

## Overview

Transmission system plays an important role in supply of power to the consumers through the vital link between the generating stations and the distribution system. The energy resources like coal, hydro and renewable are unevenly distributed in India. Coal reserves are mainly available in Central and Eastern part of the country, whereas hydro energy resources are primarily available in Himalayan Range in the Northern and North-Eastern parts. Renewable resources like wind and solar potential are also mainly concentrated in states like Tamil Nadu, Andhra Pradesh, Karnataka, Rajasthan, Maharashtra, Gujarat & Ladakh etc. The major load centres of the country are located in central part including Northern, Western and Southern regions. This skewed distribution of resources necessitated development of robust transmission system including establishment of inter-regional corridors for seamless transfer of power from surplus to deficit regions/areas. In this process, it enables access to power generation from anywhere in the country to various consumer spread throughout the country.

The transmission system has expanded over the years for evacuation of power for evacuation of power from generating stations to load centre through Intra State and Inter State Transmission System. The progressive integration of regional grids started in 1992, and on 31st December 2013, our country achieved 'ONE NATION'-'ONE GRID'-'ONE FREQUENCY' with synchronous interconnection of Southern Region Grid with rest of the Indian Grid with the commissioning of 765kV Raichur-Solapur Transmission line. However, there were constraints in market operation due to transmission congestion resulting into market splitting and different market prices in different regions. During 2013-14, about 16% of electricity transacted through power exchanges was constrained due to transmission congestion. Further, strategically important Ladakh region was not interconnected with national electricity grid.

The present Government after assuming power in 2014, has given emphasis to have congestion free transmission network, so that there is no constraint in flow of power from surplus region to deficit region. Accordingly, transmission system in the country has been continuously strengthened with addition of transmission lines and inter-regional capacity as under:

	<b>Addition in Transmission line (ckm)</b>	<b>Addition in Transformation capacity (MVA)</b>
FY 2014-15	22,101	65,554
FY 2015-16	28,114	62,849
FY 2016-17	26,300	81,816
FY 2017-18	23,119	86,193

	<b>Addition in Transmission line (ckm)</b>	<b>Addition in Transformation capacity (MVA)</b>
FY 2018-19	22,437	72,705
FY 2019-20	11,664	68,230
FY 2020-21	16,750	57,575
FY 2021-22	14,895	78,982
FY 2022-23	14,625	75,902
FY 2023-24 (till Apr '23)	476	4,706
<b>Total</b>	<b>180,481</b>	<b>654,512</b>

With the above transmission capacity addition, the country has become one of the largest synchronous interconnected electricity grids in the world with 4,71,817ckm of transmission line and 11,85,058 MVA of transformation capacity (as on Apr'23). Besides, our inter-regional capacity increased by whopping 212% to 1,12,250 MW since 2014.

The above transmission capacity addition has benefitted in development of power sector in the country. Some of the major ones are as under:-

- Transmission Congestion, experienced earlier in 2014, along with market splitting has become a rarity now, resulting into discovery of single price across the power market. Volume of electricity that can not be cleared in Power Exchanges as percentage of Unconstrained Clear Volume has reduced to only 0.06% in 2020-21 as compared to 16% in 2013-14.
- High Altitude border areas of Ladakh got interconnected with national electricity grid in January 2019 with the commissioning of 220 kV Srinagar- Leh line. This helped the people of Ladakh to get access to 24x7 quality power from the national Grid.
- Transmission and Distribution infrastructure of our North Eastern States including Sikkim are strengthened with implementation of two Central Sector Schemes namely, North Eastern Regional Power System Improvement Project (NERPSIP) and Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh and Sikkim. Implementation of these Schemes would improve the reliability of State Electricity Grids of North Eastern Region and enable the end-consumers to draw 24x7 power from the Grid.

## **Creation of National Grid**

Developments in power sector emphasize the need for accelerated implementation of National Power Grid on priority to enable scheduled/ unscheduled exchange of power as well as for providing open access to encourage competition in power market.

In view of above, nationwide synchronous power grid, interconnecting all the five regional grids, has been established with the commissioning of 765kV S/c Raichur – Sholapur line on December 31, 2013. POWERGRID is strengthening its transmission network to establish inter-State and inter-regional links for enhancing the capacity of National Grid in a time bound manner to ensure optimal utilization of uneven distribution of energy resources. “In FY 2021-22, 7,200 MW of Inter- regional (IR) Transmission Capacity was added in the country resulting to cumulative figure of 1,12,250 MW (as on Jan’23).

## **Milestones**

<u>Year</u>	<u>Milestone</u>
2022	<p>765KV, D/C, Dharamjaygarh Pool section B - Raigarh (Tamnar) Pool line (G-TTPL-TBCB) (137CKM) implemented by SGL, commissioned in Jun'22.</p> <p>400KV, D/C, Jeerat (New) - Subhasgram (PM-JTL-TBCB) (214 CKM) implemented by PGCIL, commissioned in Aug'22.</p> <p>All 13 REMs assigned to POWERGRID are now operational.</p>
2021	<ul style="list-style-type: none"> <li>• POWERGRID Infrastructure Investment Trust (PGInvIT): 1stInvIT sponsored by a CPSE and largest public offer by any InvIT/ REIT of ₹ 7,734.99 crore successfully launched by POWERGRID.</li> <li>• Bipole-I (3000 MW) of <math>\pm 800</math> kV Raigarh - Pugalur HVDC transmission line commissioned.</li> <li>• First time in India, Voltage Source Converter (VSC) Technology: Monopole 1 &amp; 2 of <math>\pm 320</math> kV VSC based HVDC terminals and associated <math>\pm 320</math> kV HVDC Pugalur - North Thrissur transmission line.</li> <li>• Raigarh and Pugalur Station HVDC Terminal pole-II commissioned in Mar'21</li> <li>• 765 kV D/C Vindhyachal - Varanasi Inter-regional line commissioned in July'21</li> </ul>
2020	<ul style="list-style-type: none"> <li>• 11 REMCs dedicated to the nation by Hon'ble MoSP (I/c) in Feb'20.</li> <li>• Transmission system associated with GEC-I completed by Mar'20.</li> <li>• Transmission system associated with Solar Ultra Mega Power Projects completed by June'20.</li> <li>• 765 kV D/C Chilkaluripeta – Cudappah line commissioned in Jan'20</li> <li>• 765 kV D/C Vemagiri – Chilakaluripeta line commissioned in Jan'20</li> <li>• Pole 4 of Champa and Kurukshetra HVDC Station commissioned in Mar'20</li> <li>• 800 kV HVDC Raigarh (HVDC stn) - Pugalur (HVDC stn) Bipole Link (3531 Ckm) has been commissioned in Sept'20</li> <li>• Raigarh and Pugalur Station HVDC Terminal (Pole-I) charged in Sept'20</li> </ul>
2019	<ul style="list-style-type: none"> <li>• POWERGRID declared as Maharatna CPSU in Oct'19.</li> <li>• Srinagar-Leh Transmission System (SLTS) commissioned in Jan'19.</li> <li>• Pole 3 of Champa and Kurukshetra HVDC Station commissioned in Nov'19</li> </ul>
2018	<ul style="list-style-type: none"> <li>• 765 Jabalpur-Orai- Aligarh D/C IR System commissioned in Mar'18</li> <li>• Guidelines for Import/Export (Cross Border) of Electricity issued in Dec'18</li> </ul>
2017	<ul style="list-style-type: none"> <li>• 765 kV D/c Nizamabad-Hyderabad commissioned in July'17</li> <li>• + 800 kV Champa-Kurukshetra HVDC Bipole-I, commissioned in Sep.'17</li> <li>• + 800kV Alipurduar-Agra HVDC Bipole, commissioned in Sep'17</li> </ul>
2016	<p>NER directly connected with NR. The longest 6000 MW HVDC line (<math>\pm 800</math> kV) from Bishwanath Chariali in NER to Agra in NR for dispersal of power from NER to NR/WR</p>
2014	<p>The Southern Grid synchronously connected with rest of all-India grid in December, 2014 through S/C 765 kV Raichur- Solapur line</p>

<u>Year</u>	<u>Milestone</u>
2013	The Southern Grid synchronously connected with rest of all-India grid in December, 2014 through S/C 765 kV Raichur- Solapur line
2011	Implementation of Point-Of-Connection (PoC) based method for sharing transmission charges and losses all across the country.
2010	Notification of POSOCO – as a separate entity for operation of RLDCs and NLDC
2007	<ul style="list-style-type: none"> <li>NR also synchronously interconnected with WR through Agra- Gwalior 765 kV S/C line-1 operated at 400 kV level (besides interconnection of NR-ER)</li> <li>765 kV operation of Sipat Substation</li> <li>765 kV operation of 765 kV transmission lines</li> </ul>
2006	Synchronous inter-connection of NR with ER-NER-WR system led to the formation of NEW grid (with commissioning of Muzaffarpur-Gorakhpur 400 kV D/C line, the Northern Region also got interconnected to this system making an upper India system having the NR-WR-ER-NER system
2004	Open access in transmission
2003	<ul style="list-style-type: none"> <li>Electricity Act 2003</li> <li>ABT with real time settlement mechanism implemented in all the five electrical regions creating the basic infrastructure for the operation of an electricity market.</li> <li>Western Region was interconnected to ER-NER system synchronously through 400 kV Rourkela-Raipur D/C line and thus the Central India system consisting of ER-NER-WR came in to operation Bulk inter-regional HVDC transmission system (Talcher– Kolar HVDC link- 2000 MW)</li> </ul>
1999	Transmission planning re-oriented towards all-India System
2000	Introduction of 765 kV transmission line (initially charged at 400 kV)
1990	Introduction of HVDC bi-pole line
1992	The Eastern Region and the North-Eastern Region were synchronously interconnected through the Birpara- Salakati 220 kV D/C transmission line
1980-88	Growth of Regional Grid Systems as Associated Transmission System with Central Sector Generation
1989	Development of HVDC back-to-back System

<u>Year</u>	<u>Milestone</u>
1977	Introduction of 400 kV voltage level
1965-73	Interconnection of State Grids to form Regional Grid Systems
1964	Constitution of Regional Electricity Boards for integrated operation of grid at regional level
1950-60	Growth of State Grids and introduction of 220 kV voltage level
1948	Electricity (Supply) Act- 1948. The Act provided for establishment of the Central Electricity Authority (CEA) and the State Electricity Boards

- Transmission System is playing a catalyst role in energy transition of our country, by extending the grid to renewable rich areas and facilitating the Renewable Energy projects to connect into the grid. Continuing transmission capacity addition has helped in increase of Renewable Energy (excluding hydro) by three times from 35.52 GW in 2014-15 to 104.88 GW in 2021-22.
- This huge transmission capacity has facilitated seamless transfer of power from power surplus regions/areas to power deficit regions/areas and thus optimizing the use of generation resources as well as meeting the demands of end consumers without any transmission constraints. Peak and Energy Deficit have reduced to 0.4% in 2020-21 in comparison to more than 4% in 2013-14.

- **International Cooperation in Electricity**

**SAARC Framework Agreement on Energy Cooperation (Electricity)**

**Guidelines for Import/ Export (Cross Border) of Electricity- 2018**

**Memorandum of Understanding for establishment of the BIMSTEC Grid Interconnection**

**Interconnection with neighbouring countries**

## **National Electricity Plan**

**NEP Volume-II (Transmission)**

**(Size 12.2 MB)**

India is now amongst the fastest developing countries in the world in terms of GDP as well as the electricity consumption. The challenge is to meet the energy needs of high economic growth & electricity consumption of about 1.3 billion people. The development of an efficient, coordinated, economical and robust electricity system is essential for smooth flow of electricity from generating station to load centers (as per Electricity Act, 2003) and for optimum utilization of resources in the country, in order to provide reliable, affordable, un-interruptible (24x7) and Quality Power for All. Transmission system establishes the link between source of generation on one side and distribution system, which is connected to load / ultimate consumer, on the other side.

## NEP Volume-II (Transmission)

(Size 12.2 MB)

Transmission planning is a continuous process of identification of transmission system addition requirements, their timing and need. The transmission requirements could arise from:

- a. new generation additions in the system,
- b. increase in demand
- c. system strengthening that may become necessary to achieve reliability as per the planning criteria under change load-generation scenario.

As per Section 3 of the Electricity Act 2003, Central Electricity Authority (CEA) has been entrusted with the responsibility of preparing the National Electricity Plan (NEP) in accordance with the National Electricity Policy and to notify such plan once in five years. The National Electricity Plan (Volume I) on Generation Planning has been prepared by CEA. National Electricity Plan Volume II (Transmission) is being prepared, incorporating the review of development of transmission system during 2017-22, Planning for the ongoing plan period 2022-27 and Perspective plan for 2027-32 keeping in view various factors, such as inter-regional transmission links, reactive compensation, cross border exchange of power etc. The system studies for NEP Vol II (Transmission) 2022-27 have been performed considering draft National Electricity Plan (Vol I: Generation) and taking relevant inputs from all the stake holders (STUs/Electricity Departments, CTUIL, POSOCO etc). The draft NEP Vol II (Transmission) 2022-27 is under finalization.

## Green Energy Corridor

In year 2012, a study was conducted by Power Grid Corporation of India Limited (PGCIL) wherein it was found that power evacuation and transmission infrastructure in near vicinities of potential sites was less and therefore, dedicated transmission infrastructure for large scale solar and wind power plants was planned. The Green Energy Corridor (GEC) report was submitted by PGCIL in FY 2012-13 and the implementation work started, after due approval process, in 2015. GEC comprises of both Inter State Transmission System (ISTS) and Intra State Transmission System (InSTS) along with the setting up of Renewable Energy Management Centre (REMC) and the control infrastructure like, reactive compensation, storage systems, etc.

### Inter-State Transmission System Green Energy Corridor Phase-I

The ISTS GEC project with total 3200 ckm inter-state transmission lines and 17000 MVA substations was commissioned in March 2020. The project was started in year 2015. The project was implemented by PGCIL. The project cost is Rs. 11369 crore with funding mechanism consisting of 30% equity by PGCIL and 70% loan from KfW (EUR 500 Million) & ADB (approx. Rs. 2800 crore). The project was implemented to evacuate approx. 6 GW of RE power. Further, MoP vide letter no.11/64/2014-PG dated 8-01-2015 has assigned works related Transmission schemes for the solar parks viz. Ananthapur (1500 MW), Pavagada (2000 MW), Rewa (750 MW), Bhadla-III (500 MW), Bhadla-IV (250 MW), Essel (750 MW), Banaskantha (700MW) & Fatehgarh (1000 MW) to be implemented by POWERGRID. The transmission system for all 7 Solar parks assigned to POWERGRID have been commissioned. Transmission system for 1000 MW AREPL solar park at Fatehgarh is also commissioned by M/s FBTL through TBCB under ISTS.

REMC have been installed at the following 11 locations:

1. REMC-SR (Tamil Nadu, Andhra Pradesh, Karnataka SLDCs & SRLDC).
2. REMC-WR (Gujarat, Maharashtra, Madhya Pradesh SLDCs and WRLDC),

REMC-NR (Rajasthan SLDC, NRLDC and NLDC)

### **Intra-State Transmission System Green Energy Corridor Phase-I**

The InSTS GEC scheme with total target of 9700 ckm intra-state transmission lines and 22600 MVA sub-stations was approved by the Cabinet Committee on Economic Affairs (CCEA) in 2015. The InSTS GEC scheme is currently under implementation by the State Transmission Utilities (STUs) of 8 RE rich States, i.e. Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan & Tamil Nadu. The project cost is Rs. 10,141.68 crore with funding mechanism consisting of 40% central grant by MNRE (Rs. 4056.67 crore), 40% loan from KfW Germany (EUR 500 Million) and 20% equity by the STUs.

The projects are being set up for evacuation of approx. 24 GW of RE power in the above 8 States, of which about 16.4 GW RE has been commissioned and connected to the grid through the projects setup under InSTS GEC. As on 31.10.2022, a total of 8651 ckm of transmission lines have been constructed and 19558 MVA of substations have been charged. Out of the 8 States, 3 have completed all the projects, viz. Rajasthan, Madhya Pradesh and Tamil Nadu. The commissioning timeline of projects under the InSTS GEC scheme has been extended up to March 2023 upon requests from the STUs.

### **Intra-State Transmission System Green Energy Corridor Phase-II**

The InSTS GEC-II scheme with total target of 10750 ckm intra-state transmission lines and 27500 MVA sub-stations was approved by the CCEA in January 2022.

The project cost is Rs. 12031.33 crore with central financial assistance from MNRE of Rs. 3970.34 crore (i.e. 33% of project cost). The balance 67% of the project cost is available as loan from KfW/REC/PFC. The transmission schemes would be implemented by the State Transmission Utilities (STUs) of seven states, i.e. Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu and Uttar Pradesh for evacuation of approx. 20 GW of RE power in the seven States. Currently, The STUs are preparing the packages and are in process of issuing tenders for implementing the projects. The scheduled commissioning timeline for the projects under this scheme is March 2026.

The State-wise brief of the projects under the scheme is as under:

<b>State</b>	<b>Estimated project cost (₹ Crore)</b>	<b>Length of transmission lines envisaged (ckm)</b>	<b>Capacity of substations envisaged (MVA)</b>	<b>RE addition envisaged (MW)</b>
Gujarat	3636.73	5138	5880	4000



State	Estimated project cost (₹ Crore)	Length of transmission lines envisaged (ckm)	Capacity of substations envisaged (MVA)	RE addition envisaged (MW)
Himachal Pradesh	489.49	62	761	317
Karnataka	1036.25	938	1225	2639
Kerala	420.32	224	620	452
Rajasthan	880.92	1170	1580	4023
Tamil Nadu	719.76	624	2200	4000
Uttar Pradesh	4847.86	2597	15280	4000
<b>Total</b>	<b>12,031.33</b>	<b>10753</b>	<b>27546</b>	<b>19431</b>

### Gol funded Transmission Schemes

- 220 kV Transmission System from Srinagar to Leh
- NERPSIP & Comprehensive Scheme for Arunachal Pradesh and Sikkim
- Transmission projects under PMDP-15 in Jammu & Kashmir and Ladakh
- Price escalation under PMRP-2004 project on Transmission and Distribution network

### Central and State Transmission Utilities

- Central Transmission Utility (CTU)
- State Transmission Utilities (STUs)
- Private Participation in Transmission Sector

#### **Private Participation in Transmission Sector**

Promotion of competition in the electricity industry in India is one of the key objectives of the Electricity Act, 2003. As per the provisions under Section 63 of the Electricity Act, 2003 and the Tariff Policy dated 6th January, 2006, Ministry of Power, issued "Guidelines for Encouraging Competition in Development of Transmission Projects" and Tariff Based Competitive Bidding Guidelines for Transmission Services". These guidelines aim at laying down a transparent procedure for facilitating competition in the transmission sector through wide participation in providing transmission services and tariff determination through a process of tariff based competitive bidding.

## **Private Participation in Transmission Sector**

As envisaged in the Guidelines, Ministry of Power had constituted an Empowered Committee on Transmission to identify inter-state transmission projects to be developed through competitive bidding and to oversee the process of competitive bidding. Ministry of Power has also issued Standard Bidding Documents (SBDs), viz. Request for Qualification (RfQ), Request for Proposal (RfP), Transmission Service Agreement (TSA) and Share Purchase agreement (SPA). As provided in the Guidelines, Ministry of Power has appointed PFC Consulting Limited (PFCCL) and REC Transmission Projects Company Limited (RECTPCL) as the Bid Process Coordinators (BPC) for carrying out the bidding process.

As far as Inter-State transmission system is concerned, till date thirty-seven projects have been awarded through Tariff Based Competitive Bidding out of which thirteen projects have already been commissioned and twenty projects are under implementation by various Transmission Service Providers. Out of balance four projects, one project has been cancelled by CERC, in one project the TSP has requested for closure and construction of two projects could not start due to litigation. Apart from this, there are six no. of projects which are presently under bidding process.

## **TBCB Guidelines**

### **Standard Bid Documents (SBDs)**

## **Power Grid**

Power Grid Corporation of India Limited (POWERGRID), a Schedule 'A', 'Maharatna' Company operating under Ministry of Power, is engaged in bulk transmission of power through its EHVAC (upto 765 kV level) and  $\pm 800/\pm 500$  kV HVDC transmission network. POWERGRID is a listed Company, with 51.34% holding of Government of India and balance by Institutional Investors & public.

POWERGRID, as on 30 April 2023, owns & operates around 174,601 ckm of Extra High Voltage (EHV) transmission lines spread over the length and breadth of the country and 273 EHV AC & HVDC Sub-stations with transformation capacity of more than 504,862.7 MVA. The availability of this huge transmission network is consistently maintained over 99% through deployment of state-of-the-art operation & maintenance techniques at par with global standards.

During FY 2021-22, POWERGRID has achieved a turnover of about Rs. 42,697.90 crore and Net Profit of Rs. 16,824.90 crore. As on 31.03.2022 Gross Fixed Assets of the company have also grown to Rs. 2,62,726 crore.

POWERGRID being one of the largest transmission utilities in the world, is playing a strategic role in the development of Indian power sector and has proved its capabilities through timely execution of large & critical transmission projects. POWERGRID has implemented Inter-State Transmission Systems to facilitate integration of large-scale Renewable Energy (RE) generation capacity of about 6 GW in eight (8) RE resource rich states viz. Rajasthan, Gujarat, Tamil Nadu, Maharashtra, Karnataka, Andhra Pradesh, Himachal Pradesh and Madhya Pradesh. To facilitate integration of seven (7) solar parks in Andhra Pradesh, Madhya Pradesh, Rajasthan, Gujarat & Karnataka, POWERGRID has implemented inter-State Transmission system for evacuation of about 6.5 GW of solar based renewable energy. Also, POWERGRID has implemented Renewable Energy Management Centers (REMCs), at 11 locations, to facilitate generation forecasting and dispatch scheduling of RE generation. A strong and vibrant National Grid has already been established in the country and is being continuously

augmented / strengthened to facilitate growing power transmission requirement with reliability. The present Inter-Regional power transfer capacity of the National Grid is about 112,250 MW.

The Company has an excellent credit rating with financial institutions, thereby, is placed in a comfortable position in terms of resource mobilization. Conserving Right-of-Way (RoW), minimizing impact on natural resources, coordinated development of cost effective transmission corridor, flexibility in up gradation of transfer capacity of lines matching with power transfer requirement are major areas of concern in development of transmission network in the country. In this direction, the Company has been working on higher transmission voltages of  $\pm 800$  kV HVDC & 1200 kV UHVAC. POWERGRID has diversified into telecom business, leveraging its country wide transmission infrastructure. Company is providing back-bone connectivity to all metros, major cities & towns including remote areas of J&K and North-Eastern States etc. Total network coverage is more than 82,294 kms and numbers of Points of Presence (PoPs) in 458 locations & Points of Interconnections in 780 locations. Having Intra city network in 256 cities across India, the Telecom Backbone Availability was greater than 99.5%. POWERGRID is one of the implementing agencies for BharatNet project of Gol and has been entrusted with the task of development and maintenance of the National Optical Fibre Network in states, namely Andhra Pradesh, Telangana, Himachal Pradesh, Jharkhand and Odisha.

Further, POWERGRID is playing a significant role in carrying forward the distribution reforms through undertaking Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Integrated Power Development Scheme (IPDS) works on behalf of the Govt. of India in the country. Presently, various electrical interconnections exist between India & Bhutan, India & Nepal and India & Bangladesh. Further, the interconnection between India & Bhutan, India & Nepal and India & Bangladesh are being strengthened for substantial exchange of power across the borders.

POWERGRID is offering consultancy services to various National clients & International clients, including many South Asian, African, and Middle East countries.

## **Important Orders/ Guidelines/ Notifications/ Reports**

<b>Sl. No.</b>	<b>Date</b>	<b>Title</b>	<b>Document</b>
1	04.10.2022	Guiding Principles for Monetization of Transmission Assets in the Public Sector through Acquire, Operate, Maintain and Transfer (AOMT) based Public Private Partnership model	
2	01.08.2022	Techno-economic norms on under-grounding of power lines	
3	13.06.2022	Amendment in Standard Bidding Documents for procurement of Inter-State Transmission Services through Tariff Based Competitive Bidding (TBCB) process	
4	04.04.2022	Reduction in Contract Performance Guarantee (CPG) for Tariff Based Competitive Bidding (TBCB) transmission projects in line with Department of Expenditure's OM dated 30.12.2021	
5	29.03.2022	Revised Guidelines and Standard Bidding Documents (SBDs) for procurement of Inter-State Transmission Services (ISTS) through Tariff Based Competitive Bidding (TBCB) process	
6	28.10.2021	Re-constitution of the "National Committee on Transmission" (NCT) - reg.	
7	05.10.2021	Gazette Notification for Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules, 2021	
8	23.07.2021	Nomination of two experts in the "National Committee on Transmission" (NCT)-regarding	
9	22.05.2021	National Committee on Transmission (NCT) - amendment thereof	
10	25.03.2021	Reduction in Contract Performance Guarantee for Tariff Based Competitive Bidding (TBCB) transmission projects in line with Department of Expenditure's OM dated 12.11.2020 reg.	
11	23.03.2021	Three O.M. No.9/4/2020-PPD, dated 12.11.2020 of Finance (D/o Expenditure Bid ) regarding- (i) Performance Security, (ii) Security/ Earnest Money Deposit; and ( iii) Additional Performance Security in case of Abnormally Low Bids (ALB), respectively.	
12	15.03.2021	Adoption of Tariff Based Competitive Bidding (TBCB) for intra-State transmission projects	
13	16.07.2020	Guidelines for payment of compensation in regard to Right of Way (RoW) for transmission lines in urban areas	
14	19.12.2019	Establishment of Renewable Energy Management Centre (REMC) at Telangana and Energy Management Centre (EMC) at South Andaman	
15	04.11.2019	Re-constitution of the National Committee on Transmission" (NCT)	
16	04.11.2019	Constitution of five Regional Power Committees Transmission Planning RPCTPs	
17	03.07.2019	Addendum to the Guidelines for Import I Export (Cross Border) of Electricity (IECBE) 2018- reg.	
18	24.12.2018	Appointment of Designated Authority under IECBE Guidelines- 2018	
19	18.12.2018	Guidelines for Import/Export (Cross Border) of Electricity-2018	
20	07.06.2018	Delegation of powers for approval of transmission schemes to be implemented through TBCB route	

<b>Sl. No.</b>	<b>Date</b>	<b>Title</b>	<b>Document</b>
21	13.04.2018	Constitution of new "Empowered Committee on Transmission" (ECT) in accordance with the Guidelines for Encouraging Competition in Development of Transmission Projects.	
22	13.04.2018	Constitution of the "National Committee on Transmission" (NCT) in accordance with the Guidelines for Encouraging Competition in Development of Transmission Projects	
23	13.04.2018	Constitution of the "North Eastern Region Standing Committee on Transmission" (NERSCT) for planning of Transmission System in the Region	
24	13.04.2018	Constitution of the "Southern Region Standing Committee on Transmission" (SRSCT) for planning of Transmission System in the Region	
25	13.04.2018	Constitution of the "Northern Region Standing Committee on Transmission" (NRSCT) for planning of Transmission System in the Region	
26	13.04.2018	Constitution of the "Western Region Standing Committee on Transmission" (WRSCT) for planning of Transmission System in the Region	
27	13.04.2018	Constitution of the "Eastern Region Standing Committee on Transmission" (ERSCT) for planning of Transmission System in the Region	
28	14.12.2016	Designation of Designated Authority under CBTE Guidelines- 2016	
29	05.12.2016	Guidelines on Cross Border Trade of Electricity- 2016	
30	11.08.2016	Constitution of the Committee for finalization of compensation in regard to Right of Way (RoW) for transmission lines in urban areas	
31	03.08.2016	Constitution of Committee for expediting approval regarding railway clearance for building transmission lines.	
32	15.10.2015	Guidelines for payment of compensation towards damages in regard to Right of Way for transmission lines.	
33	15.04.2015	Constitution of the Committee for finalization of compensation in regard to Right of Way for transmission lines.	

## **Tenders for TBCB Transmission Projects**