villagers obstructed the work, threatened the contractors/vendors/ labors, and forced them to leave site. The matter was reported to police and FIR no. 11205039230 was lodged on 30<sup>th</sup> September'2023.

#### **Status of statutory approvals:**

##### **Forest**

Details of Tr. Line Falling under Forest	: Length: 33.78 km
Forest area affected (ha)	: 226.32 Ha
Forest proposal submitted on	: 02-09-2020

##### **Current status:**

Forest proposal: Working Permission received on 21.04.2023.

##### **Power line crossing**

Total No. of crossings	: 07 No.
Proposal submitted	: 07 No.
Approval obtained	: 07 No.

##### **Railway crossing**

Total No. of crossings	: 00 No.
Proposal submitted	: 00 No.
Approval obtained	: 00 No.

##### **River Crossings**

Total No. of crossings	: 00 No.
Proposal submitted	: 00 No.
Approval obtained	: 00 No.

##### **NH Crossings**

Total No. of crossings	: 01 No.
Proposal submitted	: 01 No.
Approval obtained	: 00 No.

##### **PTCC**

Proposal submitted to BSNL in	: Submitted
Proposal submitted to Railways in	: NOC Received
Current status:	: NOC Received on 13.09.2023

##### **Defence/Civil Aviation**

Current Status	: NOC for Defence Aviation obtained
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## **28. Transmission scheme for evacuation of 4.5GW RE injection at Khavda P.S. under Phase II-Part A**

### **Background :**

Govt. of India has set a target to establish 175GW renewable capacity by 2022. To fulfil above target, MNRE/SECI has identified potential Renewable Energy Zone(REZ) comprising Solar & Wind capacity of about 66.5 GW in various renewable resource rich States in the country. Out of 28GW REZs identified in Western Region, 16GW potential has been identified in the state of Gujarat and transmission system has been taken up for implementation for about 3.5 GW REZ (Bhuj-II: 2GW & Jam Khambhaliya 1.5GW) and implementation of Transmission system for Lakadia (2GW) has been deferred due to land issues. For the balance 10.5 GW, Govt. of Gujarat has proposed for allocation of land for new RE projects in Khavda area, instead of the already planned pooling stations under ISTS at Lakadia, Jamnagar, Rapar & Radhanesda.

Transmission schemes for Khavda REZ (8GW) were deliberated and finalised in the 1st WRPC(TP) held on 11.01.2020 and in the 3rd NCT meeting held on 26.05.2020 & 28.05.2020. Out of 8GW, 3GW shall be pooled at Khavda under Phase-I and 4.5GW shall be pooled at Khavda under Ph-II. Balance 0.5GW in Khavda region was agreed to be evacuated through dedicated transmission lines of RE developers at existing Bhuj S/s.

The current scheme is for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase II-Part A. The subject scheme includes establishment of KPS2(GIS)-Lakadia 765 kV D/C line, 2 Nos. of 765 kV line bays each at Lakadia PS & KPS2(GIS).

### **Scope of transmission project:**

- 1) KPS2 (GIS)-Lakadia 765 kV D/C line
- 2) 330 MVAR switchable line reactors at KPS2 end of KPS2(GIS)- Lakadia 765 kV D/C line.
  - 330 MVAR, 765 kV switchable for 765 kV line reactor- 2 Nos.
  - Switching equipments for 765 kV line reactor- 2 Nos.
- 3) 2 Nos. of 765 kV line bays each at Lakadia PS & KPS2(GIS) for Khavda PS2(GIS) - Lakadia PS 765 kV D/c line

### **General Detail**

Special Purpose Vehicle (SPV) (A subsidiary of Adani Transmission Limited)	: Khavda II-A Transmission Limited
Bid Process Coordinator (BPC):	REC Power Development & Consulting Ltd
Estimated Cost (Rs. Cr.)	: Rs. 1270 Cr.
Request for Qualification	: NA (Single Stage Bidding)
Request for Proposal	: 06.05.2022
Letter of Intent	: 16.02.2023
Transmission Service Agreement (TSA)	: 28.03.2023
SPV acquisition	: 28.03.2023
Transmission License by CERC	: Under process
Tariff adoption by CERC	: 06.07.2023
Contract Performance Guarantee	: Submitted

Clearance u/s 164	: Applied on 17.07.2023.
Execution plan to CEA	: Submitted on 16.06.2023.
NIT issued on	:
EPC contract awarded on	: Awarded
Scheduled Date of Completion	: Mar 2025
Anticipated completion	:

### **Status of progress of transmission project:**

#### **A) KPS2(GIS)-Lakadia 765 kV D/C line**

- Length: 355 ckm
- Locations: 440 No.
- Foundation completed: 24 Nos.
- Tower erected: NIL
- Stringing completed: NIL
- Schedule completion: Mar-2025
- Anticipated Completion: Mar-25

#### **Constraints:**

1. ROU for Transmission Route from KPS2 Pooling Station to India Bridge for Transmission Line KPS2(GIS)- Lakadia 765 kV D/C awaited.

#### **B) 2 Nos. of line bays at KPS2(GIS) for Khavda PS2(GIS) -Lakadia PS 765 kV D/c line**

- Land acquisition : Space to be provided by POWERGRID which is pending.
- Engineering : 15% (Reactor Engg. Completed.)
- Civil Works : 0%
- Equipment supplied : 0 %
- Erection works : 0 %
- Schedule completion : Mar-2025
- Anticipated completion :

#### **Issues:**

1. Khavda II-A Transmission Ltd, vide letter dated 07.03.2023 to M/s POWERGRID, had sought Engineering inputs & possession of land required for bay construction which is pre-requisite to start the primary engineering & ordering activities. In absence of response on same, follow up letters were sent vide letter dated 10.04.2023, 08.06.2023 & 14.07.2023. POWERGRID vide letter dated 19.06.2023 and 15.07.2023 has provided SLD & Layout which is being evaluated. It was informed by POWERGRID that land possession is yet to be obtained from GPCL (Govt of Gujarat).

#### **C) 2 Nos. of line bays at Lakadia (PS) for Khavda PS2(GIS) -Lakadia PS 765 kV D/c line**

- Land acquisition : Under process
- Engineering : 5%
- Civil Works : 0%
- Equipment supplied : 0 %
- Erection works : 0 %

- Schedule completion : Mar-2025
- Anticipated completion :

### **Status of Statutory approvals:**

#### **Forest**

Details of Tr. Line Falling under Forest : Length: 33.179 KM  
 Forest area affected (ha) : 222.296 Ha  
 Forest proposal submitted on : 19-04-2023

#### **Wildlife**

Details of Tr. Line Falling under WLS : Length: 1.879 KM  
 WLS area affected (ha) : 12.5907 Ha  
 WLS proposal submitted on : 05-05-2023

#### **Power line crossing**

Total No. of crossings : 13 No.  
 Proposal submitted : 01 No.  
 Approval obtained : 00 No.

#### **River Crossings**

Total No. of crossings : 00 No.  
 Proposal submitted : 00 No.  
 Approval obtained : 00 No.

#### **NH Crossings**

Total No. of crossings : 04 No.  
 Proposal submitted : 03 No.  
 Approval obtained : 00 No.

#### **PTCC**

Proposal submitted to BSNL in : Under Preparation  
 Proposal submitted to Railways in : Under Preparation  
 Current status: Under Preparation

#### **Defence/Civil Aviation**

Current Status : Under Preparation

## **29. ISTS Network Expansion Scheme In Western Region & Southern Region For Export Of Surplus Power During High RE Scenario In Southern Region.**

### **Background :**

Government of India has set a target of reaching 500 GW of installed capacity from renewable energy sources by the year 2030. In order to achieve the target, various Solar, Wind, Wind-Solar Hybrid policies have been enunciated by Central and State Governments. Southern Region is envisaged to be amongst leading potential green energy generation hubs, implementing large capacity renewable projects under these policies.

NLDC as part of operational feedbacks has highlighted that high loading beyond Kolhapur which is attributable to multiple factors viz. high generation at Kudgi TPS, low generation at plants in southern Maharashtra, high load around Kolhapur area, high renewable (Solar) generation in Southern Region etc. In addition, a number of large RE based generation projects are envisaged in the Southern Region especially in the prioritized REZs of Koppal, Gadag, Karur and Tuticorin areas. Stage-II Connectivity and LTA applications have already been received / granted from several generation projects in these areas.

Transmission system for integration and immediate evacuation of power from these REZs has already been planned and is under different phases of implementation. However, constraints are observed for export of surplus power from REZs in Southern Region to Western Region under high RE scenario in SR as well as to mitigate operational constraints being faced on Kolhapur (PG) – Kolhapur (MSETCL) – Karad (MSETCL) 400 kV D/c corridor.

The scheme was agreed in the 2nd Consultation Meeting for Evolving Transmission Schemes in Western Region (CMETS-WR) held on 28.12.2021 & Southern Region (CMETS-SR) held on 29.12.2021. The scheme was also discussed in the 40th and 41st SRPC meeting held on 31.01.2021 and 02.03.2022 respectively and in 41st WRPC meeting held on 23.02.2022. In the 8th National Committee Meeting (NCT) held on 25.03.2022, the above scheme was recommended for implementation through TBCB route.

The responsibility of the TSP was to establish the following Inter-State Transmission System - ISTS Network Expansion scheme in Western Region & Southern Region for export of surplus power during high RE scenario in Southern Region (hereinafter referred to as 'Project') on build, own, operate & transfer basis and to provide transmission service:

### **Scope of transmission project:**

1. Narendra New (GIS) – Pune (GIS) 765 D/c Line with 1x330 MVar switchable line reactor (SLR) on each ckt at both ends.
  - 765 kV line bays – 2 (GIS) (at Narendra New)
  - 765 kV line bays – 2 (GIS) (at Pune)
  - 765 kV , 330MVar SLR – 2 Nos. (7 x 110 MVar incl. 1 switchable spare unit) at Pune (GIS)
  - 765 kV , 330 MVar SLR – 2 Nos. (6 x 110 MVar) at Narendra New (GIS)
2. Upgradation of Narendra New (GIS) to rated voltage of 765 kV level along with 4 x 1500 MVA transformer and 2 x 330 MVar Bus Reactor
  - 765/400 kV , 1500 MVA – 4 Nos. (13 x 500 MVA incl. 1 spare unit)
  - 765 kV ICT bays – 4 Nos.
  - 400 kV ICT bays - 2 Nos.

## General Detail

Special Purpose Vehicle (SPV)	:	WRSR Power Transmission Limited (A subsidiary of Adani Transmission Limited)
Bid Process Coordinator (BPC)	:	REC Power Development and Consultancy Limited
Estimated Cost (Rs. Cr.)	:	Rs. 2109.45 Cr.
Request for Proposal	:	25.07.2022
Letter of Intent	:	26.12.2022
Transmission Service Agreement (TSA)	:	17.01.2023
SPV acquisition	:	17.01.2023
Transmission License by CERC	:	17.04.2023
Tariff adoption by CERC	:	26.03.2023
Contract Performance Guarantee	:	12.01.2023
Clearance u/s 164	:	In Progress
Execution plan to CEA	:	Submitted on 17.05.23.
EPC contract awarded on	:	13.07.2023
Scheduled Date of Completion	:	Jul'24
Anticipated completion	:	Jul'24

## Status of progress of transmission project:

### Upgradation of Narendra New (GIS) Substation to its rated voltage level of 765 kV

- Land acquisition : N/A
- Engineering : 35 %
- Civil Works : -
- Equipment supplied : -
- Erection works : -
- Schedule completion : 17.07.2024
- Anticipated Completion : 17.07.2024

### Narendra New (GIS) – Pune (GIS) 765 kV D/c line

- Length: 635.542 ckm
- Locations: 793 Nos.
- Engineering: 92 %
- Survey: Detailed Survey Completed, Check Survey 87% Completed
- Foundation completed: -
- Tower erected: -
- Schedule completion: 17.07.2024
- Anticipated Completion: 17.07.2024

### 2 Nos. of line bays at Pune (GIS) Substation for termination of Narendra New (GIS) – Pune (GIS) 765 kV D/c line

- Land acquisition : Space for bay construction issued vide mail dated 18.08.2022 by POWERGRID, Bhuj
- Civil Works : -
- Equipment supplied : -
- Erection works : -



- Schedule completion : 17.07.2024
- Anticipated completion : 17.07.2024

**Current status:**

Details of Tr. Line Falling under Forest : Length: 11.481 km  
 Forest area affected (ha) : 76.8036 Ha  
 Forest proposal submitted on : 27.09.23

**Current status:**

**Power line crossing**

Total No. of crossings : 19 No.  
 Proposal submitted : 06 No.  
 Approval obtained : 00 No.

**River Crossings**

Total No. of crossings (No.n navigable) : 06 No.  
 Proposal submitted : 00 No.  
 Approval obtained : 00 No.

**NH Crossings**

Total No. of crossings : 12 No.  
 Proposal submitted : 03 No.  
 Approval obtained : 00 No.

**PTCC**

:  
 Proposal submitted to BSNL in :  
 Proposal submitted to Railways in :  
 Current status: : Proposal under preparation

**Defence/Civil Aviation**

Current Status : Proposal under preparation

Indigrid Limited

### **30. Transmission System for evacuation of power from RE Projects in Osmanabad area (1 GW) in Maharashtra**

#### **Background**

#### **Scope of transmission project**

1. Establishment of 2X500 MVA, 400/220 kV substation near Kallam PS
2. 1X125 MVar bus reactor at Kallam PS 400 kV reactor bay
3. LILO of both circuits of Parli(PG)-Pune(GIS) 400 kV D/c line at Kallam PS
4. Provision of new 50 MVar switchable line reactor with 400 ohms NGR at Kallam PS end of Kallam-Pune(GIS) 400 kV D/c line

#### **General Details**

Special Purpose Vehicle	: <b>Kallam Transmission Limited</b> (Subsidiary of Consortium of IndiGrid 1 Limited (70%) and IndiGrid 2 Limited (30%))
Bid Process Coordinator (BPC)	: REC Power Development and Consultancy Limited (RECPDCL)
Estimated Cost (Rs. Cr)	: 245
Levelised Tariff(Rs. Cr)	: 16.736
Request for Qualification	:
Request for Proposal	: 05-03-2020
Letter of Intent	: 30-11-2021
Transmission Service Agreement (TSA)	: 30-09-2021
SPV acquisition	: 28-12-2021
Transmission License by CERC	: 18-07-2022
Tariff adoption by CERC	: 01-06-2022
Contract Performance Guarantee	: 21-12-2021
Clearance u/s 164	: 08-06-2022
Execution plan submitted to CEA	: 18-04-2022
NIT issued on	:
EPC contract awarded on	: 14-01-2022
Scheduled Date of Completion	: Jun-2023
Anticipated COD	: Dec-2023

#### **Status of progress of transmission project**

1. **Establishment of 2X500 MVA, 400/220 kV substation near Kallam PS**
  - Land acquisition : 100%
  - Civil Works : 85%
  - Equipment supplied : 100%
  - Erection works : 45%

- Schedule completion : Jun-2023
  - Anticipated completion : Dec-2023
2. 1X125 MVar bus reactor at Kallam PS 400 kV reactor bay-1
- Engineering : 100%
  - Civil Works : 98%
  - Equipment supplied : 100%
  - Erection works : 80%
  - Schedule completion : Jun-2023
  - Anticipated completion : Dec-2023
3. LILO of both circuits of Parli(PG)-Pune(GIS) 400 kV D/c line at Kallam PS
- Length: 16.901 KM
  - Locations: 47
  - Foundation completed: 36
  - Tower erected: 24
  - Stringing completed: Nil
  - Scheduled COD: June-2023
  - Anticipated COD: Dec-2023

**Status of statutory approvals:**

- **RoW Issues:** TSP is facing severe RoW in Beed district and is working with administration to resolve issues.  
In Osmanabad district for all location TSP is facing severe RoW for which SDM has scheduled a meeting on 11<sup>th</sup> September 2023. In addition to this one court case has been lodged against TSP on 31- July-23 at Aurangabad high court. Next hearing date is 11-Oct-23.
  - **PTCC Approval-** Application submitted.
  - **Aviation Clearance-** Approval obtained.
4. Provision of new 50 MVar switchable line reactor with 400 ohms NGR at Kallam PS end of Kallam-Pune(GIS) 400 kV D/c line
- Status:**Both units have been received at site in the month of June-23. . Erection works is 80% done.

# Renew Transmission Power Venture Limited

## 31. Evacuation of power from RE sources in Koppal Wind Energy Zone (Karnataka) (2500MW)

### Background

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. Solar Energy Corporation of India (SECI) in association with MNRE has identified Solar Energy Zones (SEZ) and Wind Energy Zones (WEZ) of 66.5 GW in seven RE rich states (Tamil Nadu, Andhra Pradesh, Karnataka, Gujarat, Rajasthan, Maharashtra and Madhya Pradesh) to be evacuated through ISTS. Out of total 66.5 GW REZs, 18.5 GW (Solar-10 GW & Wind 8.5GW) of potential has been identified in the states of Tamil Nadu, Andhra Pradesh and Karnataka in Southern Region.

The 2.5 GW wind potential identified in Koppal area of Karnataka has been prioritized under Phase-I (Part-II) for implementation. The Koppal transmission scheme involves establishment of Koppal Pooling Station and its interconnection with ISTS grid for evacuation of wind potential from Koppal area of Karnataka.

### Scope of transmission project

1. Koppal Pooling station – Narendra (New) 400 kV D/c (quad) line
2. 5x500MVA, 400/220 kV Koppal Pooling Station alongwith 2x125 MVA, 420 kV bus reactors
3. 400 kV GIS Line bay at Narendra (New) & associated works: 2 Nos.

### General Details

Special Purpose Vehicle	: Koppal-Narendra Transmission Limited (a subsidiary of ReNew Transmission Ventures Private Limited)
Bid Process Coordinator (BPC)	: PFC Consulting Limited
Estimated Cost (Rs. Cr)	: 750
Levelised Tariff (Rs. Cr)	: 61.125
Request for Qualification	: 21.10.2019
Request for Proposal	: 19.12.2019
Letter of Intent	: 13.10.2021
Transmission Service Agreement (TSA)	: 26.08.2021
SPV acquisition	: 13.12.2021
Transmission License by CERC	: 28.03.2022
Tariff adoption by CERC	: 25.02.2022
Contract Performance Guarantee	: 02.12.2021
Clearance u/s 164	: 21.07.2022
Execution plan submitted to CEA	: 08.04.2022
NIT issued on	:
EPC contract awarded on	: 10.03.2022
Scheduled Date of Completion	: Phase I – June'23 and Phase II - Dec'23

### Status of progress of transmission project

1. Koppal Pooling station – Narendra (New) 400 kV D/c (quad) line
  - Length : 276 ckm
  - Locations : 352 Nos.

Foundation completed	:	348 Nos. (100% foundation completed in Non-Forest Area)
Tower erected	:	347 Nos.
Stringing completed	:	274.8 ckm
Scheduled COD	:	June'23
Anticipated COD	:	Oct'23

**Constraints / approval; if any:**

1. Facing severe ROW issues at the following locations for which support of State administration is required in resolving the ROW issues: -

District	Taluka	Village Name	Stretch Affected (km)	Stretch
Vijayapura	Basavan Begawadi	Muttagi	0.16	AP6C-AP8 (Partial)
<b>Total Stringing stretch affected</b>			<b>0.16</b>	

Hon'ble Additional Civil Judge, Basavana Begewadi, Vijayapura vide its interim order dated 23.09.2023, passed temporary injunction for restraining KNTL from making Electric Pole and not to install electric wires in the suit land property. Further, Hon'ble High Court, Kalaburgi vide interim order dated 03.10.2023 was pleased to pass stay against stay order passed by Additional Civil Judge, Basavana Begewadi, Vijayapura till the next date of hearing.

2. Forest proposal submitted on 22.02.2022. Stage-I approval was granted on 02.08.2023 and payment against demand Note also released on 18.08.2023. Further, working permission also issued by DFO, Koppal on 30.08.2023 and work has been started in the Forest area.

**Status of statutory approvals:**

**Forest area**

Details of Tr. Line Falling under Forest:-

Locations	:	4 Nos. ; Length :1.644 Kms
Forest area (Ha)	:	7.562 Ha
Online proposal submitted on	:	Submitted on 22.02.2022
Current status	:	Stage-I Approval : 02.08.2023 Working Permission : 30.08.2023

**Wildlife area**

Details of Tr. Line Falling under Wildlife:- Nil

Locations	:	
Wildlife area (Ha)	:	
Wildlife proposals submitted on	:	
Current status	:	

**Power line crossing**

Total No. of crossings	:	12 Nos.
Proposal submitted	:	12 Nos.
Approval obtained	:	12 Nos.

**Railway crossing**

Total No. of crossings	:	1Nos.
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Proposal submitted	:	1Nos.
Approval obtained	:	1 Nos.

#### **National Highway / SH Crossing**

Total No. of crossings	:	13 Nos.
Proposal submitted	:	13 Nos.
Approval obtained	:	13 Nos.

#### **River Crossings**

Total No. of crossings	:	1 No.
Proposal submitted	:	NA (Non navigable)
Approval obtained	:	NA

<b>PTCC approval</b>	:	Submitted on 28.04.2022
Current status	:	Received on 21.06.2023

#### **Defence/Civil Aviation**

Proposal submitted to Defence/Civil Aviation	:	Submitted
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Current Status	:	Civil Aviation Approval received 30.08.2022 and and Defence Aviation received on 08.08.2022
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#### **Status of progress of Substation/ Extension: -**

#### **2. (a) 3x500MVA, 400/220 kV Koppal Pooling Station alongwith 2x125 MVar, 420 kV bus reactors**

Scheduled COD	:	June'23
Actual COD	:	June'23 (Work Completed, CEIG approval received on 13.06.2023)

#### **(b) 2x500MVA, 400/220 kV ICT at Koppal Pooling Station**

Land Acquired	:	100%
Civil work completed	:	85%
Equipment supplied	:	89%
Equipment erection	:	40%
Scheduled COD	:	Dec'23
Anticipated COD	:	Dec'23

#### **3. 400 kV GIS Line bay at Narendra (New) & associated works: 2 Nos.**

Scheduled COD	:	June'23 with existing bus)
Actual COD	:	June'23 (Charged on 09.06.23)



## 32. Transmission Scheme for Solar Energy Zone in Gadag (1000 MW), Karnataka – Part-A, Phase-I

### Background

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. Solar Energy Corporation of India (SECI) in association with MNRE has identified Solar Energy Zones (SEZ) and Wind Energy Zones (WEZ) of 66.5 GW in seven RE rich states (Tamil Nadu, Andhra Pradesh, Karnataka, Gujarat, Rajasthan, Maharashtra and Madhya Pradesh) to be evacuated through ISTS. Out of total 66.5 GW REZs, 18.5 GW (Solar-10 GW & Wind 8.5GW) of potential has been identified in the states of Tamil Nadu, Andhra Pradesh and Karnataka in Southern Region.

The 2.5 GW Solar potential identified in Gadag area of Karnataka and the transmission schemes “Transmission scheme for Solar Energy Zone in Gadag (2500MW), Karnataka – Part A” agreed in NCT meeting for implementation into two phases (Phase-1: 1000 MW, Phase-2: 1500 MW). The Gadag transmission scheme (Part-A, Phase-I, 1000 MW) involves establishment of Gadag Pooling Station and its interconnection with ISTS grid for evacuation of potential Renewable Energy from Gadag area of Karnataka.

### Scope of transmission project

1. Gadag Pooling station – Narendra (New) 400 kV D/c line
2. 2x500MVA, 400/220 kV Gadag Pooling Station alongwith 1x125 MVA, 400 kV bus reactors
3. 400 kV GIS Line bays at Narendra (New) Substation- 2 Nos.

### General Details

Special Purpose Vehicle	: Gadag Transmission Limited (a subsidiary of ReNew Transmission Ventures Private Limited)
Bid Process Coordinator (BPC)	: REC Power Development and Consultancy Limited
Estimated Cost (Rs. Cr)	: 350
Levelised Tariff (Rs. Cr)	: 29.70
Request for Proposal	: 09.09.2021
Letter of Intent	: 27.01.2022
Transmission Service Agreement (TSA)	: 10.12.2021
SPV acquisition	: 17.03.2022
Transmission License by CERC	: 18.07.2022
Tariff adoption by CERC	: 08.06.2022
Contract Performance Guarantee	: 17.03.2022
Clearance u/s 164	: 06.10.2022
Execution plan submitted to CEA	: 11.07.2022
NIT issued on	:
EPC contract awarded on	:
Scheduled Date of Completion	: Sept’23
Anticipated Completion	: Dec’23

### Status of progress of transmission project

## 1. Gadag Pooling station – Narendra (New) 400 kV D/c line

Length	:	93.2 km
Locations	:	232 Nos.
Foundation completed	:	210 No.
Tower erected	:	180 No.
Stringing completed	:	18.01 km
Scheduled COD	:	Sept'23
Anticipated COD	:	Dec'23

### Constraints / approval; if any:

1. TSP has requested the office of District Collectors of Bagalkot, Vijayapura, Gadag & Koppal for fixation of compensation towards Right of Way (RoW) to land owners. The status of issuance of DCs order are as under:

District	Tehsil	Status
Bagalkote	Bagalkote, Hungund & Guledagudda	Order issued by office of District Collector, Bagalkote on 04.11.2022 (dated 27.10.2022).
Vijayapura	Basavan Bagewadi, Nidagundi & Kohlara	Order issued by office of District Collector, Vijayapura on 06.03.2023
Koppal	Kushtagi	Order issued by office of District Collector, Koppal on 07.06.2023 (dated 25.05.2023).
Gadag	Gajendragad	Order issued by office of District Collector, Gadag on 04.03.2023

Delay in fixation of RoW compensation rates by District Collectors has severely affecting the construction progress.

2. TSP is facing severe ROW issues at the following locations for which support of State administration is required in resolving the ROW issues: -

### Tower Foundation Locations under RoW : -

District	Taluka	Village Name	No of Locations	Location No
Bagalkote	Bagalkote	Bodnayakdini	1	27/0
Vijayapura	Basavan Begawadi	Mutagi	1	7/2
	Nidgundi	Golsangi	5	9/0,10/0,14/0,14/1,14/2
		Budani	2	14/5,14/6
		Benal	1	16/3
		Gonal	1	16/8
		Nidgundi	7	16/10,18/3,19/0,20/0,20A/0, 20B/0,22A/0

District	Taluka	Village Name	No of Locations	Location No
		<b>Total</b>	<b>18</b>	

**Tower Erection Locations under RoW : -**

District	Taluka	Village Name	No of Locations	Location No
Bagalkote	Bagalkote	Bodnayakdini	1	29/3
		Hosur	1	27/1
	Hungund	Aihole	1	39/1
Koppal	Kushtagi	Billekal	2	47/4,47/5
Vijayapura	Basavan Begawadi	Mutagi	4	4/1,7/1,5/0,6/0,
	Nidgundi	Golsangi	1	11/0
		Angadagiri	2	14/7,14/8
		Budani	2	14/3,14/4
		Gonal	2	16/5 16/8
		Nidgundi	2	21/0 ,23/0
		<b>Total</b>	<b>18</b>	

- Forest proposal vide No. FP/KA/TRANS/400988/2022 was submitted online on Parivesh Portal on 30<sup>th</sup> Aug 2022. However, same has been returned by MOEFCC on 12<sup>th</sup> Sept 2022 for re-submission as per new forms on Parivesh portal. Proposal was re-submitted on 22<sup>nd</sup> September 2022. Queries on the proposal have been received on 07.01.2023 (after 107 days of submission) from DFO, Bagalkot .As per Karnataka Govt revenue records, there is No. forest land involved under survey No. 75,76 & 77 of Nellur Village, Gajendragad Taluka under Gadag District, however, Deputy Conservator of Forest, Bagalkot on 07.01.2023 vide letter No. KDF-BGKD0B2(FC)/7/2022-DCF-BGLT has informed that the land under above survey No. 75,76 & 77 falls under forest and TSP need to take the forest clearance for same. Accordingly, reply to the queries including forest in Gadag (private land as per revenue record) district was submitted on 02.02.2023.

DFO, Bagalkote and DFO, Gadag have recommended the proposal on 03.03.2023 & 16.05.2023. Proposal recommended by the PCCF, Bengaluru on 17.08.2023 and also recommended by the State Government on 12.09.2023. Currently, proposal is pending with IRO, Bengaluru for issuance of Stage-I approval.

- Court Case: At Loc no. 29/3 : Hon'ble High Court vide interim order dated 20.07.2023 in WP No. 104402/2023, directed not to proceed any work for installation. Vide order dated 12.09.2023 (issued on 27.09.2023), Hon'ble Court was please to dispose off the Writ and instructed GTL to pay the compensation/ damages amount. Due to which, the work at said location was at standstill from 24.07.2023 to 27.09.2023.

At location No. 23/1: Case filled for shifting of tower by land owners, hearing scheduled on 05.10.2023 at Basavana Bagewadi Court.

**Status of statutory approvals:**

**Forest area**

Locations	:	1 Nos. ; Length 0.933 Km
Forest area (Ha)	:	4.2920 Ha
Online proposal	:	Submitted on 30.08.2022. Re-submitted on Parivesh 2.0 portal on 22.09.2022.
Current status	:	Proposal recommended by the PCCF, Bengaluru on 17.08.2023 and also recommended by the State Government on 12.09.2023. Currently, proposal is pending with IRO, Bengaluru for issuance of Stage-I approval.

**Power line crossing**

Total No. of crossings	:	18 Nos.
Proposal submitted	:	18 Nos.
Approval obtained	:	17 Nos.

**National Highway / SH Crossing**

Total No. of crossings	:	12 Nos.
Proposal submitted	:	12 Nos.
Approval obtained	:	11 Nos.

**River Crossings**

Total No. of crossings	:	1 No.
Proposal submitted	:	NA (Non navigable)
Approval obtained	:	NA

**PTCC approval**

	:	Applied on 06.02.2023
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Current status

**Defence/Civil Aviation**

	:	
Current Status	:	Civil Aviation NOC received : 31.05.23

**2. 2x500MVA, 400/220 kV Gadag Pooling Station alongwith 1x125 MVar, 400 kV bus reactors**

Land Acquired	:	100 %
Civil work completed	:	91%
Equipment supplied	:	100%
Equipment erection	:	75%
Scheduled COD	:	Sept'23
Anticipated COD	:	Oct'23

**3. 400 kV GIS Line bay at Narendra (New) : 2 Nos.**

Land Acquired	:	100%. Provided by POWERGRID.
Civil work completed	:	100 %
Equipment supplied	:	100 %
Equipment erection	:	100%
Scheduled COD	:	Sept'23
Anticipated COD	:	Sept'23 (Work Completed, charging pending)

### **33. Transmission Scheme for Solar Energy Zone in Gadag (1500 MW), Karnataka – Part-A, Phase-II**

#### **Background**

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. Solar Energy Corporation of India (SECI) in association with MNRE has identified Solar Energy Zones (SEZ) and Wind Energy Zones (WEZ) of 66.5 GW in seven RE rich states (Tamil Nadu, Andhra Pradesh, Karnataka, Gujarat, Rajasthan, Maharashtra and Madhya Pradesh) to be evacuated through ISTS. Out of total 66.5 GW REZs, 18.5 GW (Solar-10 GW & Wind 8.5GW) of potential has been identified in the states of Tamil Nadu, Andhra Pradesh and Karnataka in Southern Region.

The 2.5 GW Solar potential identified in Gadag area of Karnataka and the transmission schemes “Transmission scheme for Solar Energy Zone in Gadag (2500MW), Karnataka – Part A” agreed in NCT meeting for implementation into two phases (Phase-1: 1000 MW, Phase-2: 1500 MW). The Gadag II-A transmission scheme (Part-A, Phase-II, 1500 MW) involves Augmentation of Gadag Pooling Station and its interconnection with ISTS grid for evacuation of potential Renewable Energy from Gadag area of Karnataka.

#### **Scope of transmission project**

1. 400/220 kV , 3x500MVA ICT Augmentation at Gadag Pooling Station
2. Gadag Pooling station – Koppal PS 400 kV D/C line
3. 400 kV Line bays at both end - 4 Nos.

#### **General Details**

Special Purpose Vehicle	: Gadag II- A Transmission Limited (a subsidiary of ReNew Transmission Ventures Private Limited)
Bid Process Coordinator (BPC)	: REC Power Development and Consultancy Limited
Estimated Cost (Rs. Cr)	: 307
Levelised Tariff (Rs. Cr)	: 24.543
Request for Proposal	: 10.02.2022
Letter of Intent	: 19.09.2022
Transmission Service Agreement (TSA)	: 18.11.2022
SPV acquisition	: 18.11.2022
Transmission License by CERC	: 26.02.2023
Tariff adoption by CERC	: 09.02.2023
Contract Performance Guarantee	: 07.11.2022
Clearance u/s 164	: 26.07.2023
Execution plan submitted to CEA	: 17.03.2023
NIT issued on	:
EPC contract awarded on	: 30.12.2022
Scheduled Date of Completion	: May'24
Anticipated Completion	: May'24

#### **Status of progress of transmission project**

1. Gadag Pooling station – Koppal Pooling Station 400 kV D/c line

Length	:	100 ckm
Locations	:	127 Nos.
Foundation completed	:	39 Nos.
Tower erected	:	-
Stringing completed	:	-
Scheduled COD	:	May'24
Anticipated COD	:	May'24

**Constraints / approval; if any:**

TSP has requested the office of District Collectors of Koppal & Gadag for fixation of compensation towards Right of Way (RoW) to land owners. The status of issuance of DCs order are as under:

District	Tehsil	Status
Koppal	Yelburga	Request letter submitted on 12.04.2023. Meeting with land owners for Yelburga tehsil has been held on 25.07.2023. Order yet to be issued.
Koppal	Kukanuru	Meeting with land owners was scheduled on 05.08.2023. Order yet to be issued.
Gadag	Gajendragad	Request letter submitted on 30.05.2023. Meeting with land owners yet to be scheduled.

400 KV D/C Gadag PS- Koppal PS transmission line is passing through Mushigeri, Gulaguli, Rudrapura and Bevinkatti villages under Gajendragad Taluka, Gadag. During the construction, TSP have been informed by M/s Fortum that they have taken the land on lease for development of Solar generation project nearby Gulaguli village and project land is falling under corridor of 400 KV D/C Gadag PS- Koppal PS transmission line. As on date, M/s Fortum has not yet started any activity on said project land.

M/s Fortum is not allowing the work and asking for diverting the line. Due to these hinderances, work on tower location no. 3A/1, 3A/2, 4/0 & corridor length 1.226 Km is getting affected.

**Status of statutory approvals:**

**Power line crossing**

Total No. of crossings	:	5 Nos.
Proposal submitted	:	5 Nos.
Approval obtained	:	2 Nos.

**National Highway / SH Crossing**

Total No. of crossings	:	4 Nos.
Proposal submitted	:	4 Nos.
Approval obtained	:	3 Nos. (SH)

<b>PTCC approval</b>	:	Submitted on 21.07.2023
<b>Current status</b>	:	

<b>Defence/Civil Aviation</b>	:	
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**Current Status** : Approval received on 25.09.2023

**2. 400/220 kV , 3x500MVA ICT Augmentation at Gadag Pooling Station (Schedule COD: May'24)**

Land Acquired	:	100 % (provided by GTL)
Civil work completed	:	72%
Equipment supplied	:	40%
Equipment erection	:	10%
Scheduled COD	:	May'24
Anticipated COD	:	May'24

**3. 400 kV Line bays at Koppal PS: 2 Nos.**

Land Acquired	:	100 % (provided by KNTL)
Civil work completed	:	90%
Equipment supplied	:	65%
Equipment erection	:	18%
Scheduled COD	:	May'24
Anticipated COD	:	May'24

# G R Infraprojects Limited



### 34. Transmission System for evacuation of power from RE projects in Rajgarh (2500 MW) SEZ in Madhya Pradesh

#### Background

Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. Solar Energy Corporation of India (SECI) in association with MNRE has identified Solar Energy Zones (SEZ) and Wind Energy Zones (WEZ) of 66.5 GW in seven RE rich states (Tamil Nadu, Andhra Pradesh, Karnataka, Gujarat, Rajasthan, Maharashtra, and Madhya Pradesh) to be evacuated through ISTS.

The Ministry of Power, Government of India, vide its Notification Nos. 15/3/2018-Trans-Pt(1) dated 27/01/2020 & 15/3/2018-Trans-Pt(1) dated 19/07/2021 has appointed REC Power Development and Consultancy Limited (erstwhile REC Transmission Projects Company Limited) to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish transmission system for “Transmission System For Evacuation of Power From RE Projects in Rajgarh (2500 MW) SEZ in Madhya Pradesh” through tariff based competitive bidding process.

The 2.5 GW solar potential has been identified in Rajgarh area of Madhya Pradesh. The Transmission system for evacuation of Power from RE projects in Rajgarh SEZ in Madhya Pradesh involves the following scheme.

#### Scope of the Transmission Project

Sl. No.	Scope of the Transmission Scheme
1.	<p>Establishment of 400/220 kV , 3x500 MVA at Pachora SEZ PP with 420 kV (125 MVAR) bus reactor</p> <ul style="list-style-type: none"> <li>• 400/220 kV , 500 MVA ICT – 3 Nos.</li> <li>• 400 kV ICT bays – 3 Nos.</li> <li>• 220 kV ICT bays – 3 Nos.</li> <li>• 400 kV line bays – 2 Nos.</li> <li>• 220 kV line bays – 6 Nos.</li> </ul> <p>(4 Nos. for Agar &amp; Shajapur solar park interconnection &amp; 2 Nos. for other RE projects)</p> <ul style="list-style-type: none"> <li>• 125 MVAR, 420 kV reactor-1 No.</li> <li>• 420 kV reactor bay – 1 No.</li> <li>• 220 kV Bus coupler bay- 1 No.</li> <li>• 220 kV Transfer Bus Coupler (TBC) bay - 1 No.</li> </ul> <p>Space for future Provisions:</p> <ul style="list-style-type: none"> <li>• 400/220 kV ICTs along with bays: 6 Nos.</li> <li>• 400 kV line bays: 8 Nos.</li> <li>• 220 kV line bays: 9 Nos.</li> <li>• 420 kV bus reactor along with bays: 1 No.</li> <li>• 220 kV Bus sectionalizer bay: 2 Nos.</li> </ul> <p>(One No. bay for each Main Bus)</p>
2	<p>Pachora SEZ PP -Bhopal (Sterlite) 400 kV D/c line (Quad/HTLS) (with minimum capacity of 2100 MVA/ckt at Nominal voltage) along with 80MVAR switchable line reactors with 400 ohms NGR on each circuit at Pachora end,</p>

	Switchable line Reactors (at Pachora end) –420 kV , 2x80MVA Line reactor bays (at Pachora) – 2 Nos.
3	2 No. of 400 kV line bays at Bhopal (Sterlite) for Pachora SEZ PP-Bhopal (Sterlite) 400 kV D/c line (Quad/HTLS) (with minimum capacity of 2100 MVA/ckt at No.minal voltage)

### General Details

Special Purpose Vehicle	: Rajgarh Transmission Limited (A subsidiary of G R Infraprojects Limited)
Bid Process Coordinator (BPC)	: REC Power Development and Consultancy Limited
Estimated Cost (Rs. Cr)	: 486.00 Cr
Levelised Tariff (Rs. Cr)	: 40.819 Cr
Request for Qualification	: NA
Request for Proposal	: 09.09.2021
Letter of Intent	: 31.03.2022
Transmission Service Agreement	: 02.12.2021
SPV acquisition	: 30.05.2022
Transmission License by CERC	: 13.09.2022
Tariff adoption by CERC	: 08/08/2022
Contract Performance Guarantee	: 21.05.2022
Clearance u/s 164	: 28/12/2022
Execution plan submitted to CEA	: 21.09.2022
NIT issued on	: NA
EPC contract awarded on	: KEC International Limited, dated 09/06/2022
Scheduled Date of Completion	: 29-11-2023

### Status of progress of Transmission project

1. Pachora SEZ PP -Bhopal (Sterlite) 400 kV D/c line (Quad/HTLS) (with minimum capacity of 2100 MVA/ckt at No.minal voltage) along with 80MVA switchable line reactors with 400 ohms NGR on each circuit at Pachora end, Switchable line Reactors (at Pachora end) –420 kV , 2x80MVA Line reactor bays (at Pachora) – 2 Nos.

Length	: 287.908 ckm (Tentative)
Locations	: 357 Nos. (Tentative)
Foundation completed	: 337 Nos.
Tower erected	: 302 Nos.
Stringing completed	: 120.864 ckm
Scheduled COD	: 29-11-2023
Anticipated COD	: 29-11-2023

### Status of statutory approvals:

- a. Forest area : Nil
- b. Wildlife area : Nil
- c. Power line crossing

Total No. of crossings	: 14 Nos.
Proposal submitted	: 14 Nos.

Approval obtained : 14 Nos.

**d. Railway crossing**

Total No. of crossings : 02 Nos.

Proposal submitted : 02 Nos.

Approval obtained : 00 No.

**e. National Highway**

Total No. of crossings : 03 Nos.

Proposal submitted : 03 Nos.

Approval obtained : 03 Nos.

**f. River Crossings**

Total No. of crossings : 03 Nos.

Proposal submitted : NA (Non navigable)

Approval obtained : NA

**g. PTCC approval**

Current status : Submitted to CEA, Defense, BSNL, Railway

**h. Defence/Civil Aviation**

Current Status : Defence & Civil Aviation Proposal Submitted  
Civil Aviation: NOC obtained 300/357 Nos. Location

**Constraints / approvals; if any:**

1. Obstruction on ROW by landowners at location 3/0, 5/0, 5/1, 5/2, 6/0, 6/1 & 21A/0.

**Status of progress of Substation/ Extension: -**

1. Establishment of 400/220 kV , 3x500 MVA at Pachora SEZ PP with 420 kV (125 MVAR) bus reactor

Land Acquired	:	100 %
Civil work completed	:	90%
Equipment supplied	:	90%
Equipment erection	:	70%
Scheduled COD	:	29-11-2023
Anticipated COD	:	29-11-2023

2. 400 kV line bays at Bhopal (Sterlite) for Pachora SEZ PP-Bhopal (Sterlite) 400 kV D/c line (Quad/HTLS) (with minimum capacity of 2100 MVA/ckt at No.minal voltage) - 02 Nos

Land Acquired	:	100 % (provided by Sterlite)
Civil work completed	:	92%
Equipment supplied	:	95%
Equipment erection	:	75 %

Scheduled COD	:	29-11-2023
Anticipated COD	:	29-11-2023

# Megha Engineering & Infrastructures Limited

## 35. 400 kV D/c Khandukhal (Srinagar) – Rampura (Kashipur) line (Twin HTLS\*) (KRTL)

### Background

#### Scope of transmission project

1. 400 kV D/c Khandukhal(Srinagar) – Rampura (Kashipur) line (Twin HTLS\*) – 194 Km
2. 1x80MVAR switchable line reactor at Rampura (Kashipur) end on each circuit of Khandukhal (Srinagar) - Rampura (Kashipur) line
  - a) Switching equipment for 420 kV 80 MVAR switchable line reactor –2 Nos.
  - b) 420 kV , 80 MVAR Switchable line reactor- 2 Nos.
3. 1 No. of 400 kV line bay at Rampura (Kashipur) S/s
  - a) 400 kV line bay -1 No.
4. Upgradation of existing 400 kV bays at Khandukhal (Srinagar)
  - a) Upgradation works for 400 kV line bays -2 Nos.

### General Details

Special Purpose Vehicle	: Khandukhal Rampura Transmission Limited (KRTL) (Subsidiary of Megha Engineering & Infrastructures Limited (100%))
Bid Process Coordinator (BPC)	: PFC CONSULTING LIMITED (PFCCL)
Estimated Cost (Rs. Cr)	: ----
Levelised Tariff(Rs. Cr)	: 58.720
Request for Qualification	: ----
Request for Proposal	: 11-03-2022
Letter of Intent	: 07-09-2022
Transmission Service Agreement (TSA)	: 07-10-2022
SPV acquisition	: 07-10-2022
Transmission License by CERC	: 27.01.2023
Tariff adoption by CERC	: 12.01.2023
Contract Performance Guarantee	: 07-10-2022
Clearance u/s 164	: Application submitted and under process.
Execution plan submitted to CEA	: Will be submitted on or before 05.04.2023 as per TSA
NIT issued on	: 30.12.2022
EPC contract awarded on	: Will be submitted on or before 05.04.2023 as per TSA
Scheduled Date of Completion	: 30.09.2024

Status of progress of transmission project

**1. 400 kV D/c Khandukhal(Srinagar) – Rampura (Kashipur) line (Twin HTLS\*) – 194 KM**

Length	:	388 ckm (Tentative)
Locations	:	487 Nos.
Foundation completed	:	204 Nos.
Tower erected	:	184 Nos.
Stringing completed	:	0 ckm
Scheduled COD	:	Sept'24
Anticipated COD	:	Sept'24

**a. Power line crossing**

Total No. of crossings	:	12 Nos.
Proposal submitted	:	12 Nos.
Approval obtained	:	9 Nos.

**b. National/statehighway Highway**

Total No. of crossings	:	12 Nos.
Proposal submitted	:	04 Nos.
Approval obtained	:	04 Nos.

**2. 1x80MVA switchable line reactor at Rampura (Kashipur) end on each circuit of Khandukhal (Srinagar) - Rampura (Kashipur) line**

KRTL has requested PTCUL Vide ref: MEIL/PD-Proj/KRTL/1322/2022-23/ 892B Date: 28.10.2022 for handing over of site to initiate the preliminary works i.e. SLD preparations etc.,

CTUIL has communicated PTCUL Vide ref: CTUIL/CMG/2022-23/Khandukal/02, Dt: 17.11.2022 for handing over of site for implementation/upgradation of bay extensions to be carried out.

CTUIL has sought intervention of CEA upon receipt of communication from PTCUL dated 01/02/23 (Addressed to CTUIL and communication of the same received through KRTL)

Meeting communication received from CEA PSPA I division on 20th February'2023 for convening meeting on 24.02.203. Minutes received on 06-03-2023. PTCUL response as per MOM is awaited.

CTUIL has issued letter to Hon'ble. MD, PTCUL to resolve the issue of lese agreement of 400 kV Bay Extensions land vide ref. No. CTUIL/CMG/2023-24/PTCUL Dt: 29.05.2023.

As per the VC meeting held on 08.06.2023, Meeting between TSP and PTCUL held on 17.06.2023 regarding estimation of Bay Extensions area. And decision is yet to be communicated by PTCUL.

**Status of statutory approvals:**

**Forest Land Confirmation** - Forest Documents (Form-A (Part-I), Diversion of Forest Land) uploaded on 23.09.2023 vide proposal no: FP/UK/TRANS/445596/2023.

### 36. Transmission scheme for injection beyond 3 GW RE power at Khavda PS1 (KPS1)

#### Background:

#### Scope of transmission project

Augmentation of Khavda PS1 765/400 kV GIS Substation	:	500 MVA, 1-Phase, 765/400 kV ICT – 13 Nos. 765 kV line bays – 2 Nos. 400 kV ICT bays – 4 Nos. 400 kV line bays – 3 Nos. 110MVA, 765 kV Bus Reactor-4 Nos. 765 kV Reactor bay – 1 No. 125MVA, 420 kV Reactor -1 No. 400 kV Reactor Bay- 1 No. 765 KV Bus sectionalizer - 2 Nos. 400 KV Bus sectionalizer- 2 Nos.
765 kV D/C Transmission Line from KPS1 to Khavda PS GIS (KPS2)	:	21 km (Appx.)

#### General Details:

Special Purpose Vehicle	:	KPS1 Transmission Limited (KPS1TL)
Bid Process Coordinator (BPC)	:	RECPDCL
Estimated Cost (Rs. Cr)	:	1104
Levelised Tariff (Rs. Cr)	:	86.23
Request for Qualification	:	-----
Request for Proposal	:	25-07-2022
Letter of Intent	:	23-03-2023 & 20-04-2023
Transmission Service Agreement (TSA)	:	20-04-2023
SPV acquisition	:	20-04-2023
Transmission License by CERC	:	Under review of CERC
Tariff adoption by CERC	:	Approved on 05.09.2023
Contract Performance Guarantee	:	04-04-2023 & 18-04-2023

Clearance u/s 164 : Gazette published on 08.07.2023



Execution plan submitted to CEA : Submitted  
NIT issued on : NIT floated on 25.07.2022  
EPC contract awarded on : Activity under progress  
Scheduled Date of Completion : 19.02.2025

**Status of progress of transmission project:**

1. Site mobilization activities under progress.
2. Design and Engineering works are under progress.

# Apraava Energy Private Limited

## 37. Transmission System for evacuation of power from REZ in Rajasthan (20GW) under phase III- Part A3

### Background

Project is a part of evacuation scheme for 20 GW renewable power from Renewable Energy Zones in Rajasthan. The scheme involves construction of a 400 kV D/c (Quad) transmission link between Fatehgarh-3 & Bhadla-3 Pooling stations (new), which will be interconnected with Fatehgarh-3 & Fatehgarh-2 PS respectively. This scheme shall facilitate evacuation of RE power from Fatehgarh/Bhadla complex for onward dispersal of power to various beneficiaries.

### Scope of transmission project

1. Fatehgarh 3- Bhadla-3 400 kV D/C line (Quad) along with 63 MVAr switchable line reactor for each circuit at both ends of Fatehgarh 3- Bhadla 3 400 kV D/c line.
2. 400 kV line bays Bhadla-3 S/s & Fatehgarh-3 S/s – 4 Nos.

### General Details

Special Purpose Vehicle	: Fatehgarh III transmission Limited (Wholly owned subsidiary of Apraava Energy Private Limited)
Bid Process Coordinator (BPC)	: PFC Consulting Limited
Estimated Cost (Rs. Cr)	: INR 650.3 Cr
Levelised Tariff (Rs. Cr)	: 62.754 :
Request for Proposal	: 07-02-2022
Letter of Intent	: 31-03-2023
Transmission Service Agreement (TSA)	: 02-08-2023
SPV acquisition	: 02-08-2023
Transmission License by CERC	:
Tariff adoption by CERC	:
Contract Performance Guarantee	: 31.07.2023
Clearance u/s 164	:
Execution plan submitted to CEA	:
NIT issued on	:
EPC contract awarded on	:
Scheduled Date of Completion	: 01.02.2025

### Status of progress of transmission project

#### 1. Fatehgarh 3- Bhadla-3 400 kV D/C line (Quad) line

- Length: 225 KM
- Locations:
- Foundation completed:
- Tower erected:
- Stringing completed: Nil

- Scheduled COD: February 2025

## 2. 400 kV line bays Bhadla-3 S/s & Fatehgarh-3 S/s

- Engineering :
- Civil Works :
- Equipment supplied :
- Erection works :
- Schedule completion : February- 2025

### Status of statutory approvals:

Power line crossing	:Survey in progress
National Highway Crossing	:Survey in progress
Railway Crossing	:Survey in progress

### Notes :

1. Survey of the Transmission line completed except 5 Km closure to Bhadla 3 Substation, coordinates of the same is pending from Bhadla 3 Transmission service provider.
2. Transmission line length subject to change basis Bhadla 3 Substation location

## **38. Transmission System for evacuation of power from REZ in Rajasthan (20GW) under phase III- Part A1**

### **Background**

Project is part of a evacuation scheme for 20 GW renewable power from Renewable Energy Zones in Rajasthan. The scheme involves construction of Pooling station at Fatehgarh -IV and a 400 kV D/c (Twin) transmission link between Fatehgarh-4 & Fatehgarh -3 transmission limited.

### **Scope of transmission project**

1. Establishment of 5x500MVA, 400/220 kV pooling station at Fatehgarh-4 along with 2x125MVAr Bus reactor
  - 400/220 kV , 500 MVA ICT - 5Nos.
  - 400 kV ICT bays – 5 Nos.
  - 220 kV ICT bays - 5 Nos.
  - 400 kV line bays - 2 Nos.
  - 220 kV line bays- As per connectivity granted to RE developers (7 No. of bays considered at present).
  - 125 MVAr, 420 kV bus reactor - 2 Nos.
  - 420 kV reactor bay - 2 Nos.
  - 220 kV Sectionalization bay: 1 set
  - 220 kV Bus Coupler (BC) Bay -2 Nos.
  - 220 kV Transfer Bus Coupler (TBC) Bay -2 Nos.

Space for Future provisions:

  - 765/400 kV ICTs along with bays: 6Nos.
  - 765 kV line bay along with switchable line reactor: 6 Nos.
  - 765 kV Bus Reactor along with bays: 3 Nos.
  - 400/220 kV ICTs along with bays: 8 Nos.
  - 400 kV line bays along with switchable line reactor: 10 Nos.
  - 400 kV Bus Reactor along with bays: 2 Nos.
  - 400 kV Sectionalization bay: 2 sets
  - 220 kV line bays: 13 Nos.
  - 220 kV Sectionalization bay: 3 sets
  - 220 kV Bus Coupler (BC) Bay -3 Nos.
  - 220 kV Transfer Bus Coupler (TBC) Bay -3 Nos.
2. Fatehgarh-4 PS- Fatehgarh-3 PS 400 kV D/c Twin HTLS\* line  
\* with minimum capacity of 2100 MVA on each circuit at Nominal voltage
3. 2 No.s of 400 kV line bays at Fatehgarh-3

### **General Details**

Special Purpose Vehicle

: **Fatehgarh IV transmission Limited**

Bid Process Coordinator (BPC)	: PFC Consulting Limited (PFCCL)
Estimated Cost (Rs. Cr)	: 342.7
Levelised Tariff (Rs. Cr)	: 24.867
Request for Proposal	: 07-02-2022
Letter of Intent	: 31-03-2023
Transmission Service Agreement (TSA)	: 02-08-2023
SPV acquisition	: 02-08-2023
Transmission License by CERC	:
Tariff adoption by CERC	:
Contract Performance Guarantee	: 31.07.2023
Clearance u/s 164	:
Execution plan submitted to CEA	:
NIT issued on	:
EPC contract awarded on	:
Scheduled Date of Completion	: 01.02.2025

### Status of progress of transmission project

#### 1. Establishment of 5x500MVA, 400/220 kV pooling station at Fatehgarh-4 along with 2x125MVar Bus reactor

- Land acquisition :
- Civil Works :
- Equipment supplied :
- Erection works :
- Schedule completion : February 2025

#### 2. Fatehgarh-4 PS- Fatehgarh-3 PS 400 kV D/c Twin HTLS\* line

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

- Length: 23 KM
- Locations:
- Foundation completed:
- Tower erected:
- Stringing completed: Nil
- Scheduled COD: February 2025

#### 3. 2 No.s of 400 kV line bays at Fatehgarh-3

- Engineering :
- Civil Works :
- Equipment supplied :
- Erection works :
- Schedule completion : February- 2025

### Status of statutory approvals:

Power line crossing  
National Highway Crossing

:Survey in progress  
:Survey in progress

# Reliance Power Transmission Limited



### **39. System strengthening in NR for import of power from North Karanpura and other projects outside NR and system strengthening in WR for import of power from North Karanpura and other projects outside Western Region and also for projects within Western Region (UNDER LITIGATION)**

#### **Background**

Transmission system for power evacuation from North Karanpurahas been evolved in a comprehensive manner along-with evacuation system for Maithon RB and other generation projects of DVC viz. Koderma, BokaroExtn, Mejia Extn, Durgapur and Raghunathpur and Maithon RB. The comprehensive system consists of common and generation specific transmission schemes. Corresponding to injection of power from North Karanpura and the other generation projects in ER, both NR and WR would require system strengthening. Out of the comprehensive plan of system strengthening, the elements identified for commissioning matching with North Karanpura have been covered under this scheme.

#### **Scope of transmission project**

1. LuckNo.w – Bareilly 765 kV D/C line
2. Bareilly – Meerut 765 kV D/C line
3. Agra – Gurgaon(ITP) 400 kV D/C line
4. Gurgaon(ITP) – Gurgaon (PG) 400 kV D/C line
5. Gurgaon (ITP) 400/220 kV GIS Substation
6. Sipat/Korba pooling station – Seoni 400 kV D/C line

#### **General Details**

Special Purpose Vehicle (SPV)	: North Karanpura Transmission Company Ltd. (A subsidiary of RPTL)
Bid Process Coordinator (BPC)	: Rural Electrification Corporation
Estimated Cost (Rs. Cr)	: 2700
Levelised Tariff(Rs. Cr)	: 258
Request for Qualification	: 06.10.2008
Request for Proposal	: 08.05.2009
Letter of Intent	: 18.12.2009
Transmission Service Agreement (TSA)	: 10.09.2009
SPV acquisition	: 20.05.2010
Transmission License by CERC	: 22.12.2010
Tariff adoption by CERC	: Matter was in CERC for revision of tariff
Contract Performance Guarantee	: 17.05.2010
Clearance u/s 164	: 12.08.2013
Execution plan submitted to CEA	: 13.10.2010 and 28.10.2010
NIT issued on	:
EPC awarded on	: 27.10.2010
Scheduled Date of Completion	: 20.11.2013
Anticipated Date of Completion	: Matter with CERC

#### **Status of progress of transmission project:**

The Company had approached Central Electricity Regulatory Commission (CERC) for allowing tariff revision and Force Majeure due to delay in grant of clearance u/s 164 of Electricity Act (EA).

CERC No.tified an unfavorable order dated 09.05.2013, which was later challenged by NKTCL in Appellate Tribunal for Electricity (ATE). ATE allowed the appeal filed by company and set aside the unfavorable CERC order.

Pursuant to the ATE Order dated 02.12.2013, written requests were sent to the beneficiaries seeking following main reliefs to mitigate effect of Force Majeure in line with the prayers allowed in appeal:

- a) Re-fixation of implementation time of the Project as was originally envisaged considering zero date as issuance of section 68 approval from MoP.
- b) Tariff Increase to the tune of 160%.

Concerned utilities in Tamilnadu, Gujarat and Maharashtra have appealed against the order of ATE in the Supreme Court of India. First hearing was held on March 07, 2014 in case of Gujarat and April 21, 2014 in case of Maharashtra. The Tamilnadu petition has been merged with Gujarat. The matter is going in the Registrar court and Notices are being served on all the beneficiaries. Once the servicing is complete the matter will be argued in Supreme Court. All the petitions filed by beneficiaries have been clubbed together by SC. The petition has been admitted and next hearing is awaited.

Further, on March 04, 2014, CERC reopened Power Grid Corporation of India Limited's (POWERGRID) petition Nos. 19 and 20 seeking revocation of license of the company and transferring the project to them on cost plus model and at the risk and cost of Reliance Power Transmission Limited (the Holding Company). CERC No.tified an order dated 02 Sep 2015, against the said petition for revocation of transmission license. NKTCL filed Appeal No. 200 of 2015 & IA-337 of 2015 in ATE challenging the above mentioned CERC order. ATE rejected the IA meant for stay but allowed the appeal. NKTCL filed a Civil Appeal number 9291 of 2015, in SC against ATE's order. Supreme Court has given a stay order directing No. coercive action to be taken by CERC.

SC on 12<sup>th</sup> August has disposed of the appeal and directed ATE to decide on the appeal. An Interim Application (IA Nos. 479 & 480 of 2018) was filed in ATE. APTEL in its hearing dated 01<sup>st</sup> Feb 19 disposed off the case directing to go back to CERC for a fresh treatment - including (but No.t limited to) the aspect of the very necessity of NK and TT transmission system. A petition has been filed with a stay application in CERC for redressal of grievances. CERC has directed POWERGRID to file an affidavit on the necessity of the project. POWERGRID has filed an affidavit on 17.08.2020 wherein it has been stated that the transmission scheme under the scope of TSP is presently No.t required on technical grounds only as either investment in alternate corridors development has already been made or alternate scheme has already been planned for implementation. The case is ongoing in CERC and further hearing date is awaited.

## **40. Augmentation of Talcher-II Transmission System (UNDER LITIGATION)**

### **Background**

Talcher-II (4x500 MW) generation project of NTPC is located in Orissa. All the units of the generation project are already in operation. Earlier total power from this project was allocated to the states of Southern Region. Subsequently in April 2007 power allocation of Talcher-II has been revised.

For power evacuation from this project to the Southern Region a +/- 500 kV 200MW HVDC bi-polar line from Talcher in Eastern Region to Kolar in Southern Region and 400 kV lines beyond Kolar is in operation however, under contingency of outage of one pole of HVDC line, there is constraint in evacuation of power from Talcher-II to Southern Region. An outage of one pole also causes jerk in Eastern-Western-Northern Region, which are operating in synchronism and result in overloading on some of the transmission lines in Eastern and Western Regions. The Talcher-Behrapur- Gazuwaka 400 kV D/C line with series compensation and switching station at Behrapur and the Talcher - Rourkela 400 kV D/C Quad line have been evolved to augment the Talcher-II Transmission System so as to provide a backup system to meet the contingency outage of one pole and increase the reliability of the system. With this system, it would be possible to schedule the power flow on Talcher - Kolar HVDC and Gazuwaka HVDC back to back in such a manner that the reliable evacuation of power from Talcher-II would be ensured.

### **Scope of transmission project**

1. Talcher II- Rourkela 400 kV D/C Quad line
2. Talcher II – Behrapur 400 kV D/C line
3. Behrapur- Gazuwaka 400 kV D/C line
4. 2x315 MVA, 400/220 kV Behrapur substation

### **General Details**

Special Purpose Vehicle (SPV)	:	Talcher-II Transmission Company Ltd. (A subsidiary of RPTL)
Bid Process Coordinator	:	Rural Electrification Corporation
Estimated Cost (Rs. cr)	:	1400
Levelised Tariff(Rs. Cr)	:	144
Request for Qualification	:	06.10.2008
Request for Proposal	:	08.05.2009
Letter of Intent	:	18.12.2009
Transmission Service Agreement (TSA)	:	10.09.2009
SPV acquisition	:	27.04.2010
Transmission License by CERC	:	08.11.2010
Tariff adoption by CERC	:	Matter in CERC for revision of tariff
Contract Performance Guarantee	:	22.04.2010
Clearance u/s 164	:	12.08.2013
Execution plan submitted to CEA	:	13.10.2010 and 28.10.2010
Scheduled Date of Completion	:	27.10.2012
Anticipated Date of Completion	:	Matter with CERC

### **Status of progress of transmission project**

1. Talcher II – Rourkela 400 kV D/C (Q) line
2. Talcher II – Behrapur 400 kV D/C line
3. Behrapur – Gazuwaka 400 kV D/C line

#### **4. 2x315 MVA, 400/220 kV Behrampur substation**

The Company had approached Central Electricity Regulatory Commission (CERC) for allowing tariff revision and Force Majeure due to delay in grant of clearance u/s 164 of Electricity Act (EA). CERC Notified an unfavorable order dated 09.05.2013, which was later challenged by TTCL in Appellate Tribunal for Electricity (ATE). ATE allowed the appeal filed by company and set aside the unfavorable CERC order.

Pursuant to the ATE order dated 02.12.2013, written requests were sent to the beneficiaries seeking following main reliefs to mitigate effect of Force Majeure in line with the prayers allowed in appeal:

- a) Re-fixation of implementation time of the Projects as was originally envisaged considering zero date as issuance of section 68 approval from MoP.
- b) Tariff Increase to the tune of 90%.

Concerned utilities in Tamil Nadu have appealed against the order of ATE in the Supreme Court of India (SC). First hearing was held on August 1, 2014. The matter is still pending before Supreme Court. All the petitions filed by beneficiaries have been clubbed together by SC. The petition has been admitted and next hearing is awaited.

Further, on March 04, 2014, CERC has reopened Power Grid Corporation of India Limited's (POWERGRID) petition Nos. 19 and 20 seeking revocation of license of the company and transferring the project to them on cost plus model and at the risk and cost of Reliance Power Transmission Limited (the Holding Company).

CERC Notified an order dated 02 Sep 2015, against the said petition for revocation of transmission license. TTCL filed Appeal No. 201 of 2015 & IA-338 of 2015 in ATE challenging the above mentioned CERC order. ATE rejected the IA meant for stay but allowed the appeal. TTCL filed a Civil Appeal number 13370 of 2015, in SC against ATE's order. Supreme Court has given a stay order directing No. coercive action to be taken by CERC.

SC on 12<sup>th</sup> August has disposed of the appeal and directed ATE to decide on the appeal. An Interim Application (IA Nos. 479 & 480 of 2018) was filed in ATE. APTEL in its hearing dated 01<sup>st</sup> Feb 19 disposed off the case directing to go back to CERC for a fresh treatment - including (but No.t limited to) the aspect of the very necessity of NK and TT transmission system. A petition has been filed with a stay application in CERC for redressal of grievances. CERC has directed POWERGRID to file an affidavit on the necessity of the project. POWERGRID has filed an affidavit on 17.08.2020 wherein it has been stated that the transmission scheme under the scope of TSP is presently not required on technical grounds only as either investment in alternate corridors development has already been made or alternate scheme has already been planned for implementation. The case is ongoing in CERC and further hearing date is awaited.