Transmission Plan for Integration of over 900 GW Non-Fossil Fuel Capacity by 2035-36

Government of India

Ministry of Power

Central Electricity Authority

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March 2026

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घनश्याम प्रसाद
अध्यक्ष तथा पदेन सचिव भारत सरकार
GHANSHYAM PRASAD
Chairperson & Ex-officio Secretary
To the Government Of India

सत्यमेव जयते

केन्द्रीय विद्युत प्राधिकरण
भारत सरकार
विद्युत मंत्रालय
सेवा भवन, आर.के. पुरम
नई दिल्ली–110066
Central Electricity Authority
Ministry of Power
Sewa Bhawan, R. K. Puram
New Delhi-110066

FOREWORD

India's commitment to a sustainable energy transition is one of the most ambitious global endeavours of our time. As the nation targets a non-fossil fuel installed capacity of 500 GW by 2030, and eyes even greater milestones by 2035–36 for long term sustainable development, the necessity of a robust and forward-looking transmission infrastructure has now become very critical. The challenge of integrating renewable energy (RE) lies in its unique nature: solar and wind projects have significantly shorter gestation periods compared to the transmission systems required to evacuate their power. Recognizing this gap, a meticulous plan for integration of over 900 GW of non-fossil fuel capacity has been prepared well in advance.

Generation expansion planning studies indicate that the likely installed capacity (IC) in the country may reach about 1121 GW by 2035–36, out of which about 786 GW is expected to be from non-fossil fuel–based sources. However, the transmission system has been planned for over 900 GW non-fossil fuel capacity considering the implementation challenges in transmission system. The implementation decision has to be taken depending on the progress of development of RE integration. This report serves as a strategic roadmap to ensure that our power grid is not only prepared for this massive influx of clean energy but is also resilient enough to support India's burgeoning economic growth.

This report provides essential visibility for RE developers, grid operators, and policymakers, aligning generation capacity additions with the necessary infrastructure. It is a major step toward achieving the Government of India's energy transition goals and ensures that our journey toward a greener future is backed by a world-class transmission network.

As a testament to our collective resolve to build a resilient, carbon-conscious, and energy-secure nation for generations to come, Central Electricity Authority has prepared this report titled "Transmission Plan for Integration of over 900 GW Non-fossil Fuel Capacity by 2035-36". The report presents a roadmap for enabling continuous growth of Renewable Energy (RE) capacity. It is a blueprint for India's green industrial revolution. This report will serve as a useful reference for utilities, developers, and provide a structured framework for transmission system infrastructure required for non-fossil capacity integration by 2035-36, thereby strengthening India's clean, secure, and sustainable energy future. I thank Shri V.K. Singh, Member (Power System, CEA), Ms. Ammi Ruhama Toppo, Chief Engineer (PSPA-1, CEA), officers of Central Electricity Authority (CEA), and all the stakeholders i.e. MNRE, CTUIL, Grid India, State Power utilities, etc. for their sincere efforts in preparing this report.

(Ghanshyam Prasad)

New Delhi
16 March 2026

दूरभाष / Telephone : 011-26732201, 26732222, ईमेल / Email : chair@nic.in, वेबसाईट / Website : www.cea.nic.in

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Executive Summary

The installed generating capacity from non-fossil sources as on 28th February, 2026, was 275 GW, which was about 52.5% of the total installed capacity of 524 GW. As per demand projections, the peak electricity demand and electrical energy requirement are estimated to reach about 459 GW and 3365 MU, respectively, by 2035–36. To meet this growing demand in a reliable and sustainable manner, generation expansion planning studies indicate that the likely installed capacity (IC) in the country may reach about 1121 GW by 2035–36, out of which about 786 GW is expected to be from non-fossil fuel–based sources. A significant share of this capacity addition is expected to come from renewable energy, with solar and wind capacity together projected to reach about 664 GW by 2035–36 (Solar: 509 GW and Wind: 155 GW).

For enabling continuous growth of Renewable Energy (RE) capacity, areas which have high solar and wind energy potential, needs to be connected to Inter-State Transmission System (ISTS), so that the power generated could be evacuated to the load centers. The gestation period of wind and solar based generation projects being much less than the gestation period of associated transmission system, transmission system has to be planned well in advance.

As a significant step towards successfully achieving the planned RE capacity, transmission system has been planned in this report for evacuation of power from over 900 GW of non-fossil capacity by the year 2035-36 more than the required non-fossil capacity in view of challenges faced in implementation of the transmission system. The implementation decision has to be taken depending on the progress of development of RE integration. The report provides visibility for the RE project developers and other stakeholders for transmission system planned to integrate the RE capacity into the grid.

The length of the transmission lines and sub-station capacity planned under ISTS and Intra-state for integration of additional wind and solar capacity during 2026-27 to 2035–36 has been estimated as 1,37,500 ckm and 8,27,600 MVA respectively at an estimated cost of Rs. 7,93,300 crores.

Transmission Plan for Integration of over 900 GW Non-fossil fuel capacity by 2035-36

1.0 Introduction

India is committed to energy transition and plans to have 500 GW of non-fossil based electricity generation installed capacity by the year 2030. As a major step towards this, Central Electricity Authority has prepared Transmission Plan titled "Transmission System for Integration of over 500 GW RE Capacity by 2030" and the same was released in December, 2022. The Plan provides broad transmission system requirement for having about 537 GW of Renewable Energy capacity by the year 2030. The planned Transmission system is progressively being taken up for implementation commensurate with the Renewable Energy capacity addition.

For enabling continuous growth of Renewable Energy (RE) capacity, areas which have high solar and wind energy potential, needs to be connected to Inter-State Transmission System (ISTS), so that the power generated could be evacuated to the load centers. The gestation period of wind and solar based generation projects being much less than the gestation period of associated transmission system, transmission system has to be planned well in advance. As a significant step towards successfully achieving the planned RE capacity, transmission system has been planned in this report for integration of power from over 900 GW of non-fossil capacity by the year 2035-36. The report provides visibility for the RE project developers and other stakeholders for transmission system planned to integrate the RE capacity into the grid.

The Plan has identified major upcoming non-fossil based generation centres in the country, which include potential RE Zones in Rajasthan, Gujarat, Andhra Pradesh, Karnataka, Telangana, Maharashtra, etc. and based on these potential generation centres, transmission systems have been planned. The transmission plan also includes transmission system required for evacuation of 10 GW off-shore wind located in Gujarat (5 GW) and Tamil Nadu (5 GW).

2.0 Non-Fossil fuel installed capacity in the country

The installed generating capacity from non-fossil sources as on 28th February, 2026, was 275 GW, which was about 52.5% of the total installed capacity. The details are given in Table-1 below :

Table-1

Source	Non-Fossil Installed Capacity (MW) as on 28.02.2026
Hydro	51165
Wind	55133
Solar	143604*
Small Hydro	5171
Bio Power	11615
Nuclear	8780
Total	**275468**

* including solar roof top capacity of 24.8 GW

Solar roof top installed capacity was 11.87 GW as on 31st March 2024, the same has been increased to 24.87 GW as on 28th February 2026 with increase in capacity addition of around 13 GW during last two years.

3.0 Projected Electricity Demand and Generation Capacity Requirement up to 2035–36

The electricity demand in the country has observed steady growth over the past five years and is expected to continue increasing in line with economic growth, electrification, and rising consumption across sectors along with emergence of new type of load like green hydrogen, data center etc. As per demand projections, the peak electricity demand and electrical energy requirement are estimated to reach about 459 GW and 3365 MU, respectively, by 2035–36. To meet this growing demand in a reliable and sustainable manner, generation expansion planning studies indicate that the likely installed capacity (IC) in the country may reach about 1121 GW by 2035–36, out of which about 786 GW is expected to be from non-fossil fuel–based sources. A significant share of this capacity addition is expected to come from renewable energy, with solar and wind capacity together projected to reach about 664 GW by 2035–36 (Solar: 509 GW and Wind: 155 GW). The year-wise capacity requirement from RE resources (solar and wind) is estimated to be around 40 to 45 GW per year. However, the transmission system has been planned for over 900 GW non-fossil fuel capacity. The implementation decision has to be taken depending on the progress of development of RE integration.

To effectively integrate the planned renewable energy (RE) capacity, it is important

that capacity addition takes place broadly in line with the year-wise requirements envisaged in the planning studies. This ensures that the development of transmission infrastructure and grid support systems progresses in a coordinated manner with generation capacity. If RE capacity is added significantly ahead of the planned schedule or in a highly concentrated manner, it may lead to operational challenges such as transmission congestion and renewable energy curtailment. Therefore, aligning RE capacity addition with the planned yearly trajectory is important to ensure efficient evacuation of power and reliable grid operation.

4.0 Transmission System associated with non-fossil capacity integration by 2035-36

MNRE in consultation with states has declared RE potential in various RE rich states for the purpose of transmission planning under ISTS. Details of the same are given below:

Table-2

Wind and Solar Potential Zones

State/District	Capacity (GW)
Northern Region	
Rajasthan	259.8
Sub Total (NR)	
Western Region	
Gujarat	136.1
Maharashtra	21
Madhya Pradesh	49.5
Sub Total (WR)	
Southern Region	
Andhra Pradesh	88.0
Karnataka	32.7
Tamil Nadu	8
Telangana	13.0
Sub Total (SR)	
Total	**608.1**

In addition to above RE declared by MNRE, transmission system has also been planned for RE evacuation in Assam and Ladakh as given below:

Table-3

State/District	Capacity (GW)
Ladakh	9
Assam	1.0

For integration of non-fossil generation capacity beyond 500 GW by 2030, the transmission system has been planned for over 900 GW of non-fossil capacity by the year 2035-36. Status of Transmission System associated with Non-Fossil generation is given below:

Table-4

Non-Fossil Capacity and status of associated Transmission System

Item Description	**Non-fossil Capacity (GW)**
Commissioned Non-fossil Capacity &Transmission System	
Commissioned transmission system for non fossil Capacity (as on 28.02.2026) (RE: 266.7 GW+ Nuclear: 8.8 GW)	275.5
Transmission System under implementation for Non-fossil capacity	
ISTS network for RE evacuation (Solar & Wind)	192
Intra-state network under the Green Energy Corridor Scheme (GEC II)	19.4
Network for additional Hydro capacity (ISTS + InSTS)	12.7
Network for additional Nuclear Capacity (ISTS)	6.6
Sub-Total	**506.2**
Transmission System planned for Non-fossil capacity	
ISTS network for RE evacuation (Solar & Wind)	76.5*
Intra-state network under the Green Energy Corridor Scheme-III	134.7
Additional Intra-state Transmission system for RE integration	33.6
Margin available in existing non-RE ISTS substation which can be used for RE integration	31.5
Network for additional Nuclear Capacity (ISTS)	7
Small Hydro and Bio Mass addition	5.2
Capacity Addition under Solar rooftop	46
Sub-Total	**334.5**
Transmission System under planning for Non-fossil capacity	
ISTS network for RE evacuation (Solar & Wind)	**60**
Network for additional Hydro capacity (ISTS + InSTS)	13
Total	**913.7**

***Note:** *Transmission schemes for integration of 19 GW RE (Ladakh 9 GW, Offshore wind-5 GW each at Gujarat and Tamil Nadu) planned and are on hold at present due to high cost of RE*

The Central Electricity Regulatory Commission (Third Amendment) Regulations, 2025 have introduced Solar Hour and Non-Solar Hour access, under which solar projects are aligned with Solar Hours, while wind and Energy Storage Systems are permitted round-the-clock access. This framework promotes optimal utilization of transmission capacity and encourages hybrid project with different combination of solar, wind and BESS to ensure more reliable renewable power supply. Margin of around 176 GW is available during non-solar hours at existing/ under implementation RE pooling stations, out of which application for connectivity for around 105 GW have already been received. Substation wise details are attached as **Annexure-A**. The margins as available during non-solar hours at existing and under implementation substations can be used for integration of wind and BESS.

As per the Resource Adequacy studies carried out by the Central Electricity Authority up to 2035–36, it has been observed that long-duration energy storage (around 6 hours) will be required for integrating higher levels of renewable energy beyond 2030. Pumped Storage Projects (PSPs) offer a comprehensive and cost-effective solution to meet the future energy storage requirements while also supporting grid reliability through services such as frequency regulation and voltage support. The Central Electricity Authority has prepared a report titled "*Roadmap for Achieving 100 GW of Hydro Pumped Storage Projects (PSPs) by 2034–35"*, which outlines the development pathway for PSP capacity in the country. The report also presents the transmission planning framework required for effective integration of these PSPs into the grid.

5.0 ISTS network under implementation and planned in the country

State wise RE potential for which ISTS transmission system is under implementation/ planned/ under planning is given below:

Table-5

Region	State	Under Implementation	Planned/ Under Planning	Total
NR	Rajasthan	52.7	66	118.7
	Ladakh*	0	9	9
Sub-Total (NR)		**52.7**	**75**	**127.7**
WR	Gujarat*	48.3	16.5	64.8
	Maharashtra	5.75	4	9.75
	Madhya Pradesh	12.78	6.5	19.28
Sub-Total (WR)		**66.83**	**27**	**93.83**
SR	Andhra Pradesh	38.4	15	53.4
	Tamil Nadu*	2.38	6	8.38
	Karnataka	30.74	0.5	31.24
	Telangana	0	13	13
Sub-Total (SR)		**71.5**	**34.5**	**106**
NER	Assam	**1**	**0**	**1**
Total (NR+WR+SR+NER)		**192.03**	**136.5**	**328.53**

**Transmission schemes under hold at present due to high cost of RE (Ladakh 9 GW, Offshore wind- 5GW each at Gujarat and Tamil Nadu)*

6.0 Transmission system for evacuation of power from solar and wind potential zones in Northern Region

6.1 Rajasthan

Status of upcoming ISTS network for 58.7 GW solar and wind potential zones in Rajasthan is given in Table 6 and Figure 1.

Table-6

Status of upcoming ISTS network in Rajasthan

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1	Under Implementation *(phase-wise completion by 2027-2028)*	a) Ramgarh (Phase-III)	2.9	46.7
		b) Fatehgarh-III (Phase-III)	6	
		c) Fatehgarh-IV (Phase-III)	2.1	
		d) Bhadla-III (Phase-III)	6.5	
		e) Bhadla-II (Phase-III)	1.5	
		f) Fatehgarh-II (Phase-III)	1	
		g) Bikaner-III (Phase-IV: Part 1)	4	
		h) Bikaner-II (Phase-IV: Part 1)	3.7	
		i) Fatehgarh-IV (Section-2) (Phase-IV: Part-2)	4	
		j) Barmer- I (Phase-IV: Part 2)	1.5	
		k) Bikaner-IV (Phase-IV: Part 3)	6	
		l) Barmer-I (Phase-IV: Part 4)	2.5	
		m) Fatehgarh-IV (Phase-IV: Part 4)	1	
		n) Merta-II (Phase-V: Part 1)	2	
		o) Sirohi (Phase-V: Part 1)	2	
2	Under Tendering *(implementation timeframe by 2030-31)*	a) Barmer-II (Phase-IV: Part 5)	6	6
3	Planned *(implementation timeframe by 2028-29)*	a) Bikaner-V (Phase-IV: Part 6)	6	6
	Total			**58.7**

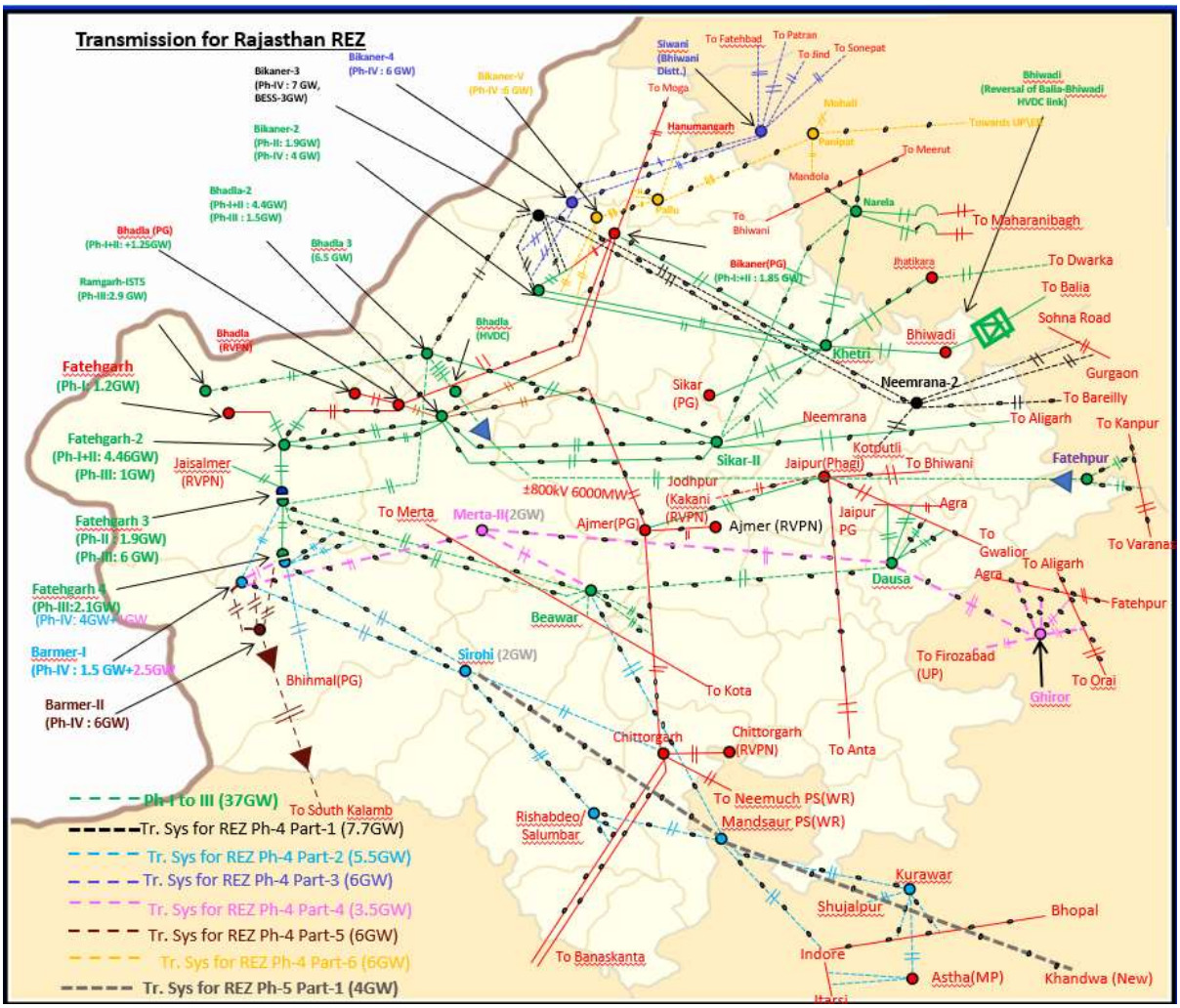

Fig.1: Transmission system for evacuation of RE power in Rajasthan

As Rajasthan has abundant RE potential, any additional RE is envisaged to be evacuated from the RE potential zones through HVDC transmission systems. The transmission system would be implemented in phased manner depending on the requirement of RE capacity and growth of demand in the country. The following RE potential zones have been identified for development of HVDC system:

Table-7

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1	Under Planning *(phase-wise completion by 2035-36)*	a) Ramgarh-II	6	60
		b) Bhadla-IV	6	
		c) Barmer-III	6	
		d) Jalore/Sirohi/Sanchore	6	
		e) Bhadla-V	6	
		f) Barmer-IV	6	

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
		g) Ramgarh-III	6	
		h) Merta-III/Pali	6	
		i) Bhadla-VI	6	
		j) Bikaner-VI	6	
	Total			**60**

6.2 Ladakh

Status of upcoming ISTS network for 9 GW RE capacity in Ladakh is given in Table 8 and Figure 2.

Table-8

Status of upcoming ISTS network in Ladakh

Sl. No.	Status of transmission scheme	RE Potential Zone	Identified Potential (GW)	Total (GW)
1.	Planned *(phase-wise completion by 2035-36)*	Leh	(9 GW solar + 20 GWh BESS)	9

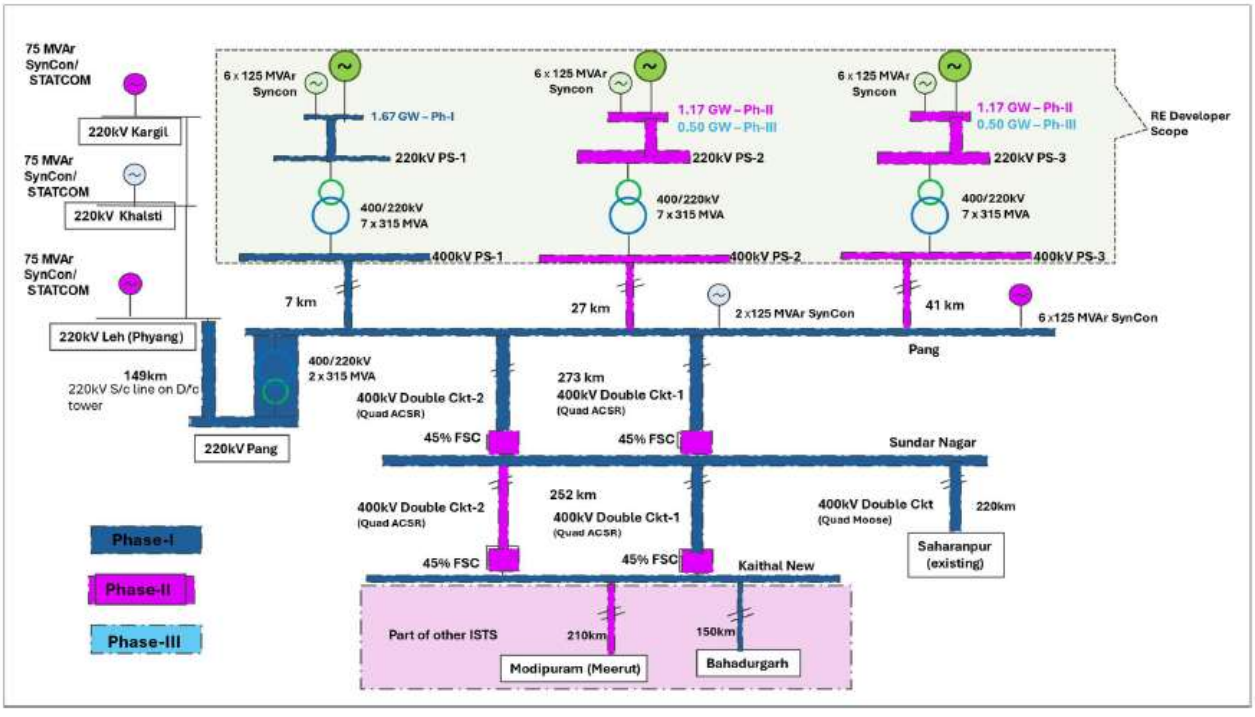

Fig.2: Proposed Transmission system for evacuation of RE power from renewable energy parks in Leh

Details of the ISTS network in Northern Region with broad scope of works is given at **Annexure- B.**

7.0 Transmission system for evacuation of power from solar and wind potential zones in Western Region

7.1 Gujarat

Status of upcoming ISTS network for 64.8 GW solar and wind potential zones in Gujarat is given in Table 9 and Figure 3, Figure 4.

Table-9

Status of upcoming ISTS network in Gujarat

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1	Under Implementation *(phase-wise completion by 2029-2030)*	a) Khavda (Phase-III)	7	34.3
		b) Khavda (Phase-IV)	7	
		c) Khavda (Phase-V)	8.5	
		d) Bhuj	0.5	
		e) Bhuj II	2	
		f) Lakadia (Phase-I)	3.5	
		g) Navinal	0.3	
		h) Radhanesda	4	
		i) Jam Khambhaliya (Phase-I)	1.5	
2	Under Tendering *(implementation timeframe by 2029-30)*	a) Jam Khambhaliya (Phase-II)	5.5	14
		b) Jamnagar (Phase-I)	1	
		c) Lakadia (Phase-II)	7.5	
3	Planned *(implementation timeframe by 2035-36)*	a) Khavda (Phase-VI)	5.5	16.5
		b) Khavda (Phase-VII)	6	
		c) Off-Shore	5	
	Total			**64.8**

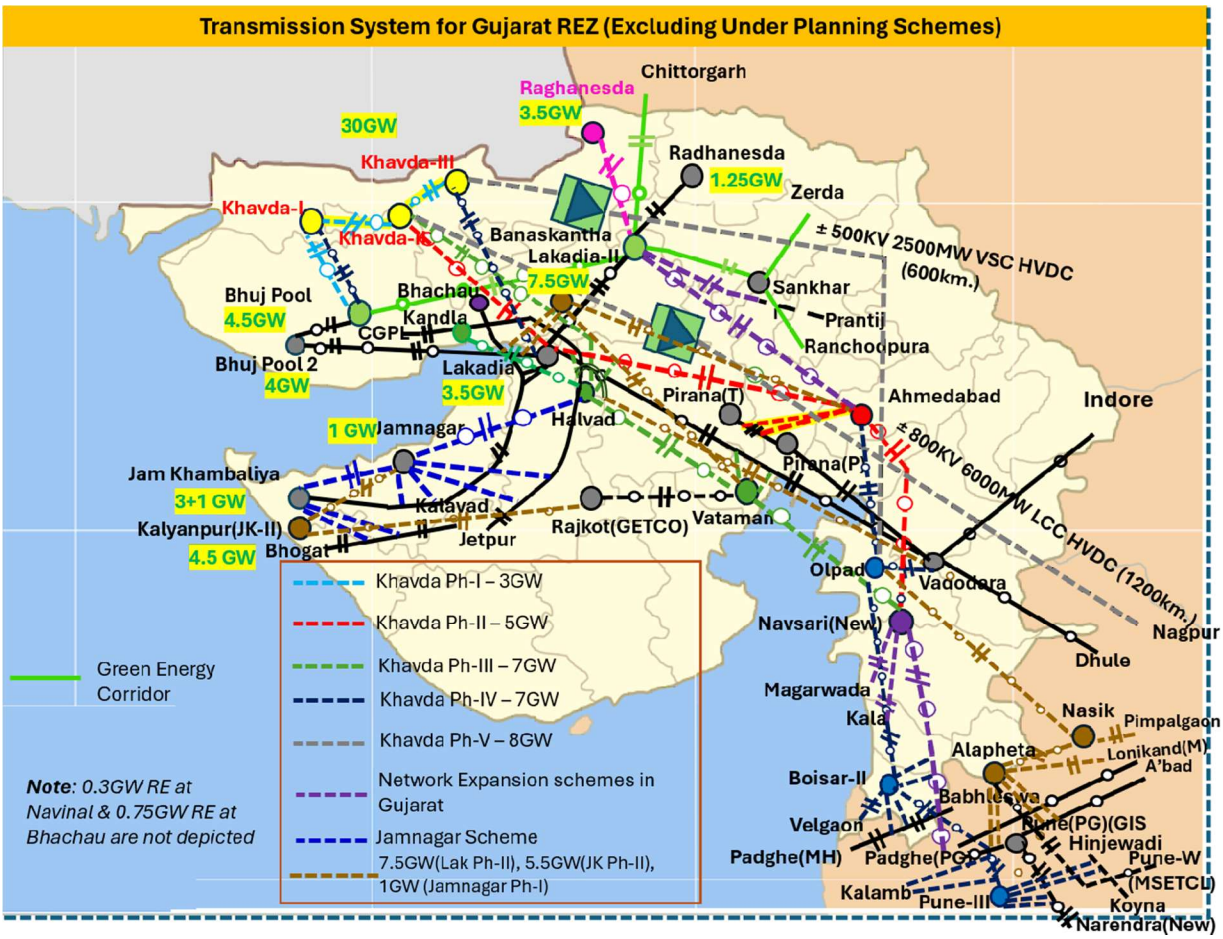

Fig.3: Transmission system for evacuation of RE power in Gujarat

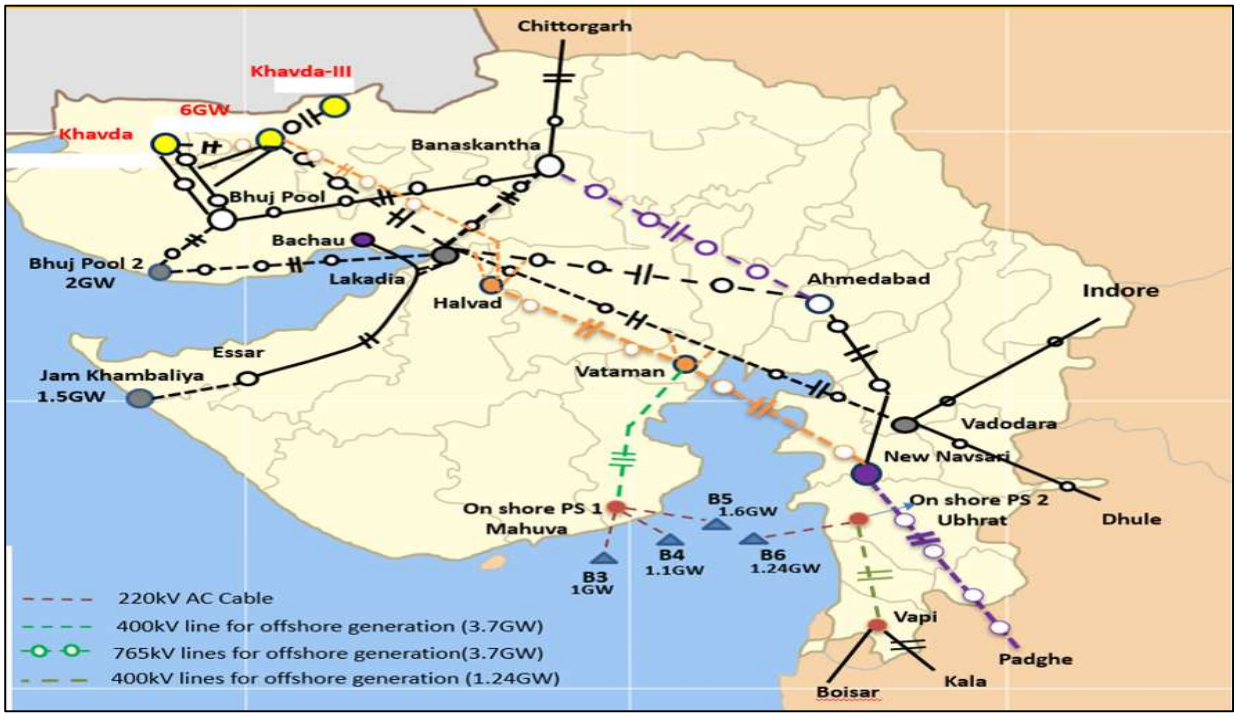

Fig.4: Transmission system for off-shore wind potential zones in Gujarat

7.2 Maharashtra

Status of upcoming ISTS network for 9.75 GW solar and wind potential zones in Maharashtra is given in Table 10 and Figure 5.

Table-10

Status of upcoming ISTS network in Maharashtra

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1.	Under Implementation *(implementation timeframe by 2026-27)*	a) Kallam	2.25	5.75
		b) Solapur	1.5	
		c) Dhule	2	
2.	Planned *(implementation timeframe by 2035-36)*	a) Solapur (Phase-II)	2	4
		b) Dhule (Phase-II)	2	
	Total			**9.75**

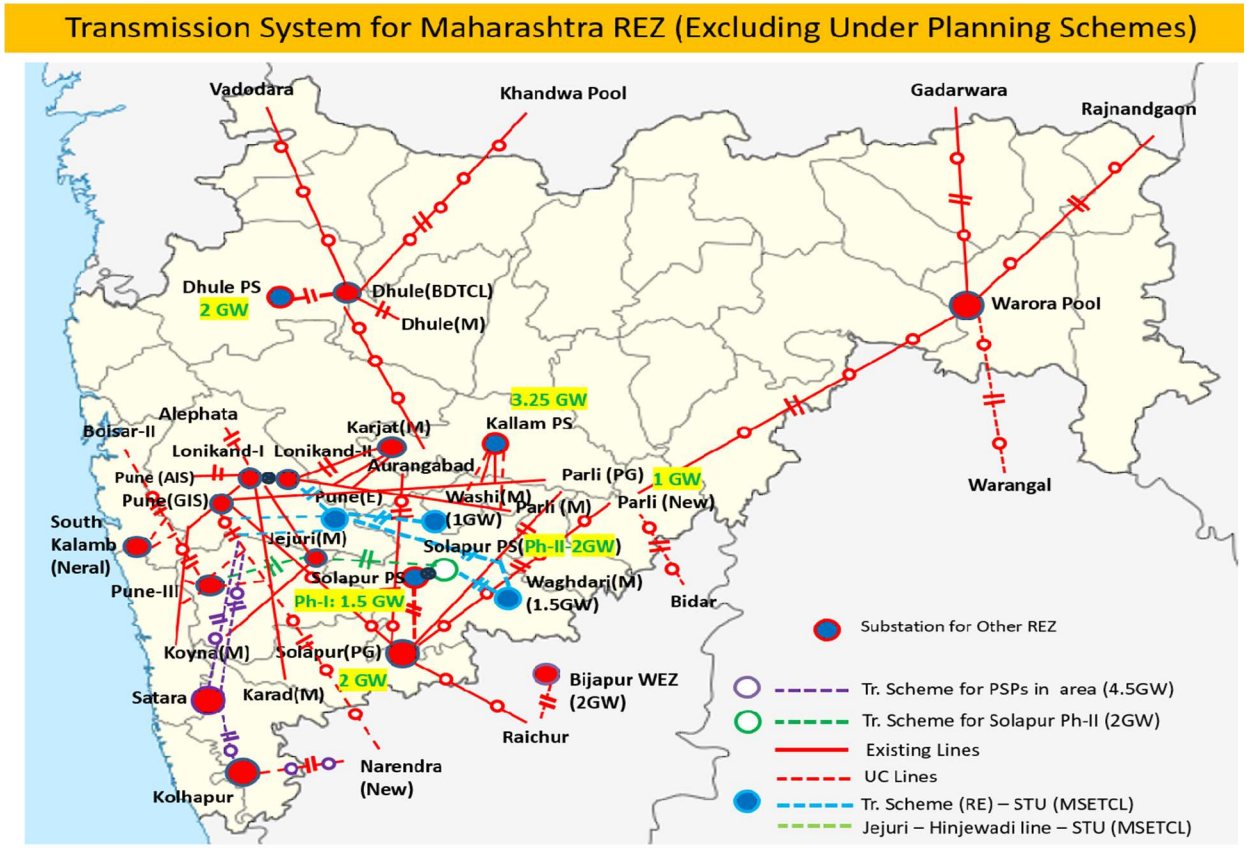

Fig.5: Transmission system for evacuation of RE power in Maharashtra

7.3 Madhya Pradesh

Status of upcoming ISTS network for 19.28 GW wind and solar potential zones in Madhya Pradesh is given in Table 11 and Figure 6.

Table-11

Status of upcoming ISTS network in Madhya Pradesh

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1.	Under Implementation *(phase-wise completion by 2027-28)*	a) Rajgarh	1	12.78
		b) Rajgarh (Phase-II)	1	
		c) Rajgarh (Phase-III)	1.5	
		d) Neemuch (Phase-II)	1	
		e) Mandsaur	4.5	
		f) Morena (Phase-I)	2.5	
		g) Ishanagar	1.28	
2.	Planned *(implementation timeframe by 2035-36)*	a) Morena (Phase-II)	3.5	6.5
		b) Mandsaur	1.5	
		c) Sagar	1.5	
	Total			**19.28**

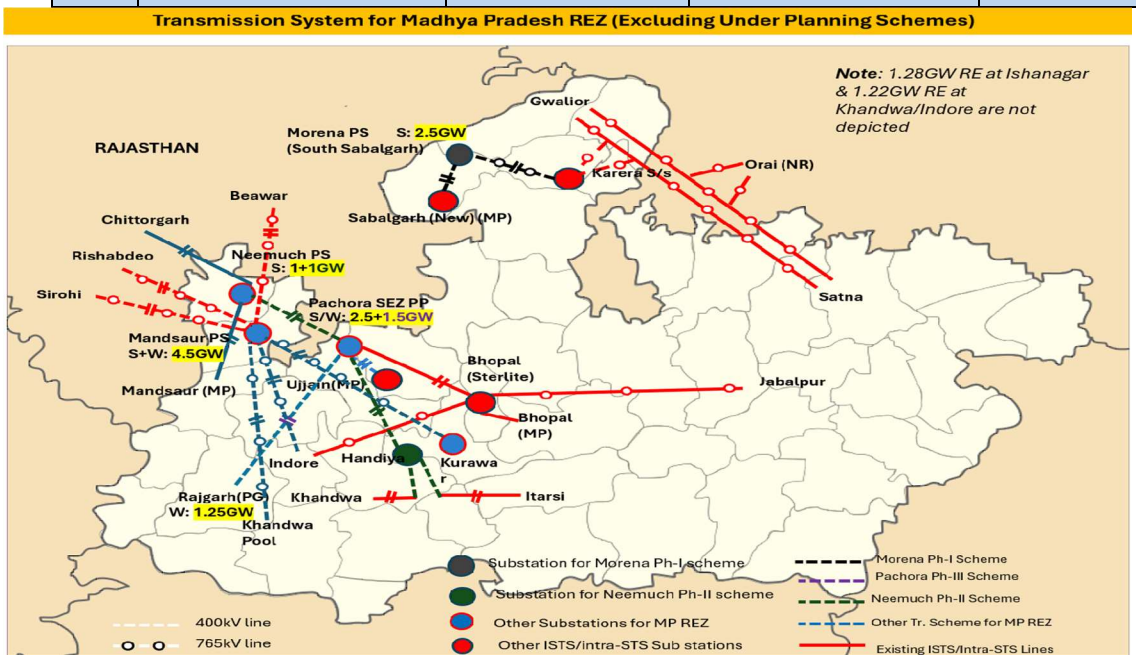

Fig.6: Transmission system for evacuation of RE power in Madhya Pradesh

Details of ISTS network in Western Region with broad scope of works is given at **Annexure-C**.

8.0 Transmission system for evacuation of power from solar and wind potential in Southern Region

8.1 Andhra Pradesh

Status of upcoming ISTS network for 53.4 GW solar and wind potential zones in Andhra Pradesh is given in Table 12 and Figure 7.

Table-12

Status of upcoming ISTS network in Andhra Pradesh

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1.	Under Implementation *(implementation timeframe : progressively from 2026-27 to 2029-30)*	Anantapur	3.5	38.4
		Anantapur-II	7.5	
		Ananthapuram-III (Ph-I)	3	
		Kurnool-III	9	
		Kurnool-IV	7.5	
		Krishnagiri (Ph-I)	4.5	
		Additional RE at other substations	3.4	
2.	Planned *(implementation timeframe by 2029-30)*	Krishnagiri (Ph-II)	3	15
		Ananthapuram-III (Ph-II)	4.5	
		Kadapa-II	7.5	
	Total			**53.4**

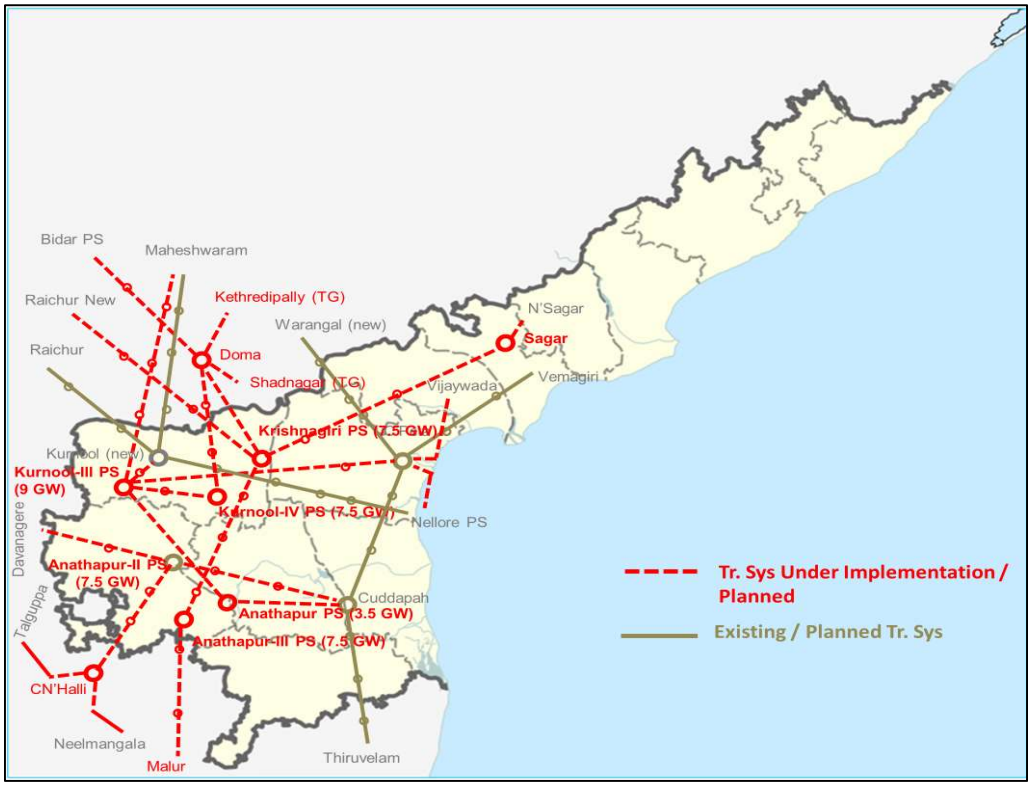

Fig.7: Transmission system for evacuation of RE power in Andhra Pradesh

8.2 Karnataka

Status of upcoming ISTS network for 31.24 GW solar and wind potential zones in Karnataka is given in Table 13 and Figure 8.

Table-13

Status of upcoming ISTS network in Karnataka

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1	Under Implementation *(implementation timeframe : progressively from 2026-27 to 2029-30)*	a) Tumkur-II	4.2	30.74
		b) Tumkur (Pavagada)	1	
		c) Bidar	3.5	
		d) Koppal-II and Gadag-II	9	
		e) Bijapur	2	
2		a) Davanagere and Bellary	7	
		b) Davanagere	2	
		Additional RE at other substations	2.04	

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
3	Planned *(implementation timeframe by 2028-29)*	a) Davanagere	0.5	0.5
	Total			**31.24**

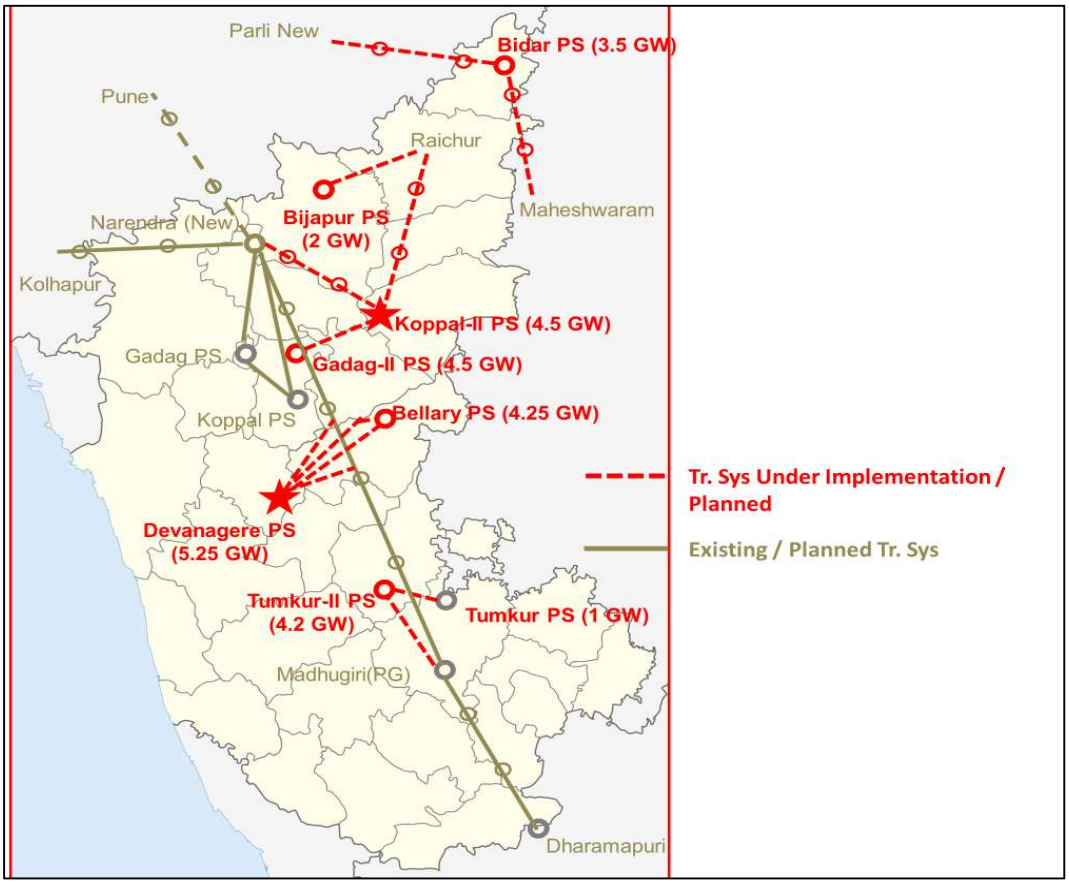

Fig.8: Transmission system for evacuation of RE power in Karnataka

8.3 Tamil Nadu

Status of upcoming ISTS network for 8.38 GW solar and wind potential zones in Tamil Nadu is given in Table 14 and Figure 9.

Table-14

Status of upcoming ISTS network schemes in Tamil Nadu

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1	Under Implementation *(implementation timeframe : progressively from 2026-27 to 2027-28)*	Karur	0.5	2.38
		Tuticorin-II	0.5	
		Additional RE at other substations	1.38	
2	Planned *(implementation timeframe by 2035-36)*	Karur	1	6
		Offshore wind	5	
	Total			**8.38**

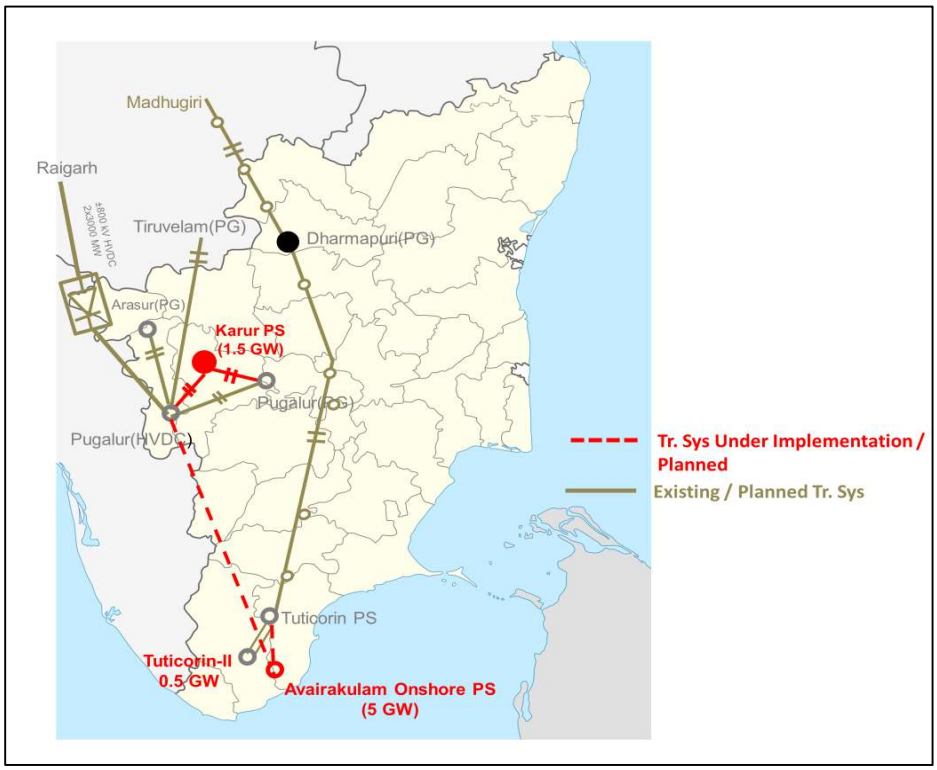

Fig.9: Transmission system for off-shore wind potential zones in Tamil Nadu

8.4 Telangana

Status of upcoming ISTS network for 13 GW solar and wind potential zones in Telangana is given in Table 15 and Figure 10.

Table-15

Status of upcoming ISTS network in Telangana

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1	Planned *(implementation timeframe 2027-32)*	a) Nizamabad	3.5	13
		b) Medak	3.5	
		c) Rangareddy	3.5	
		d) Karimnagar	2.5	
	Total			**13**

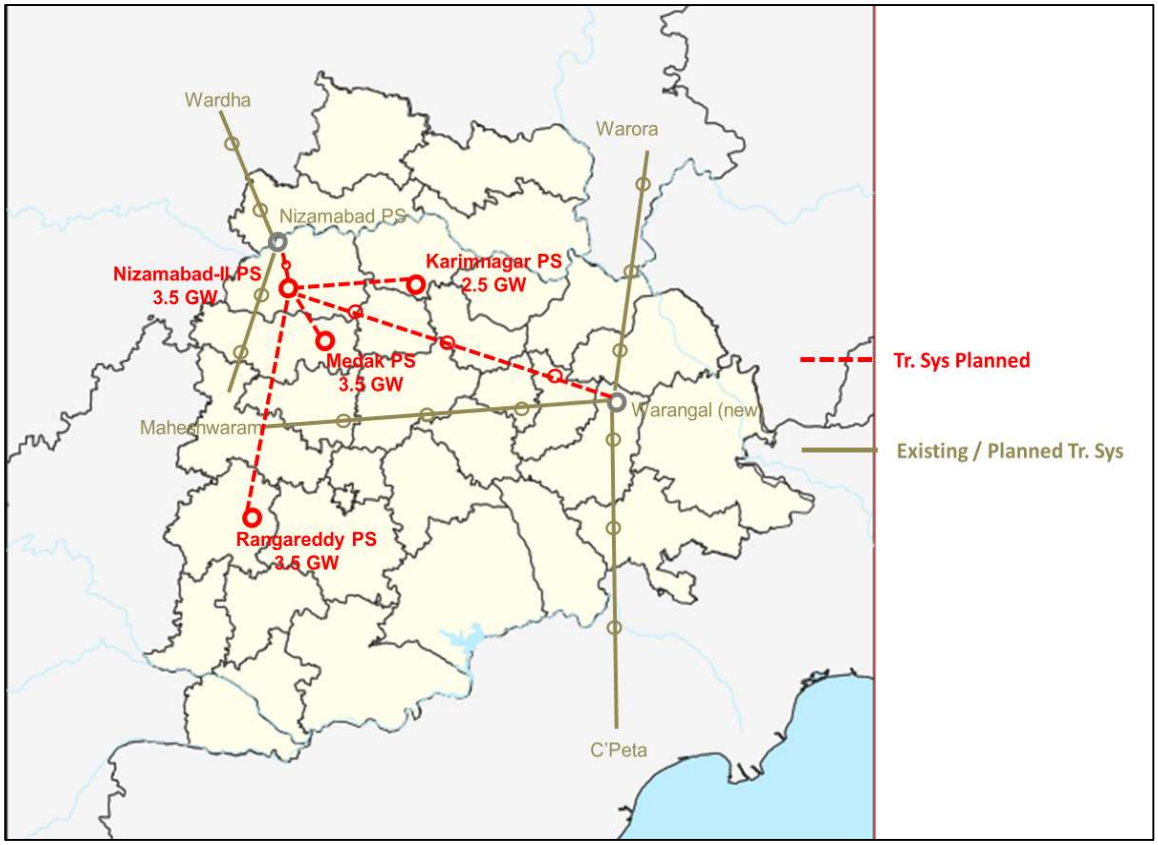

Fig.10: Transmission system for evacuation of RE power in Telangana

Details of ISTS network in Southern Region with broad scope is given at **Annexure-D**.

9.0 Transmission scheme for evacuation of power from solar generation in North Eastern Region

Status of upcoming ISTS network for 1 GW solar capacity in Assam is given in Table 16 and Figure 11.

Table-16

Status of upcoming ISTS network in Assam

Sl. No.	Status of transmission schemes	RE Potential Zone	Identified Potential (GW)	Total (GW)
1	Under Bidding *(implementation timeframe by 2026-27)*	Bokajan (Karbi Anglong)	1	1
	Total			**1**

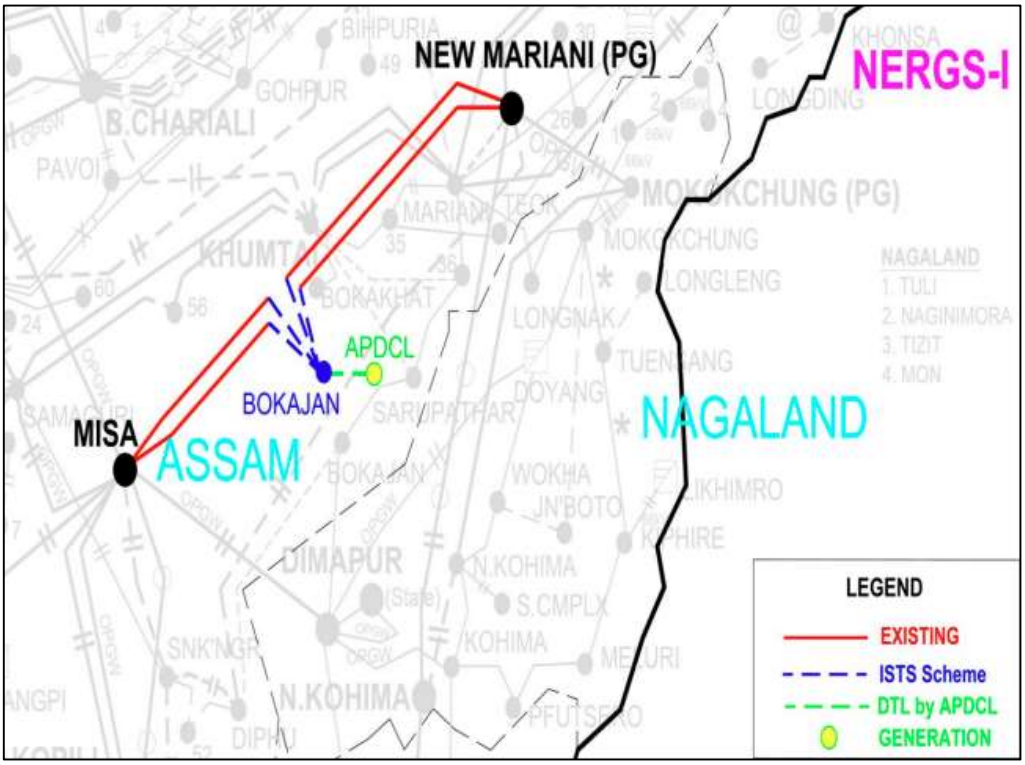

Fig. 11: Transmission system for evacuation of RE power in Assam

10.0 Margin available in existing non-RE ISTS substations which can be used for RE integration

In addition to above, about 31.5 GW transmission capacity margins are also

available at the existing non-RE ISTS substations, the margins can be utilized for RE integration. The substation wise details of transmission margins available at 220 kV and 400 kV are given at Annexure-E.

11.0 RE capacity to be integrated to intra-state network

11.1 RE capacity to be integrated to intra-state network under Green Energy Corridor II

About 20 GW RE capacity is planned to be integrated to intra-state transmission system under Green Energy Corridor-II (GEC-II) Scheme. The scheme is under implementation. State-wise details are given below in Table 17.

Table-17

State-wise details of RE capacity and associated transmission system under GEC-II Scheme

State	RE capacity addition envisaged (MW)	Transmission lines (ckm)	Transformation Capacity (MVA)
Gujarat	4000	2570	7460
Himachal Pradesh	317	337	352
Karnataka	2639	938	1225
Kerala	452	224	620
Rajasthan	4023	659	2191
Tamil Nadu	4000	624	2200
Uttar Pradesh	4000	2567	10440
Total	**19431**	**7919**	**24488**

11.2 RE capacity to be integrated to intra-state network under Green Energy Corridor III

The newly proposed GEC –III scheme is further expected to facilitate the intra-state evacuation of additional 134.7 GW Solar, Wind & Hydro power from RE plants and 25.2 GW pumped storage systems with the augmentation of grid in RE rich

States. The scheme will strengthen transmission infrastructure by 51,126 circuit kilometers and establish substations of aggregate capacity of 2,28,903 MVA. The proposed scheme will support development of 44.8 GWh BESS Capacity to facilitate grid integration of RE power to ensure reliable electricity supply. Details of Green Energy Corridor (GEC)-III is given in Table-18.

Table-18

S.No.	Name of State	RE Capacity to be Added (MW)	Transmission Lines (ckm)	Transformation Capacity (MVA)
1	Rajasthan	13,255	5,819	36,090
2	Andhra Pradesh	11,000	7,872	9,500
3	Odisha	1,763	1,300	1,000
4	Kerala	1,759	1,422	1,973
5	Assam	2,247	1,488	1,920
6	Karnataka	19,010	8,306	35,305
7	Tamil Nadu	9,772	2,122	13,260
8	Telangana	19,000	4,839	28,100
9	Gujarat	16,500	5,330	45,320
10	Maharashtra	35,000	10,398	42,715
11	Uttar Pradesh	4,600	1,719	13,120
12	Himachal Pradesh	680	494	600
13	Ladakh	140	17	-
	Total	**1,34,726**	**51,126**	**2,28,903**

11.3 Other RE capacity to be integrated to Intra-State network

In addition, about 33.3 GW RE capacity (Solar, Wind) has been planned to be integrated to Intra-State network in Rajasthan (10 GW), Gujarat (15 GW) and Karnataka (8.3 GW).

12.0 Transmission plan for additional Hydro Electric Projects likely by 2035-36

Installed capacity of hydroelectric projects in the country is 51,165 MW (as on 28th February, 2026). Transmission system has been planned for evacuation of hydro

capacity of 12.7 GW and transmission system for 13 GW hydro capacity is under planning. The details of planned transmission system is given at **Annexure**-F.

13.0 Network for additional Nuclear Capacity by 2035-36 (ISTS)

Installed capacity of nuclear power projects in the country is 8.78 GW (as on 28th February, 2026). Transmission system has been planned for evacuation of nuclear capacity of 7 GW. The details of planned transmission system is given at **Annexure**-G.

13.0 New Technology Options for RE integration: 1150 kV Transmission System

In order to evacuate power from high RE potential areas including offshore generations with associated energy storage, to cater the demand of large Green Hydrogen Hubs and to inter-connect large conventional power plants to load centers, the possible corridors for the 1150 kV AC Transmission system area have also been identified.

The 1150 kV Corridors have been planned up to 2034 based on the following assumptions:

i. New Renewable generations with approximate generation of 8 GW at Bhadla - IV and 8 GW at Ramgarh - II are coming up in Rajasthan.

ii. New demands approximating to 23.1 GW from Green hydrogen/ammonia, steel, petrochemical, PV manufacturing, EV manufacturing etc. type of industries are coming up in eastern part of Odisha [Paradeep (11 GW); Duburi (2.5 GW);Gopalpur (7 GW); Khuntuni (2.6 GW)].

iii. Peak Demand of West Bengal (~21GW), Bihar (~18GW) & Odisha (~15GW) to increase substantially as per CEA transmission system adequacy Report 2035. Increase of up to 18GW (West Bengal: 6GW), Bihar (5GW) and Odisha (7GW) from 2029-30 levels is envisaged.

iv. New thermal generations are coming up in western part of Chhattisgarh and Odisha with approximate generation of 7 GW and 4 GW respectively.

Considering the above & in order to integrate the new upcoming RE generation

at Solapur & Ramgarh area & utilization of existing Wardha-Aurangabad 1150 kV S/c line (presently charged as 400 kV D/c line), 1150 kV corridor requirement along with 800 kV HVDC links from NR has been evolved. Further, Bikaner Complex is also proposed to be integrated at Raigarh (Kotra)-II so that corridor can be utilized during both High RE as well as evening peak period. The details of identified system is given at **Annexure-H.** The schematic diagram representing the planned 1150 kV is given below:

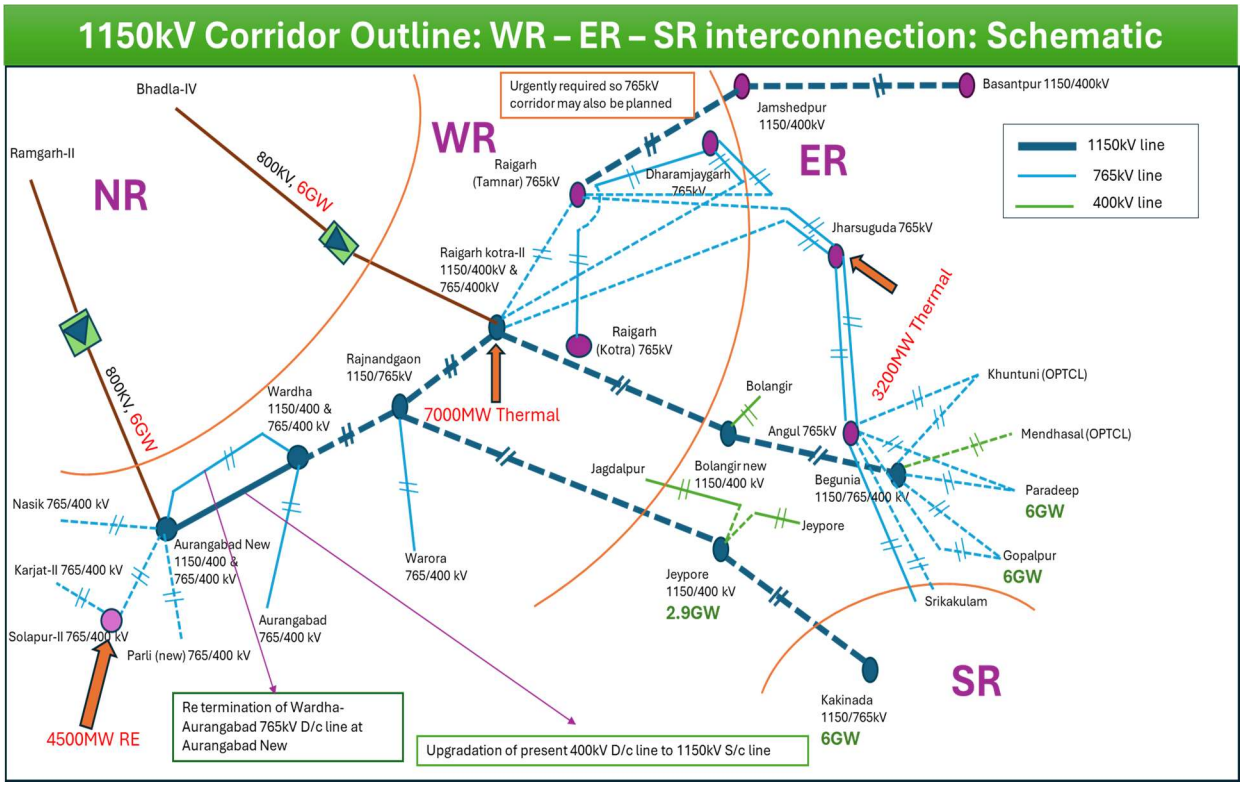

Fig. 12

14.0 Conclusions

Transmission system has been planned for evacuation of power from over 900 GW non-fossil capacity by the year 2035-36. The associated transmission schemes are at various stages of implementation—some have already been commissioned, several are under construction, and others are under the bidding process. The planned transmission schemes would be taken up progressively for implementation commensurate with the RE capacity addition. Considering that renewable energy projects typically have shorter gestation periods compared to transmission infrastructure, timely planning and implementation of transmission systems is essential to ensure readiness for evacuation of RE power. The

transmission plan for Renewable Energy is a major step towards achievement of Government's energy transition goal. The length of the transmission lines and sub-station capacity planned under ISTS and Intra-state for integration of additional wind and solar capacity during 2026-27 to 2035–36 has been estimated as 1,37,500 ckm and 8,27,600 MVA respectively at an estimated cost of Rs. 7,93,300 crores.

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Annexure-A

Substation wise details of margin available during non-solar hours at existing/ under implementation RE pooling stations

Sl. No.	Substation	Region	Pooling Station Status (Existing/ Under implementation/ Under bidding)	Indicative Margins available during non-solar hours (MW)	Application Granted/Agreed/Received for Non-Solar Hours Access (MW) (including ROFR and other than ROFR)	Net Available Margins for Non-Solar Hour Access (MW)
1	Bhuj PS	WR	Existing	1222	0	1222
2	Bhuj-II PS (Sec-I)	WR	Existing	720	31.5	688.5
3	Bhuj-II PS (Sec-II)	WR	Under Construction	1220	270	950
4	Dhule PS (Sec-I)	WR	Under Construction	535	100	435
5	Dhule PS (Sec-II)	WR	Under Construction	720	600	120
6	Indore (PG)	WR	Existing	550.6	0	550.6
7	Ishanagar PS	WR	Under Construction	630	0	630
8	Jam Khambhaliya PS	WR	Existing	312.49	79	233.49
9	Jamnagar S/s	WR	Under Construction	419	70	349
10	KPS-1 (Sec-I)	WR	Existing	4305	1220	3085
11	KPS-1 (Sec-II)	WR	Existing	4643.6	4132	511.6
12	KPS-2 (Sec-I)	WR	Existing	5159	0	5159

13	KPS-2 (Sec-II)	WR	Existing	4091	1455	2636
14	KPS-3 (Sec-I)	WR	Existing	4044	3853	191
15	KPS-3 (Sec-II)	WR	Under Construction	4209	3865	344
16	Kallam PS	WR	Existing	578.1	3.4	574.7
17	Kalyanpur PS (Sec-I)	WR	Under Bidding	694	130	564
18	Kalyanpur PS (Sec-II)	WR	Under Bidding	900	0	900
19	Khandwa (PG)	WR	Existing	300	0	300
20	Lakadia-II (Sec-I)	WR	Under Bidding	3369.1	160	3209.1
21	Lakadia-II (Sec-II)	WR	Under Bidding	1760.4	358.2	1402.2
22	Lakadiya PS	WR	Existing	1951	980.8	970.2
23	Mandsaur PS (Sec-II)	WR	Under Construction	758	1201	-443
24	Mandsaur PS (Sec-III)	WR	Under Construction	50	0	50
25	Morena PS	WR	Under Construction	1420	700	720
26	Neemuch PS	WR	Existing	2000	300	1700
27	Pachora PS (Sec-I)	WR	Existing	1235	80	1155
28	Pachora PS (Sec-II)	WR	Under Construction	1126	650	476
29	Pachora PS (Sec-III)	WR	Under Construction	637	0	637
30	Parli (New)	WR	Existing	200	0	200
31	Radhanesda PS	WR	Existing	1250	0	1250

32	Raghanesda PS	WR	Under Construction	3406	2850	556
33	Rajgarh SS(Sec-II)	WR	Under Construction	356.4	0	356.4
34	Solapur PG	WR	Existing	1751	457.5	1293.5
35	Solapur PS (400 Sec-I)	WR	Under Construction	401	140.7	260.3
36	Anantapur PS	SR	Existing	562	450	112
37	Anantapur-II PS	SR	Under Construction	4764.7	2708.5	2056.2
38	Bellary PS	SR	Under Construction	3542	600	2942
39	Bidar PS	SR	Under Construction	1736.9	1682	54.9
40	Bijapur PS	SR	Under Construction	37.6	20	17.6
41	Davangere PS	SR	Under Construction	1787	1000	787
42	Gadag PS	SR	Existing	974.5	185	789.5
43	Gadag-II PS	SR	Under Construction	81	633.4	-552.4
44	Hiriyur	SR	Existing	99.7	0	99.7
45	Karur PS	SR	Existing	323.9	0	323.9
46	Koppal PS	SR	Existing	1276.29	472.7	803.59
47	Koppal-II PS	SR	Under Construction	1740.5	449	1291.5
48	Kurnool (new)	SR	Existing	300	0	300
49	Kurnool-III PS	SR	Existing	2942.5	3700	-757.5

50	Kurnool-IV PS	SR	Under Construction	5521	2890.6	2630.4
51	NP Kunta PS	SR	Existing	2000	200	1800
52	Pavagada PS	SR	Existing	3925	1021.5	2903.5
53	Pugalur	SR	Existing	0	0	0
54	Tumkur-II PS	SR	Under Construction	4100	2099	2001
55	Tuticorin-II PS	SR	Existing	1001.9	256	745.9
56	Krishnagiri PS	SR	Under Bidding	4500	1530	2970
57	Anantapur-III PS	SR	Under Bidding	3000	920	2080
58	Bhadla	NR	Existing	3580	6705	-3125
59	Bhadla-II	NR	Existing	5945	5895	50
60	Bhadla-III	NR	Under Construction	6250	5754	496
61	Fatehgrah	NR	Existing	1690	1550	140
62	Fatehgarh-II	NR	Existing	5105	3504	1601
63	Fatehgarh-III (Sec-I)	NR	Existing	1480	623	857
64	Fatehgarh-III (Sec-II)	NR	Existing	5350	4012.7	1337.3
65	Fatehgarh-IV (Sec-I)	NR	Existing	1507	1221.4	285.6
66	Fatehgarh-IV (Sec-II)	NR	Under Construction	4671	2418	2253
67	Barmer-I	NR	Under Construction	3700	6635	-2935
68	Barmer-II	NR	Under Bidding	4805	4205	600
69	Bikaner	NR	Existing	4175	1250	2925
70	Bikaner-II	NR	Existing	5460	2198	3262
71	Bikaner-III	NR	Under Construction	4667	2457.5	2209.5

72	Biknaer-IV	NR	Under Construction	6000	4025	1975
73	Ramgarh	NR	Existing	3984	3934	50
74	Sirohi	NR	Under Construction	2100	1400	700
75	Merta-II	NR	Under Construction	2050	1930	120
76	Orai	NR	Existing	1200	800	400
77	Bokajan	NER	Under Construction	1000	0	1000
	Total			**175859.18**	**105022.4**	**70836.78**

Annexure-B

Details of the ISTS network for RE evacuation in Northern Region

a) **Under bidding :**

Sl. No.	Name of Scheme	ckm	MVA
1	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-5: 6 GW) [Barmer Complex] Barmer-II: 6 GW (Solar) (LCC Configuration)	1900	9000
2	Augmentation at Bhadla-III, Ramgarh PS and Kanpur (PG)	0	8000
3	Transmission system for evacuation of power from Luhri Stage-I HEP	80	630
4	Transmission system for evacuation of power from Shongtong Karcham HEP (450 MW) and Tidong HEP (150 MW)	460	630
5	Transmission system for evacuation of power from Pumped Storage Projects in Sonbhadra District, Uttar Pradesh	650	6000

b) **Under implementation :**

Sl. No.	Name of Scheme	ckm	MVA
1	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part G	635	0
2	Additional Transmission system for evacuation of power from Bhadla-III PS as part of Rajasthan REZ Phase-III scheme (20 GW)	0	4000
3	Augmentation of Transformation capacity at 400/220kV Bhiwadi(PG) S/s in Rajasthan by 400/220kV, 1x1500 MVA ICT (4th)	0	500
4	Augmentation of Transformation capacity at 400/220kV Bikaner-II PS in Rajasthan by 400/220kV, 1x1500 MVA ICT (9th)	0	500
5	Augmentation of Transformation capacity at 765/400/220kV Bikaner PS in Rajasthan by 400/220kV, 1x1500 MVA ICT (4th)	0	500
6	Augmentation of Transformation Capacity at 400/220 kV Fatehgarh-III PS(Section-1) by 400/220 kV, 1x500 MVA ICT (5th)	0	500

7	Augmentation of transformation capacity at 400/220kV Bhadla-II PS (section-1) in Rajasthan by 1x500 MVA, 400/220kV ICT (6th) to cater to the N-1 contingency requirements	0	500
8	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part E2	0	5500
9	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part J	0	3500
10	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part D	618	0
11	Transmission system for evacuation of RE Power from renewal energy Park in Leh (5GW Leh - Kaithal Transmission corridor)*	1268	5130
12	Transmission system for evacuation of power from Rajasthan REZ PhIV (Part-1) (Bikaner Complex) Part-E	0	500
13	Transmission System for evacuation of power from Rajasthan REZ Ph-IV (Part 3: 6GW) (Bikaner Complex) Part-A	1017.9	12000
14	Transmission System for evacuation of power from Rajasthan REZ Ph-IV (Part 3: 6GW) (Bikaner Complex) Part-B	949	9000
15	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part1) (Bikaner Complex) Part-A	818	11500
16	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part1) (Bikaner Complex) Part-B	482	6000
17	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part1) (Bikaner Complex) Part-C	692	0
18	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part1) (Bikaner Complex) Part-D	666	0

19	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2 : 5.5 GW) (Jaisalmer/Barmer Complex) Part-D	553	0
20	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2 : 5.5 GW) (Jaisalmer/Barmer Complex) Part-A	399.94	8500
21	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2 : 5.5 GW) (Jaisalmer/Barmer Complex) Part-B	858	3000
22	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2 : 5.5 GW) (Jaisalmer/Barmer Complex) Part-E	696	0
23	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2 : 5.5 GW) (Jaisalmer/Barmer Complex) Part-F	527	5500
24	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2 : 5.5 GW) (Jaisalmer/Barmer Complex) Part-H1	737	4600
25	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-4 :3.5 GW): Part A	837	8500
26	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-4: 3.5 GW): Part B	1323	5500
27	Transmission system for evacuation of power from Rajasthan REZ Ph-V (Part-1: 4 GW) [Sirohi/Nagaur] Complex	1156	2000
28	Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part I	2012	7500
29	Transmission system for evacuation of power from REZ in Rajasthan (20 GW)under Phase-III Part D Phase II	36	0
30	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part H	606.6	0

31	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part A3	446	0
32	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part B1	650	4500
33	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part C1	372	4000
34	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase III Part F	837	3000
35	Augmentation at Fatehgarh-II PS, Fatehgarh-IV PS (Section II) and Barmer-I PS	0	4000
36	Augmentation of 2x500 MVA (7th & 8th), 400/220 kV ICTs along with 220 kV Sectionalizer bay (1 set), 220 kV BC (1 no.) bay and 220 kV TBC (1 no.) bay at Bikaner-IV PS	0	1000
37	Transmission scheme for evacuation of power from Ratle HEP (850 MW) & Kiru (624 MW) HEP : Part B	1	0
38	Transmission scheme for evacuation of power from Ratle HEP (850 MW) & Kiru HEP (624 MW): Part-A	373.2	0

c) **Under planning :**

Sl. No.	Name of Scheme	Transmission System Planned (Major Elements)	ckm	MVA
1	Transmission scheme for evacuation of power as part of Rajasthan REZ Ph-IV (Part-6: 6GW) (Bikaner Complex) (Bikaner V: 6GW)	• Establishment of 765/400 kV, 6x1500 MVA & 400/220 kV, 8x500 MVA Bikaner-V Pooling Station along with 2x240 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors at a suitable location near Bikaner • STATCOM (2x+300MVAr) along with MSC (4x125 MVAr) & MSR (2x125 MVAr) at Bikaner-V PS • LILO of one double ckt of 400kV Bikaner II PS-Khetri (Twin HTLS) 2xD/c line at Bikaner-V PS • Establishment of 765/400 kV, 2x1500 MVA S/s at suitable location near Pallu (Distt. Hanumangarh) along with 2x240 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors • 765 kV Bikaner-V PS – Pallu 2xD/c line • LILO of both ckts of 765kV Bikaner – Moga D/c line at Pallu S/s along with 240MVAr switchable line reactor for each circuit at Pallu S/s end of 765kV Pallu-Moga D/c line • 400 kV Pallu – Hanumangarh (RVPN) D/c (Quad) line • Establishment of 765/400 kV, 3x1500 MVA S/s at suitable location near Panipat (Distt. Panipat) along with 2x240 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors • 765 kV Pallu-Panipat 2xD/c line along with 240 MVAr switchable line reactor for each circuit at each end • Establishment of 400/220kV, 3x500 MVA S/s at suitable location near Mohali (Distt. Mohali district) along with 2x125 MVAr (420kV) Bus Reactors • LILO of one circuit of 400kV Patiala-Panchkula D/c line at Mohali • 400 kV Panipat S/s – Mohali D/c (Quad Moose) line along with 80 MVAr (420kV) switchable line reactor for each circuit at Mohali end • 400 kV Panipat S/s – Mandola D/c (Quad) line • Establishment of 765 kV S/s at suitable location near Bulandshahr (Distt. Bulandshahr) along with 2x330 MVAr (765kV) Bus Reactors • 765 kV Panipat- Bulandshahr 2xD/c line along with 240 MVAr switchable line reactor for each circuit at Bulandshahr end • LILO of 765kV Aligarh – Gr. Noida line at Bulandshahr S/s • 765 kV Bulandshahr - Noida sec-148 (UPPTCL) D/c line • Establishment of 765/400 kV, 2x1500 MVA Lucknow-II S/s at suitable location near Lucknow	5560	29500

		along with 2x330 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors • 765 kV Bulandshahr – Lucknow-II D/c line along with 330 MVAr switchable line reactor for each circuit at each end • 400 kV Lucknow-II – Gonda D/c (Quad Moose) line • Establishment of 765/400 kV, 2x1500 MVA S/s at suitable location near Asana Village (Chandauli District) along with 2x330 MVAr (765kV) & 2x125 MVAr (420kV) Bus Reactors • 765 kV Lucknow-II-Asana D/c line along with 330 MVAr switchable line reactor for each circuit at each end • LILO of both ckts of 400kV Varanasi – Biharsharif D/c line at Asana S/s along with 80 MVAr switchable line reactor for each circuit at Asana end of 400kV Asana- Biharsharif section • LILO of both ckts of 400kV Balia – Patna D/c line at Asana S/s along with 80 MVAr switchable line reactor for each circuit at Asana end of 400kV Patna-Asana D/c line		
2	Transmission scheme for evacuation of power as part of Rajasthan REZ (Ramgarh Complex) (Ramgarh-II: 6GW) - HVDC		2700	7500
3	Transmission scheme for evacuation of power as part of Rajasthan REZ (Bhadla Complex) (Bhadla-IV: 6GW)		2500	7500
4	Transmission scheme for evacuation of power as part of Rajasthan REZ (Barmer Complex) (Barmer-III 6GW) -HVDC		2500	7500
5	Transmission scheme for evacuation of power as part of Rajasthan REZ (Jalore/Sirohi/Sanchore Complex) (Jalore/Sirohi/Sanchore: 6GW) -HVDC		2500	7500
6	Transmission scheme for evacuation of power as part of Rajasthan REZ (Bhadla Complex) (Bhadla-V: 6GW) -HVDC		2500	7500
7	Transmission scheme for evacuation of power as part of Rajasthan REZ (Barmer Complex) (Barmer-IV: 6GW) -HVDC		2500	7500
8	Transmission scheme for evacuation of power as part of Rajasthan REZ (Ramgarh Complex) (Ramgarh-III: 6GW) - HVDC		2700	7500
9	Transmission scheme for evacuation of power as part of Rajasthan REZ (Merta Complex) (Merta-III/Pali: 6GW) - HVDC		2500	7500
10	Transmission scheme for evacuation of power as part of Rajasthan REZ (Bhadla Complex) (Bhadla-VI: 6GW) -HVDC		2500	7500

11	Transmission scheme for evacuation of power as part of Rajasthan REZ (Bikaner Complex) (Bikaner-VI: 6GW) - HVDC	2500	7500

Annexure-C

Details of the ISTS network for RE integration in Western Region

a) **Under bidding :**

Sl. No.	Name of Scheme	ckm	MVA
1	Transmission system for Integration of Power from RE Projects in Jam Khambhaliya REZ in Gujarat - Phase II (5500MW) and Jamnagar Phase-I (1000 MW)	640	12500
2	Transmission system for Integration of Power from RE Projects in Lakadia REZ in Gujarat-Phase II (7500MW)	908	14000

b) **Under implementation :**

Sl. No.	Name of Scheme	ckm	MVA
1	Transmission scheme for evacuation of power from Dhule 2 GW REZ	131	2000
2	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8 GW): Part A	2465	9000
3	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part A	621	4500
4	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part B	730	4000
5	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part C	682	7000
6	Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part D	644	4500
7	Transmission System for Evacuation of Power from Rajasthan REZ Ph-IV (Part-2 : 5.5 GW) (Jaisalmer/Barmer Complex) Part-C	338	7000
8	Transmission System for Evacuation of Power from RE Projects in Rajgarh 1000MW SEZ in Madhya Pradesh – Phase- II	118	1500
9	Transmission system for evacuation of RE power from Raghanesda area of Gujarat – 3 GW under Phase-I	155	7000
10	Western Region Expansion Scheme XXXIII (WRES-XXXIII): Part C	35	4000

11	Transmission system for Evacuation of Power from RE Projects in Rajgarh (1500 MW) SEZ in Madhya Pradesh-Phase III and Evacuation of Power from RE Projects in Neemuch (1000 MW) SEZ in Madhya Pradesh-Phase II	1360	4000
12	Transmission system for evacuation of power from RE Projects in Morena SEZ in Madhya Pradesh-Phase I (2500 MW)	191	6000
13	Transmission System for Evacuation of Power from RE Projects in Solapur (1500 MW) SEZ in Maharashtra	80	2000

c) **Under planning :**

Sl. No.	Name of Scheme	Transmission System Planned (Major Elements)	ckm	MVA
1	Transmission system for Evacuation of Power from RE Projects in Solapur SEZ in Maharashtra-Phase II (2000MW) and Network Expansion scheme to enable drawal of power from Solapur PS	Installation of 2x500MVA, 400/220kV ICTs (5th & 6th) at Solapur PS 6 Nos. 220kV line bays on 220kV Sec-2 at Solapur PS for 220kV downstream lines of MSETCL Creation of New 400kV Bus Section-2 and 220kV Bus Section-3 with 400kV and 220kV Bus Sectionalizers at Solapur PS along with 3 nos. 220kV line bays on new Bus Section-3 & 1 no. 400kV bay for RE Interconnection 400/220 kV, 3x500 MVA ICT augmentation (8th ,9th & 10th) at Solapur PS on New 400kV Bus Section-2 and 220kV Bus Section-3 Solapur PS (Sec-II) – Jejuri (MSETCL) 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) 400kV line bays at Solapur PS (Sec-2) as well as Jejuri(MSETCL) for Solapur PS (Sec-II) – Jejuri (MSETCL) 400 kV D/c line Jejuri (M) – Pune-III 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) (~20km.)	520	2500

2	Scheme for establishment of KPS4 Substation in Khavda area of Gujarat and Scheme for establishment of KPS5 Substation in Khavda area of Gujarat (KPS4 & KPS5 S/s establishment in Khavda area) and Additional Transmission System for evacuation of 5.5GW RE power from Khavda area (Phase-VI)	Establishment of 765/400 kV, 8x1500MVA, KPS4 (GIS) with 2x330 MVAR 765kV bus reactor and 2x125 MVAR 400kV bus reactor KPS4 – KPS2 765kV D/c line ~20km 2 Nos. 765 kV line bays at KPS2 (GIS) S/s Establishment of 765 kV KPS5 (GIS) with 2x330 MVAR 765kV bus reactor Creation of 400kV level at KPS5 along with establishment of 765/400 kV, 4x1500MVA ICTs and 2x125 MVAR 400kV bus reactor. KPS4 – KPS5 765kV 2xD/c line ~10km ±400 MVAr STATCOM on each 400kV Bus section of KPS5. KPS5 – Lakadia-II 765kV 2xD/c line (220km.) 765kV, 330MVAr Switchable line reactors on each circuit at Lakadia-II end of KPS5 – Lakadia-II 765kV 2xD/c line	960	12000
3	Transmission system for evacuation of 6GW RE power from Khavda area (Phase VII) 6GW	Establishment of 6000 MW (2 nos. 3000MW Bipole configuration), ± 800 kV Lakadia-II (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard Establishment of 6000 MW (2 nos. 3000MW Bipole configuration), ± 800 kV Alephata (HVDC) [LCC] terminal station (4x1500 MW) along with associated interconnections with 400 kV HVAC Switchyard ±800 kV HVDC Bipole line (Hexa lapwing) between Lakadia-II (HVDC) and Alephata (HVDC) Installation of additional	1450	4500

		3x1500 MVA, 765/400 kV ICTs at Alephata S/s		
4	Transmission system for Evacuation of Power from RE Projects in Morena SEZ in Madhya Pradesh-Phase II (3500MW)	Augmentation of 3x1500 MVA, 765/400 kV & 8x500MVA,400/220kV Morena PS (South of Sabalgarh) with 2x330 MVAr 765 kV bus reactor and 2x125 MVAr 420 kV bus reactor Morena PS (South of Sabalgarh)(Sec-II) – Karera (near Datia)(Sec-II) 765 kV 2nd D/c line LILO of Gwalior-Orai (NR) 765kV S/c line at Karera (near Datia) (Sec-II) S/s 765 kV Sectionaliser: 1 set at Karera (Near Datia)	260	8500
5	Transmission system for Evacuation of Power from RE Projects in Sagar area in Madhya Pradesh- (1500MW)	Establishment of 4x500 MVA, 400/220kV Sagar PS with 2x125 MVAr 420 kV bus reactor. Sagar PS– Damoh 400 kV D/c line (Quad Moose)	160	2000
6	Common Transmission System Augmentation for evacuation of power from 2x800MW Gadarwara-II TPS and additional 1500MW RE power at Mandsaur S/s	Augmentation of Transformation capacity at Mandsaur PS by installation of 2x1500MVA, 765/400 kV ICTs (5^{th}& 6^{th}), to be terminated at 765kV Bus Section-II and 400kV Bus Section-II. Augmentation of Transformation capacity at Mandsaur PS by installation of 3x500MVA, 400/220kV ICTs (8th,9th & 10th), to be terminated on 400 kV Bus Section-II and 220kV Bus Section-III Installation of ±400MVAr STATCOM at Mandsaur S/s Establishment of 765 kV Gadarwara switching station along with 2x330 MVAr,	510	4500

		765kV bus reactors Kurawar – Gadarwara switching station 765 kV D/c line (~230Km) with LILO of one circuit at Bhopal (BDTCL) S/s, along with associated line reactors:		
7	Transmission system for Evacuation of Power from RE Projects in Dhule, Maharashtra-Phase II (2000MW)	Augmentation of Transformation capacity at Dhule PS by installation of 5x500MVA, 400/220 kV ICTs Dhule PS – Dhule (BDTCL) 400kV 2nd D/c line (quad/HTLS)~60km Dhule PS – Balsane 400kV D/c (quad/HTLS) lines ~45km	210	2500
8	Network Expansion scheme in Western Region to cater to pumped storage potential near Satara (up to 4500MW)	Part-A Phase-I (Cumulative 1800MW) Creation of 765kV level at Kolhapur (PG) GIS with Installation of 2x1500MVA, 765/400kV ICTs at Kolhapur (PG) S/s along with upgradation of Kolhapur (PG) S/s to 765kV level Bay Works required for upgradation of Narendra (New) – Kolhapur (PG) 765kV D/c line (presently charged at 400kV) to 765kV level. 765kV, 330MVAr Switchable line reactors on each circuit at Kolhapur (PG) end of Narendra (New) – Kolhapur (PG) 765kV D/c line Establishment of 765/400 kV, 3x1500MVA Satara S/s with 2x330 MVAR 765kV bus reactor and 1x125 MVAR 400kV bus reactor. (3x1500MVA on Bus Section-I) LILO of Pune-III – Karjat-II(M) 765kV D/c line at Satara.~65km	565	9000

		Phase-II (Cumulative 4500MW) Creation of 400kV Bus Section-II along with Augmentation of Transformation Capacity at Satara S/s by 765/400 kV, 1x1500MVA along with 1x330 MVAR 765kV bus reactor and 1x125 MVAR 400kV bus reactor (1x1500MVA on Bus Section-II) Kolhapur (PG) – Satara 765kV D/c line~150km 765kV, 240MVAr Switchable line reactors on each circuit at Satara end of Kolhapur (PG) – Satara 765kV D/c line Part- B Reorientation of existing Narendra (New) – Kolhapur (PG) 765kV D/c line (presently charged at 400kV) and its termination into 765kV bays		

Annexure-D

Details of the ISTS network in Southern Region

a) **Under bidding:**

Sl. No.	Name of Scheme	ckm	MVA
1	Transmission System for Kurnool-IV REZ - Phase-II (3 GW)	260	14000
2	Transmission system strengthening at Tumkur-II for integration of additional RE potential (2.7 GW)	200	3000
3	Transmission System for integration of Krishnagiri REZ Phase-I	1310	13000
4	Transmission System for integration of Ananthpuram-III PS REZ Phase-I (3GW)	280	8000

b) **Under implementation:**

Sl. No.	Name of Scheme	ckm	MVA
1	Augmentation of transformation capacity by 2x500MVA (7th & 8th), 400/220kV ICTs at Tumkur (Pavagada) 400/220kV PS	0	1000
2	Augmentation of 1x1500 MVA (3rd), 765/400kV transformation capacity at Kurnool New S/s.	0	1500
3	Augmentation of 2x500 MVA, 400/230 kV transformation capacity (3rd & 4th ICTs) at Karur PS	0	1000
4	Augmentation of transformation capacity at 400/220kV NP Kunta PS in Andhra Pradesh by 1x500 MVA, 400/220kV ICT (5th) and implementation of common facility works for providing connectivity to RE generation projects	0	500
5	Augmentation of transformation capacity at 400/230kV Tuticorin-II GIS PS in Tamil Nadu by 500 MVA, 400/230kV ICT (6th) to meet N-1 reliability of RE Pooling Station	0	500
6	Augmentation of transformation capacity by 3x500 MVA, 400/220 kV ICTs (6th - 8th) and 1x1500 MVA,765/400 kV ICT (4th) at Bidar PS	0	3000
7	Augmentation of transformation capacity by 1x1500 MVA, 765/400 kV ICT (3rd) at Maheshwaram (PG) substation in Telangana	0	1500
8	Evacuation of power from RE sources in Kurnool Wind Energy Zone (3000 MW)/Solar Energy Zone (AP) (1500MW) - Part-A & Part B	507	1000
9	ISTS Network Expansion scheme in Western Region & Southern Region for export of surplus power during high RE scenario in Southern Region	636	6000

10	System strengthening at Koppal-II and Gadag-II for integration of RE generation projects	90	10500
11	Transmission Scheme for integration of Renewable Energy Zone (Phase-II) in Koppal-II (Phase-A & B) and Gadag-II (Phase- A) in Karnataka	607	9000
12	Transmission scheme for integration of Tumkur-II REZ in Karnataka	53	2000
13	Transmission scheme for Solar Energy Zone in Ananthpuram (Ananthapur) (2500 MW) and Kumool (1000 Mw), Andhra Pradesh	371	3000
14	Transmission Scheme for Solar Energy Zone in Bidar (2500 MW), Karnataka.	480	7000
15	Transmission Scheme for Solar Energy Zone in Gadag (1500 MW), Karnataka: Part A Phase-II	0	1500
16	Transmission System for Integration of Kurnool-IV REZ - Phase-I (for 4.5 GW)	692	9500
17	Transmission System for Offshore wind farm in Tamil Nadu {500 MW VGF}	280	1630
18	Transmission System for Integration of Anantapur-II REZ - Phase-I (for 4.5 GW)	801	9000
19	Transmission system strengthening at Kurnool-III PS for integration of additional RE generation projects	520	6000
20	Transmission Scheme for integration of Bijapur REZ in Karnataka	276	2500
21	Transmission Scheme for integration of Davanagere / Chitradurga REZ and Bellary REZ in Karnataka	360	14500
22	Augmentation of 1x500 MVA, 400/230 kV ICT (7th) at Tuticorin-II GIS Sub Station	0	500
23	Transmission System for Integration of Ananthapuram-II REZ - Phase-II (3 GW)	471	11000
24	Transmission system strengthening at Davanagere for integration of RE generation	0	3500
25	Augmentation of transformation capacity by 2x500 MVA (9th & 10th),400/220 kV ICTs at Tumkur (Pavagada) 400/220 kV Pooling Station in Karnataka and Implementation of 1 Nos. of 220 kV line bay at Tumkur (Pavagada) 400/220 kV PS for providing Connectivity to RE generation project	0	1000
26	Transmission system strengthening for integration of additional RE potential at Davanagere (0.25 GW) and Bellary (2.75 GW)	143	6000
27	Transmission system for integration of Kurnool-V REZ Phase-I- Upgradation works at Nagarjunasagar and Raichur	0	0

28	Augmentation of transformation capacity at 400/220kV Gadag PS in Karnataka by 1x500 MVA, 400/220kV ICT (6th)	0	500

c) **Under planning:**

Sl. No.	Name of Scheme	Transmission System Planned (Major Elements)	ckm	MVA
1	Augmentation of transformation capacity by 1x500 MVA, 400/220 kV ICT (9th) at Davanagere PS	Augmentation of transformation capacity by 1x500 MVA, 400/220 kV ICT (9th) at Davanagere PS	0	500
2	Transmission System strengthening at Karur PS for integration of RE generation capacity	i) Augmentation of 2x500 MVA, 400/230kV ICTs (5th & 6th) at Karur PS ii) Karur PS – Pugalur (HVDC) 400kV (Quad) 2nd D/c line (~ 40 km) iii) Karur PS – Pugalur (existing) 400 kV (Quad) 2nd D/c line (~ 20 km)	120	1000
3	Transmission System for integration of Krishnagiri REZ - Phase-II	i) Augmentation of 2x1500 MVA, 765/400 kV and 9x500 MVA, 400/220kV ICTs at Krishnagiri PS ii) Krishnagiri – Nellore 765 kV D/c line (240 km) 1x240 MVAr SLR (convertible) at both ends on both circuits iii) Khammam-II – Sagar 765 kV D/c line (150 km) 1x240 MVAr SLR (convertible) at Khammam-II end on both circuits	780	7500
4	Transmission System for Integration of Ananthapuram-III REZ Phase-II	i) Augmentation of 3x1500 MVA, 765/400 kV and 7x500 MVA, 400/220kV ICTs at Ananthapuram-III PS ii) Establishment of 2x1500 MVA, 765/400 kV GIS substation near Malur with 1x240 MVAr (765 kV) bus reactor with space provision for establishment of 220 kV switchyard at Malur iii) Ananthapuram-III – Malur 765kV D/c line with 240 MVAr SLR (convertible) at both ends on both circuits (250 km) iv) ± 300 MVAr STATCOM at Malur v) Malur – Somanahalli 400 kV (Quad) D/c line (80 km) vi) Malur – Hosur 400 kV (Quad) D/c line (60 km) vii) Malur – Dommasandra 400 kV (quad) S/c line (50 km)	830	11000

5	Transmission System for Integration of Kadapa-II REZ	i) Establishment of 4x1500 MVA, 765/400 kV and 5x500 MVA, 400/220kV Kadapa-II Pooling Station along with 2x330 MVAr bus reactor ii) ± 300 MVAr STATCOM at Kadapa-II iii) Kadapa-II – Thiruvelam 765kV D/c line (250 km) 1x240 MVAr SLR (convertible) at both ends on both circuits iv) Ananthapuram-III – Kadapa-II 765kV D/c line (220 km) with 1x330 MVAr SLR (convertible) at Ananthapuram-III end on both circuits v) Augmentation of 2x1500 MVA, 765/400 kV and 5x500 MVA, 400/220kV Kadapa-II Pooling Station vi) Upgradation of Nagapattinam GIS to 765 kV level with 2x1500 MVA, 765/400kV ICTs vii) Thiruvelam – Nagapattinam 765kV D/c line (250 km) 1x240 MVAr SLR (convertible) at both ends on both circuits	1440	17000

Annexure-E

Substation wise details of transmission margins available at 220 kV and 400 kV level

Sl. No.	Substation	Region	Indicative Margins available at 220kV (MW)	Indicative Margins available at 400kV (MW)	Total Margins Available (MW)
1	Indore 765/400/220kV	WR	150.6	100	250.6
2	Rajgarh 400/220kV	WR	356	0	356
3	Palakkad (400/220kV)	SR	300	0	300
4	Nagapattinam PS 765/400kV	SR	0	1000	1000
5	Malekottaiyur(Kalivendapattu) 400/230kV	SR	500	0	500
6	Kanpur(New)	NR	0	500	500
7	Lucknow (new)	NR	0	500	500
8	Balia	NR	0	500	500
9	Bareilly(New)	NR	0	500	500
10	Jeypore	ER	1500	0	1500
11	Keonjhar	ER	800	0	800
12	Rengali	ER	500	0	500
13	Baripada	ER	300	0	300
14	Sundargarh A (Jharsuguda)	ER	0	2500	2500
15	Sundargarh B (Jharsuguda)	ER	0	2500	2500
16	Paradeep	ER	0	3000	3000
17	Gopalpur	ER	0	3000	3000
18	Chaibasa	ER	500	0	500
19	Daltonganj	ER	500	0	500
20	Ranchi	ER	800	0	800
21	Dhanbad	ER	500	0	500
22	Banka	ER	1300	0	1300
23	Lakhisarai	ER	300	0	300
24	Motihari	ER	500	0	500
25	Muzaffarpur	ER	800	0	800
26	Saharsa	ER	700	0	700
27	Sitamarhi	ER	1000	0	1000
28	Gaya	ER	3000	0	3000
29	Kishanganj	ER	500	0	500
30	New Purnea	ER	1000	0	1000

31	Patna	ER	100	0	100
32	Purnea	ER	900	0	900
33	Sasaram	ER	600	0	600
	Total		**17406.6**	**14100**	**31506.6**

Note: Implementation of 400kV/220kV line bays may be required for intergration of this capacity.

Annexure-F

Details of additional hydro electric projects by 2035-36

SI.No.	Name of Hydro Project	Capacity (MW)	Broad transmission system
	Andhra Pradesh		
1	Lower Sileru Extension /APGENCO)	230	Transmission System under Intra State
2	Polavaram / Polavaram Project Authority	960	Transmission System under Intra State
	Arunachal Pradesh		
3	SUBANSIRI LOWER /NHPC	1500	Lower Subansiri - Biswanath Chariali 400 kV 2xD/c line
4	Heo (NEEPCO)	240	LILO of one circuit of Tato-I - Kaying PS 220 kV D/c Line at Heo switchyard (Ampacity: 1840 A or more per ckt)
5	Tato-I (NEEPCO)	186	Tato-I HEP – Naying 220 kV D/c line
6	Dibang/NHPC	2880	Dibang HEP – Gogamukh 400 kV 2xD/c line
	Assam		
7	Lower Kopili /APGCL	120	Transmission System under Intra State
	Himachal Pradesh		
8	Tidong-I /M/s Statkraft India Pvt. Ltd.	150	1. Establishment of 2x315 MVA (7x105 MVA 1-ph units) 220/400 kV GIS Pooling Station at Jhangi. 2. 400 kV Jhangi PS – Wangtoo (Quad) D/c line. 3. 420 kV Bus reactor -1 No. (4x 41.66 MVA 1-ph units including one spare unit) **Under the scope of generation developer:** Tidong HEP - Jhangi PS 220 kV D/c line
9	Dhaulasidh /SJVN	66	Transmission System under Intra State
10	Chanju-III /HPPCL	48	Transmission System under Intra State

11	Shongtong Karcham/HPPCL	450	1. LILO of one circuit of Jhangi PS - Wangtoo (HPPTCL) 400 kV D/c (Quad) line at generation switchyard of Shongtong HEP. 2. Wangtoo (HPPTCL) - Panchkula (PG) 400 kV D/c (Twin HTLS) Line along with 80 MVAr switchable line reactor at Panchkula end at each circuit.
12	Sunni Dam /SJVNL	382	**Common System:** 1. Establishment of 7x105 MVA, 400/220 kV Nange GIS Pooling Station. 2. Nange (GIS) Pooling Station – Koldam 400 kV D/c line. 3. Bypassing one ckt of Koldam – Ropar/ Ludhiana 400 kV D/c line at Koldam and connecting it with one of the circuit of Nange- Koldam 400 kV D/c line, thus forming Nange- Ropar/ Ludhiana 400 kV S/c line. **Under the scope of generation developer:** Sunni Dam – Nange Pooling Station 220 kV D/c line.
13	Luhri-I /SJVN	210	**Common System:** 1. Establishment of 7x105 MVA, 400/220 kV Nange GIS Pooling Station. 2. Nange (GIS) Pooling Station – Koldam 400 kV D/c line. 3. Bypassing one ckt of Koldam – Ropar/ Ludhiana 400 kV D/c line at Koldam and connecting it with one of the circuit of Nange- Koldam 400 kV D/c line, thus forming Nange- Ropar/ Ludhiana 400 kV S/c line. **Under the scope of generation developer:** LuhriI-I – Nange Pooling Station 220 kV D/c line.
	Jammu & Kashmir		

14	Pakal Dul /CVPPL	1000	1. Establishment of 2x200 MVA, 400/132 kV Kishtwar Pooling Station by LILO of one circuit of Kishenpur – Dulhasti 400 kV D/c line 2. Stringing of 2nd circuit of Kishenpur – Dulhasti 400 kV D/c (Quad) line from Kishtwar to Kishenpur. **Under the scope of generation developer:** Implementation of Kiru –Kwar –Pakal Dul - Kishtwar 400 kV D/C line.
15	Kiru /CVPPL	624	
16	Parnai/JKSPDC	37.5	Transmission System under Intra State
17	Kwar/CVPPL	540	1. Establishment of 2x200 MVA, 400/132 kV Kishtwar Pooling Station by LILO of one circuit of Kishenpur – Dulhasti 400 kV D/c line 2. Stringing of 2nd circuit of Kishenpur – Dulhasti 400 kV D/c (Quad) line from Kishtwar to Kishenpur. **Under the scope of generation developer:** Implementation of Kiru –Kwar –Pakal Dul - Kishtwar 400 kV D/C line.
18	Ratle / NHPC	850	**Common System:** 1. LILO of 400 kV Kishenpur- Dulhasti line (Twin) at Kishtwar S/s 400 kV Kishenpur-Samba D/c line (Quad) 2. 400 kV Kishenpur-Samba D/c line (Quad) 3. Bypassing of one ckt of 400kV Kishtwar – Kishenpur 400kV D/c line (Quad) at Kishenpur and connecting it with one of the circuit of Kishenpur-Samba 400kV D/c line(Quad), thus forming 400kV Kishtwar - Samba (Quad) direct line (one ckt) 4. Bypassing both ckts of 400kV Kishenpur – Samba D/c line (Twin) & 400 kV Samba – Jalandhar D/c line (Twin) at Samba and connecting them together to form 400kV Kishenpur–Jalandhar D/c direct line (Twin) 5. 400 kV Samba- Jalandhar D/c line(Quad) 6. Bypassing 400kV Jalandhar – Nakodar line (Quad) at Jalandhar and connecting

			it with one of the circuit of Samba-Jalandhar 400kV D/c line(Quad Moose), thus forming 400kV Samba –Nakodar line **Under the scope of generation developer:** Ratle HEP - Kishtwar PS 400 kV D/c line
	Kerala		
19	Mankulam/ KSEB Ltd.	40	Transmission System under Intra State
	Punjab		
20	Shahpurkandi /PSPCL	206	Transmission System under Intra State
	Sikkim		
21	Rangit-IV/NHPC	120	Rangit-IV- New Melli 220 kV D/c line
22	Teesta- VI /NHPC	500	Teesta VI - Rangpo 220 kV (Twin Moose) D/c line
	Uttarakhand		
23	Vishnugad Pipalkoti /THDC	444	1. Establishment of 400 kV Pipalkoti switching station. 2. Pipalkoti HEP– 400 kV Pipalkoti switching station 400 kV D/c (Twin Moose) line. 3. Pipalkoti 400 kV S/s- Srinagar 400 kV D/c (Quad Moose) line. 4. Srinagar- Kashipur 400 kV D/c (Quad) line
24	Tapovan Vishnugad /NTPC	520	1. Establishment of 400 kV Pipalkoti switching station. 2. Pipalkoti HEP– 400 kV Pipalkoti switching station 400 kV D/c (Twin Moose) line. 3. Pipalkoti 400 kV S/s- Srinagar 400 kV D/c (Quad Moose) line. 4. Srinagar- Kashipur 400 kV D/c (Quad) line
25	Lakhwar Multipurpose Project /UJVNL	300	Transmission System under Intra State
	West Bengal		
26	Rammam - III / NTPC Ltd.	120	Transmission System under Intra State

Annexure-G

Details of additional nuclear capacity by 2035-36

SI.No.	Name of Nuclear Project	Capacity (MW)	Broad transmission system
	Haryana		
1	Gorakhpur HAVP (GHAVP)	2800	(i) Gorakhpur (NPCIL) - Patran 400 kV D/c line (ii) Gorakhpur (NPCIL)- Narwana (HVPNL) / Fatehabad (proposed) 400 kV D/c line
	Karnataka		
2	Kaiga Nuclear Power Plant	1400	• Re-conductoring of Kaiga – Narendra 400 D/c line with high capacity conductors • Re-conductoring of Kaiga – Guttur (Davangere) 400 kV D/c line with high capacity conductors
	Madhya Pradesh		
3	Chutkha (CHAMPP)	1400	Dedicated line to Jabalpur Pool
	Rajasthan		
4	Rajasthan Atomic Power Station (RAPS)	700	
5	Mahi Banswara (MBAPP)	2800	(i) Mahi Banswara- Mandsaur (765 kV) 400 kV D/c line (ii) Mahi Banswara- Nagda 400 kV D/c line
	Tamil Nadu		
6	Kudankulam Nuclear Power Plant	4000	• Interconnection of KNPP U-3&4 and KNPP U-5&6 switchyards with 400 kV quad D/c line • Shifting of KNPP U-3&4 – Tuticorin-II GIS 400 kV (quad) D/c line to KNPP U-5&6 to form KNPP U-5&6 – Tuticorin-II GIS 400 kV (quad) D/c line and with provision of SLR at terminating bays of KNPP-5&6 • KNPP-5&6 – Virudhanagar (TN) 400 kV (quad) D/c line with 80 MVAR SLR in each circuit at KNPP U-5&6 end • Upgradation of Tuticorin PS to its rated voltage of 765 kV level along with 3x1500 MVA,

			765/400 kV ICTs • Upgradation of Dharmapuri (Salem New) PS to its rated voltage of 765 kV level along with 3x1500 MVA, 765/400 kV ICTs • Upgradation of Tuticorin PS-Salem 765 kV D/c line to its rated voltage (presently charged at 400 kV) [upgradation work of Tuticorin PS and Salem S/S is considered with the transmission system of Green Hydrogen load at Tuticorin]
7	Kalpakkam PFBR	500	

Annexure-H

Tentative identified 1150 kV Transmission System

The details of tentative identified system is as follows:

- **Phase-1: Required by 2030-31**

(i) Upgradation of Aurangabad – Wardha Corridor at its rated voltage along with 1150/400 kV & 765/400 kV substation at Aurangabad (New) & 1150/400 kV substation at Wardha

(ii) Aurangabad (New)-Parli (New) 765 kV D/c line & Aurangabad (New)- Nashik 765kV D/c line (to ensure N-1 compliance under outage of Aurangabad – Wardha 1150 kV S/c line)

(iii) Wardha – Rajnandgaon – Kotra-II – Bolangir – Begunia 1150kV D/c line along with new substations at Rajnandgaon (1150/765 kV), Kotra-II (1150/400kV), Bolangir (1150/400 kV) & Begunia (1150/765 kV)

(iv) ±800 kV, 6000MW Ramgarh-II – Aurangabad (New) HVDC link with establishment of 6GW terminal station at both ends

±800 kV, 6000MW Bhadla-IV – Raigarh Kotra-II HVDC link with establishment of 6GW terminal station at both ends

Aurangabad (New) S/s & Solapur-II S/s will be established in an earlier timeframe (**previous to Phase-1 1150 kV proposed system**) to cater to Solapur additional potential as under:

i. Establishment of Aurangabad (New) 765kV switching station
ii. Re termination of Wardha-Aurangabad 765kV D/c line at Aurangabad New
iii. Establishment of 4x1500MVA, 765/400kV S/s at Solapur-II
iv. Solapur-II – Karjat-II (MSETCL)765kV D/c line
v. Solapur-II – Aurangabad (New) 765kV D/c line

- **Phase-2: Required by 2032-33:**

(i) Kotra-II – Chaibasa – Basantpur 1150kV D/c line along with new substations at Chaibasa (1150/400kV) & Basantpur (1150/400kV)

(ii) Rajnandgaon – Jeypore-2 – Kakinada 1150kV D/c line along with new substations at Jeypore-2 (1150/400kV) & Kakinada (1150/765kV)