

Renewable Energy



Renewable Energy

1. Provisions for facilitating connectivity to Renewable Energy

<i>Direction</i>	<i>Date of Issue</i>
<u>OM No. :23/17/2020-R&R</u> <u>Direction under section 107 of the Electricity Act, 2003 to CERC regarding Connectivity and Long-Term Access provisions to further accelerate renewable capacity addition programme</u>	<u>11.01.2021</u>

In January,2021, directions were issued to CERC, to allow connectivity to new Renewable generators at the existing connection point to ISTS through electrical system of a generating station subject to availability of available margin in the system. These directions were given to accelerate Renewable generation capacity addition by optimally utilizing the transmission infrastructure in existing ISTS facilities as well as well Generating stations' switchyard, in the larger public interest.

2. Advice to Regulatory Commissions regarding Exemption of charges under Intra State Open Access and Relaxation of Deviation Settlement Mechanism to Waste to Energy (WTE) project.

<i>Letter</i>	<i>Date of Issue</i>
<u>OM No. : 23/26/2020-R&R (Part-I)</u> <u>Advise to Regulatory Commissions regarding Exemption of charges under Intra State Open Access and Relaxation of Deviation Settlement Mechanism to Waste to Energy (WTE) project</u>	<u>23.07.2021</u>

Order was issued, in July 21, to exempt all waste to Energy projects of all applicable charges (except wheeling and the transmission charges) under intra-state Open Access sale of power and to give relaxation in the Deviation Settlement Mechanism (DSM). This will facilitate in development of WTE projects and take forward the mission of Swachh Bharat.

3. Electricity (Promotion of generation of Electricity from Must-Run Power Plant) Rules, 2021

<i>Rules</i>	<i>Date of Issue</i>
<u>Electricity (Promotion of generation of Electricity from Must-Run Power Plant) Rules, 2021</u>	<u>22.10.2021</u>

In spite of Regulatory provision of must –run for Renewable Energy (RE) sources, there had been a tendency of curtailment of generation from these sources, in some states, on account of commercial reasons. This had not only deprived of, the country, the clean power without using any fuel, but also affected the economic viability of RE projects.

The Rules have been notified to provide that a must-run power plant (including RE plants and hydroplant in case of spillage of water) shall not be subjected to curtailment or regulation of generation or supply of electricity on account of merit order dispatch or any other commercial consideration. The electricity generated from a must-run power plant may be curtailed or regulated only in the event of any technical constraint in the electricity grid or for reasons of security of the electricity grid. In the event of a curtailment of supply from a must-run power plant, compensation shall be payable by the procurer to the must-run power plant at the rates specified in the agreement for purchase or supply of electricity. In such cases, the RE generator is also allowed to sell power in the power exchange and recover the cost. These Rules will help in economic sustainability of RE generators as well as availability of more RE power leading to decarbonisation of power sector.

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4. Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy.

<i>Order / Amendment/Addendum</i>	<i>Date of Issue</i>
<u>No. : 23/12/2016-R&R</u> <u>Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy under Para 6.4(6) of the revised Tariff Policy, 2016</u>	<u>30.09.2016</u>
<u>Amendment-Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy under Para 6.4(6) of the revised Tariff Policy,2016</u>	<u>14.06.2017</u>
<u>Amendment-Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy under Para 6.4(6) of the revised Tariff Policy, 2016</u>	<u>13.02.2018</u>
<u>Amendment-Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy under Para 6.4(6) of the revised Tariff Policy, 2016</u>	<u>05.08.2020</u>
<u>Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy</u>	<u>15.01.2021</u>
<u>Amendment-Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy</u>	<u>21.06.2021</u>
<u>Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy under Para 6.4(6) of the revised Tariff Policy, 2016</u>	<u>23.11.2021</u>
<u>Addendum-Waiver of inter-State transmission charges and losses on transmission of the electricity generated from solar and wind sources of energy under Para 6.4(6) of the revised Tariff Policy, 2016</u>	<u>30.11.2021</u>

In order to avoid the difficulty of Renewable generators due to delay in Commissioning on account of force measure, CERC was advised under section 107 of the Electricity Act,2003, for making suitable Regulatory provisions for extension of waiver of inter-state transmission charges for the electricity generated from solar and wind projects, whose date of Commissioning had been extended by the competent authority.

To promote RE generation addition in the country, the waiver of inter-state transmission charges on electricity generated from solar and wind sources has been extended for projects to be commissioned up to 30th June 2025.

With a view to encourage the capacity addition in solar, wind, battery storage and pumped storage projects, it was also advised that waiver of inter-state transmission charges shall also be allowed for Hydro Pumped Storage Plant (PSP) and Battery Energy Storage System (BESS) projects with certain conditions.

In order to have long-term visibility and certainty in renewable power generation, vide order dated 23.11.2021 it has been stipulated that the inter-state transmission charges shall be increased gradually w.e.f. July, 2025.

As a result of various policy measures taken by the Central Government RE capacity in country has already crossed 100 GW. The waiver of inter-state transmission losses will provide an impetus to green hydrogen generation and development of energy storage in the country, which will further accelerate the decarbonisation of Indian power sector.

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5. Bundling of Renewable Energy with Thermal / Hydro Energy under existing PPAs.

<i>Order</i>	<i>Date of Issue</i>
<u>No.: 23/70/2017-R&R</u> <u>Flexibility in Generation and Scheduling of Thermal Power Stations to reduce emissions</u>	<u>05.04.2018</u>
<u>No. : 09/11/2021-RCM</u> <u>scheme for Flexibility in Generation and Scheduling of Thermal/Hydro Power Stations through bundling with Renewable Energy and Storage Power</u>	<u>15.11.2021</u>

Through these guidelines, in April,2018, Thermal Power Generating Stations were allowed to generate and bundle RE power under existing and future Power Purchase Agreements (PPAs). This reduced the cost of power for of the Distribution Licensees.It also helped them to meet their Renewable Purchase Obligation (RPO)under their existing PPAs and reduced their burden of arranging for separate balancing power. The benefits of the reduced cost of power are shared between the Gencos and the DISCOMs on a 50:50 basis, which ultimately benefits the consumer.

In order to broaden the scope and promote RE and energy storage, the scheme has been revised to cover replacement of thermal or hydro power with Renewable energy or Renewable energy combined with Battery Energy Storage System. This will facilitate Distribution company to meet RPO under existing contracted capacity without any additional financial burden.

This step by Central Government will lead to a faster energy transition and will help towards achieving the goal of 500 GW of non-fossil fuel capacity by 2030, as per commitment in COP 26, at the same time benefit consumers in terms of reduced cost of supply by replacing the costlier conventional power by cheaper RE power.

6. Implementation of smart pre-payment meter/pre-payment meters and AMR/AMI for Feeder and DT Meters

<i>Order / Gadget Notification</i>	<i>Date of Issue</i>
<u>No.:23/05/2020-Part (1)</u> <u>Implementation of smart pre-payment meter/pre-payment meters</u>	<u>26.02.2021</u>
<u>No.: 23/35/2019-R&R</u> <u>Implementation of smart pre-payment meter/pre-payment meters and AMR/AMI for Feeder and DT Meters</u>	<u>17.08.2021</u>
<u>No. : 14/06/2021-UR&SI-II-Part (I) – (E- 261576)</u> <u>Energy Accounting and Audit in Electricity Distribution Utilities</u>	<u>14.03.2022</u>

DISCOMS have been facing financial problems due to poor billing and collection efficiency. The poor financial health of DISCOMS affects the entire value chain of the power sector and therefore, to address the issues of billing and collection and to improve the cash flows in the entire value chain of the Power Sector, Ministry of Power, in August,2018 advised all the state Governments to switch over to simple prepayment meters or smart prepayment meters.

Observing various financial benefits to not only Distribution companies but the generating and transmission companies also, based on the feedback from States, who have implemented pre-payment meters, Ministry of Ministry of Power, in February,2021, advised all the state Governments to prepare plan to switch over to prepayment meters in a time bound manner to avail funds under the new reforms based-result linked power distribution sector scheme, announced by the Central Government.

The metering regulations have been changed to provide that all new meters will be prepaid meters.

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Vide notification dated 17.08.2021, timelines (December,2023/ March, 2025, for different category) for the replacement of existing consumer meters (except Agricultural consumers) with smart meters with pre-payment feature has been specified by the Central Government. Time lines (December,2023/ March, 2025, for different category) for feeder and Distribution Transformer (DT) meters have also been specified for providing Automated Meter Reading (AMR) facility or to be covered under AMI (Advanced Metering Infrastructure).

The shift to the prepaid system and AMR / AMI facility for feeder and DT meters will lead to reduction in Commercial losses and also to reduction in the carrying cost and working capital requirements of the Distribution licensee. Prepayment meters will also do away with the cost of meter reading, billing, collection and disconnection in case of non-payment.

7. Introduction of Real Time Market

<i>Press Release</i>	<i>Date of Issue</i>
<u>Union Power Minister launches pan-India Real Time Market in electricity:Indian power market moves closer to real time</u>	<u>03.06.2020</u>

In a move towards competitive markets, for the first time in India, a platform for trading in electricity closer to delivery / supply called Real Time Market (RTM) was introduced in June,2020, This allows DISCOMs/Buyers to buy power with an advance notice of one hour. This allows DISCOMs to procure only that quantity of power which it requires. Its also allows the DISCOMs to meet the challenge in grid management due to intermittent and variable nature of RE generation.

8. Introduction of Green Term Ahead Market

<i>Press Release</i>	<i>Date of Issue</i>
<u>Indian Power Market Goes Green</u> <u>Indian Power Minister Launches Green Term Ahead Market (GTAM)</u>	<u>01.09.2020</u>

To make clean environment and to facilitate achieving green energy targets in a most efficient and cost optimized manner, Green Term Ahead Market (GTAM) was introduced in August, 2020.This enables procurement of RE power through Power Exchanges. This will benefit buyers of RE in procurement atcompetitive pricesthrough transparent and flexible procurement to meet their load requirement as well as to fulfil RPO target and benefit RE sellers by providing access to pan-India market.

9. Development of Integrated Day Ahead Market (DAM) in Power Exchange with separate price formation for RE Power and Conventional Power

<i>Press Release/ Letter</i>	<i>Date of Issue</i>
Letter: <u>Development of Integrated Day Ahead Market (DAM) in Power Exchange with separate price formation for RE Power and Conventional Power</u>	<u>24.03.2021</u>
Press Release: <u>Union Minister of Power & New and Renewable Energy launches the Green Day Ahead Market (GDAM)</u>	<u>25.10.2021</u>

In view of increasing renewable power in generation mix and to make multiple options for market participants in Renewable energy, Ministry of power in March,2021 advised the concerned organisations e.g. CERC, POSOCO and Power Exchanges to develop Integrated Day Ahead Market (DAM) in Power Exchange with separate price formation for RE Power and Conventional Power.

G-DAM was launched on 25.10.2021 and merged with Integrated Day Ahead Market (DAM) in Power Exchange with separate price formation for RE Power and Conventional Power.The introduction of Green day-ahead market, will deepen the green market and will provide competitive price signals, besides offering an opportunity to the market participants to trade in green energy, in the most transparent, flexible, competitive, and efficient manner.

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10. Bio mass Utilization for Power Generation through Co-firing in Coal Based Power Plants.

<i>Policy/letter/ Amendment/ Press Release</i>	<i>Date of Issue</i>
<u>F. No. : 11/86/2017-Th.II</u> <u>Policy-Bio mass Utilization for Power Generation through Co-firing in Coal Based Power Plants</u>	<u>17.11.2017</u>
<u>Amendment-Revised Policy for Biomass Utilisation for Power Generation through Co-firing in Coal based Power Plants</u>	<u>08.10.2021</u>
<u>Press Release-Ministry of Power decides to set up a National Mission on use of Biomass in coal based thermal power plants</u>	<u>25.05.2021</u>

In order to effectively utilize large amounts of paddy straw which remains unutilized and burnt after harvesting of paddy and other crops, and to mitigate the problem of air quality deterioration while providing an additional source of income to farmers, Ministry of Power advised eligible coal based thermal power plants to use 5-10% blend of biomass pellets made from agro residue along with coal, subject to technical and safety feasibility. In order to also ensure recovery of any additional cost of generation, the policy provides for compensation via tariff to be determined by the Appropriate Commission.

This policy has been revised further to facilitate use of agriculture residues in TPPs, for the provisions related to mandatory use of certain percentage of fuel from bio residue for different class of TPPs, pass through of increase in tariff and period as well as price of contract for procuring bio pellets.

A “National Mission on use of Biomass in coal based thermal power plants” with the objectives of increasing the level of co-firing, taking up R&D activity, facilitating in overcoming the constraints in supply chain of bio mass pellets and agro-residue and consider regulatory issues in biomass co-firing, has been set up.

This National Mission on biomass will also contribute in the National Clean Air Programme (NCAP).

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“Atmanirbhar Bharat” and “Make in India” Initiatives



“Atmanirbhar Bharat” and “Make in India” Initiatives

1. Indigenisation of Equipment

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>No.: 11/05/2018-Coord.</u> <u>Measures for contributing towards ‘Atmanirbhar Bharat’ and ‘Make in India’ through phased indigenisation in Power Sector</u>	<u>23.07.2020</u>

Keeping in view the fact that the Power Sector is a sensitive and strategically important sector and provides the backbone for growth of the nation. In the light of the emerging Cyber Security threats and also the fact that some attempts of Cyber Attack were made, orders have been issued for phased indigenisation of equipment where domestic capacity is not available. Till such time the indigenous manufacturing capacity is developed, the order specifies that goods to be imported would be tested in certified laboratories to check the presence of any malware or cyber security threats and to check adherence to Indian Standards.

2. Public Procurement (Preference to make in India)

<i>Order / Revision</i>	<i>Date of Issue</i>
<u>F. No. : 11/05/2018-Coord.</u> <u>Public Procurement (Preference to Make in India) to provide for Purchase Preference (linked with local content) in respect of power Sector</u>	<u>28.07.2020</u>
<u>Revision-Public Procurement (Preference to Make in India) to provide for Purchase Preference (linked with local content) in respect of power Sector</u>	<u>17.09.2020</u>
<u>F. No.: A-1/2021-FSC-(Part-5)</u> <u>Public Procurement (Preference to Make in India) to provide for Purchase Preference (linked with local content) in respect of power Sector</u>	<u>16.11.2021</u>

Ministry of Power has issued orders for hydro, transmission and distribution sectors regarding Public Procurement (Preference to Make in India) to provide for Preference in Purchase of equipment having local content.

These orders are in compliance to Department for Promotion of Industry and Internal Trade (DPIIT) Public Procurement (Preference to Make in India), Order 2017 and subsequent modifications from time to time for encouraging ‘Make in India’ and promoting manufacturing and production of goods and services in India with a view to enhancing income and employment.

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Transmission



Transmission

1. One Nation – One Grid – One Frequency

On 31st December 2013, we 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 was constraint 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.

In order to address this, transmission system in the country has been strengthened and inter-regional capacity were added. Transmission capacity addition since 01.04.2014 is as under:

	Capacity Addition during last 7 years	% addition in comparison to capacity as on 01.04.2014
Transmission line (ckm)	1,61,104	55.30
Transformation capacity (MVA)	5,49,220	103.52
Inter-regional Capacity (MW)	76,300	212.24

Today, the country has one of the largest synchronous grids in the world. As on 31st December 2021, the status of national grid is as given below:

- Transmission line (ckm) : 4,52,440
- Transformation capacity (MVA) : 10,79,766
- Inter-regional capacity (MW) : 1,12,250

The above transmission network expansion reduced transmission congestion considerably and market splitting has become a rarity resulting into discovery of single price in the market. It also facilitated seamless transfer of power from power surplus regions to power deficit regions and thus optimizing the use of generation resources as well as meeting the demands of end consumers without any transmission constraints. It has also assisted growth of Renewable Energybased capacity.

2. Import/Export (Cross Border) Trade of Electricity

<i>Guidelines/ Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<i>F. No. : 14/1/2017-Trans Guidelines for Import/Export (Cross Border) of Electricity-2018</i>	<i>18.12.2018</i>
<i>Addendum to Guidelines for Import/Export (Cross Border) of Electricity -2018</i>	<i>03.07.2019</i>
<i>Procedure for approval and facilitating import/export cross-border) of electricity by the Designated Authority</i>	<i>25.02.2021</i>

Cross Border Electricity Trade with neighbouring countries was going on bilateral basis since long. However, the quantum of electricity trade was not much and there was no institutional mechanism/policy guideline for governing cross border electricity trade between India and neighbouring countries.

In order to strengthen the position of India in cross border electricity trade with neighbouring countries in the South East Asia, the Guidelines for Cross Border Trade of Electricity were issued by India in 2016 to promote cross border trade of electricity. Based on further stakeholders' consultation, the Guidelines were revised and Import/Export (Cross Border) Trade of Electricity of Guidelines were issued in December 2018. The Guidelines provided a framework for developing cross border electricity transmission links, eligibility of importer and exporter for electricity trade, appointment of Designated Authority for approval of trade, trading through power market etc.

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In line with Import/Export (Cross Border) Trade of Electricity of Guidelines 2018, Member (Power System), Central Electricity Authority was appointed as the Designated Authority (DA) for facilitating the process of approval and laying down the procedure for import/export of electricity. In line with the provision of the Guidelines, "Procedure for approval and facilitating Import / Export (Cross Border) of Electricity by Designated Authority" has been issued in February 2021.

All these measures have helped the country in enhancing the capacity of cross border transmission links as well as export from India to neighbouring countries. The capacity of cross border transmission links between India and neighbouring countries have increased from 2100 MW in 2014 to 4233 MW in 2021. Similarly, peak export from India to Bangladesh / Nepal /Myanmar has increased from 750 MW to about 1900 MW.

3. Payment of compensation towards damages in regard to Right of Way (RoW) for laying of transmission lines in urban areas

<i>Order</i>	<i>Date of Issue</i>
<u>F. No.: 3/7/2015-Trans</u> <u>Guidelines for payment of compensation towards damages in regard to Rightof Way for transmission lines</u>	<u>15.10.2015</u>
<u>F. No. : 3/4/2016-Trans</u> <u>Payment of compensation towards damages in regard to Right of Way (RoW) for laying of transmission lines in urban areas</u>	<u>16.07.2020</u>

Prior to 2015, there was no uniform mechanism in the country for payment of compensation towards damages in regard to Right of Way (RoW) for laying of transmission lines. Transmission licensees generally used to pay only tree and crop compensation for laying of transmission lines. As a result, there were grievances of owners of land, over which transmission lines are laid.

Ministry of Power in October 2015 issued Guidelines for payment of compensation [15% of land value in RoW corridor and 85% of land value for tower footing areas] towards damages in regard to RoW for laying of transmission lines. As Right of Way is major issue in urban areas, Guidelines for payment of compensation towards damages in regard to Right of Way (RoW) in urban areas have been issued on 16th July, 2020. The Guidelines inter-alia prescribes addition 15% compensation for RoWcorridor, as non-usability allowance, in addition to 15% compensation for RoW corridor and 85% for tower footing.

Land being a State subject, the States have been advised to adopt these Guidelines. Adoption of these Guidelines is expected to reduce the grievance of the land owners, over which transmission line passes and also help the transmission utility in getting encumbrance free Right of Way for laying of transmission lines. This will also reduce litigations.

4. Separation of CTU from POWERGRID to provide transparency

<i>Order</i>	<i>Date of Issue</i>
<u>F. No. :18/3/2015-PG (Part3)</u> <u>The division and demerger of the Central TransmissionUtility and Power Grid Corporation of India Limited Transfer Scheme, 2021</u>	<u>09.03.2021</u>

Section 38 of the Electricity Act, 2003 provides that the Central Government may notify a Government Company as Central Transmission Utility (CTU) to discharge all functions of planning and co-ordination relating to Inter State transmission System (ISTS) and other functions assigned in the Act. POWERGRID, a CPSE under Ministry of Power, was notified as CTU on 27.11.2003.

Over a period of time, many private transmission developers also emerged in the Transmission Sector. As CTU, POWERGRID was engaged in transmission planning. Further, POWERGRID, as developer was engaged in implementation and participating in bidding process for development of transmission system. Therefore, conflict of interest in twin roles of POWERGRID as planner and developer was flagged. [Back to INDEX page](#)

In order to bring transparency and make level playing field for all the transmission developers, it was decided to separate CTU functions from POWERGRID. In the first stage, CTU India Ltd, 100% subsidiary of POWERGRID was notified as CTU vide gazette notification dated 09.03.2021. Accordingly, CTU India Ltd started functioning as CTU w.e.f. 01.04.2021. Further, creation of CTU as an independent Government Company is in advanced stage.

Separation of CTU from POWERGRID will bring transparency in planning of transmission sector and encourage investment in transmission sector.

5. Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV) and above voltage class

Earlier, the specification of each Transformer and Reactor was unique and Manufacturers used to take inordinate time to design them. Accordingly, the manual to adopt country wide standard designs of Power Transformers and Reactors was prepared and the same was approved by Ministry of Power 16.04.2021. By standardizing the design parameters of transformers and reactors for specific voltage class, the execution time of transmission projects will reduce considerably.

6. Disaster Resilient Infrastructure

<i>Order</i>	<i>Date of Issue</i>
<u>Advisory to State & UTs on cyclone resilient infrastructure</u>	<u>10.06.2021</u>

Considering the recurrent damages caused by cyclones on transmission and distribution (T&D) infrastructures in coastal areas of the country, a Task Force was constituted by this Ministry to recommend preventive and mitigation measures for minimizing the damages to transmission and distribution infrastructures due to Cyclone in coastal areas of the country.

The task force suggested a multi-pronged approach, which encompasses the change in design philosophy, better planning and adoption of modern technological solutions required to safeguard the T&D infrastructure from natural disasters and to increase resilience, reliability and availability of the system.

Based on the report, guidelines were issued to coastal States and UTs vide MoP's letter dated 10 June 2021 directing that each Coastal States/UTs may mark out areas prone to cyclones within 20-30 Kms of Coast line and any new construction / reconstruction of Power systems in these areas will follow the design parameters laid down in this report. Adoption of these guidelines would reduce the recurrent damages caused by cyclones in transmission and distribution infrastructures in the country.

7. Revised Standard Bidding Documents (SBDs) for award of Transmission service on competitive bidding basis

<i>Order</i>	<i>Date of Issue</i>
<u>F.No. : 15/1/2017-Trans Revised Standard Bidding Documents (SBDs) for procurement of Inter-State Transmission Services (ISTS) through Tariff Based Competitive Bidding (TBCB) process</u>	<u>06.08.2021</u>

In order to encourage private sector participation in transmission sector, Ministry of Power had notified "Tariff Based Competitive Bidding (TBCB) Guidelines for Transmission Service" and "Guidelines for Encouraging Competition in Development of Transmission Projects" in April 2006. Subsequently, Ministry notified the SBDs comprising Request for Qualification (RfQ), Request for Proposal (RfP) and Transmission Service Agreement (TSA) in the year 2008.

As the SBDs and the Guidelines were issued long back, requests were received to align them with other infrastructure SBDs to attract more private investment in transmission sector. Based on request received from stakeholders, revised Standard Bidding Documents and "Tariff Based Competitive Bidding (TBCB) Guidelines for Transmission Service" and "Guidelines for Encouraging Competition in Development of Transmission Projects" have been revised and issued on 06.08.2021.

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The major changes in the revised SBD include reduction in Equity Lock in period (from earlier 51% for a period of 2 years from Date of Commissioning (COD) and 26 % for period of 3 years thereafter to 51% for a period of 1 year from COD), signing of Transmission Service Agreement by CTU, provision for quoting of single tariff in the bid, changing from Build Own Operate Maintain (BOOM) model to Build Own Operate Transfer (BOOT) model, provision of Independent Engineer during construction phase for monitoring, quality assurance and quantification of cost/time related issues, etc.

The revised SBD and revised Guidelines will promote ease of doing business for private developers in transmission sector, address concerns of developers on risk sharing, encourage competition in transmission, and facilitate timely completion of transmission lines. All these provisions would bring in more private investment in transmission sector.

8. Bringing 33 kV system under Transmission for performance improvement of sub-transmission system.

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>F. No. : 15/1/21-Trans</u> <u>Bringing 33 kV system under Transmission for performance improvement of sub-transmission system</u>	<u>01.09.2021</u>

Sub-transmission System plays important role to feeding quality power to the consumers on 24x7 basis. However, sub-transmission system is often plagued with higher technical losses and more outages. Considering the importance of sub-transmission system, Ministry of Power had constituted a committee to suggest measures for reduction of losses in the sub-transmission system & for ensuring reliability and efficient performance and to make recommendation for promoting investment in sub-transmission system.

The Committee observed that losses at 33 kV are about 4.8%, while the loss in 66 kV-220 kV level is only 1.72-2.39%. Besides, yearly availability at 33 kV is about 96.3%, while the same in 66 kV-220 kV level is 98.5-99.4%. The Committee inter-alia recommended to bring 33 kV system under State Transmission Utility for improvement in performance of 33 kV system.

After examining the report of the Committee, the 33 kV system has been declared as Transmission element and the same was communicated to State/UTs vide letter dated 01.09.2021. This will lead to better planning, loss reduction and increased supply reliability. Assets in 33 kV network and existing overloaded assets/assets can be handed over to STUs.

9. Revamping the Transmission Planning

<i>Rules/ Order</i>	<i>Date of Issue</i>
<u>Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules, 2021</u>	<u>01.10.2021</u>
<u>No.: 15/3/2017-Trans</u> <u>Dissolution of five "Regional Power Committees (Transmission Planning)"</u>	<u>20.10.2021</u>

Regional Power Committees (Transmission Planning) have been dissolved to obviate the need of dual consultation in the transmission planning process and expediting planning and approval process.

Terms of reference of National Committee on Transmission (NCT) have been modified and Central Transmission Utility and National Committee on Transmission have been delegated powers to approve Inter State Transmission System upto Rs. 500 crores, this will enable faster implementation of such works.

All these measures would facilitate in timely development of the required ISTS system for having 500 GW of Renewable Energy by 2030.

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10. General Network Access

Ministry of Power has taken following reform measures to simplify and fast-track the process for connecting to the National Grid. Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules 2021 were promulgated completely overhauling the rules for access to the transmission system.

Now, the entire transmission system of the country is located as one integrated whole. Any entity which connects to the ISTS can buy power from any GENCO or sell power to any utility across the country and can buy from and sell to different entities on different days. This is called the **General Network Access (GNA)**.

This also provides flexibility to the States as well as the generating stations to acquire, hold and transfer transmission capacity as per their requirements. These rules will bring in rationality, responsibility and fairness in the process of transmission planning as well as its costs.

The GNA is a complete departure from the earlier concept of transmission. In a major change from the present system of taking transmission access, power plants will not have to specify specific beneficiaries. They can sell to whosoever they want. The distribution companies can also buy from any Generator across the country. The GNA unifies the market and enables competition. The concept of a planning of transmission line based on connection of one generator to one consumer is over. These rules will also empower state power distribution and transmission companies to determine their transmission requirements and build them. Also, States will be able to purchase electricity from short term and medium-term contracts and optimize their power purchase costs.

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Distribution



Distribution

1. Guidelines for Corporate Governance of State Power Distribution Utilities (DISCOMs)

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>Revised Guidelines for Corporate Governance of State Power Distribution Utilities (DISCOMs)</u>	<u>2021</u>

Ministry of Power have issued guidelines for strengthening the Governance structure of DISCOMs at Board as well as Senior Management level. These guidelines have been formulated based on best practices available in the DPE guidelines, SEBI regulations, and governance mechanisms adopted by private DISCOMs.

The Guidelines cover important aspects such as composition of the Board of Directors, Board meetings, Board Committees, Independent Directors, Roles and Responsibilities etc. Implementation of these guidelines will result in improved financial health of DISCOMs through good governance and adoption of best business practices as well as in achieving necessary physical and financial separation between the States and DISCOMs.

2. Integrated Rating of Power Distribution Utilities

Over the years, Distribution Sector in India has surmounted major challenges of providing Energy access to all citizens of the country. The Sector is now in the process of surmounting the last major challenge of addressing financial viability and sustainability of the Distribution system ecosystem. Several measures have been undertaken by the Government, including launching of multiple schemes linking financial support to States and DISCOMs.

Recognising that measurement of performance against reforms initiated is imperative for monitoring and making corrective interventions, the Ministry of Power has entirely revamped the Integrated Rating Report of DISCOMs, which provides objective measures of performance of DISCOMs. The rating has 75% weightage on “financial sustainability parameters” and financial ratios, with 25% weightage spread on “Performance excellence” and “health of External environment”. The Ratings also provide negative marking for certain actions that are extremely detrimental to the health of DISCOMs. Ranks of Utilities across the countries are determined based on assessments made on the parameters obtained from official documents of Utilities.

While the aggregated ratings provide overall ranking in performance of utilities, disaggregated parametric measures including specific financial ratios identify the exact problem areas specific to the Utilities. Such parameters would also provide benchmarks amongst peers and enable the Utilities to determine the distance-to-frontier measures. Furthermore, these rankings also provide objective assessments to various Banks and Financial Institutions for creditworthiness of the Utilities, while also enabling a positive spirit of germinating healthy competition in the spirit of competitive and cooperative federalism in the Country. The revised Integrated Ratings would be launched on the 5th August, 2022 in the Review, Planning and Monitoring Committee meeting with all States.

3. Additional Prudential Norms for Financing

Additional prudential norms intend to align the norms with action plan under LIS, Revamped Distribution Sector Scheme, UDAY, Electricity (Late Payment Rules) 2021 and additional borrowing guidelines linked to power sector reforms by Ministry of Finance with the main objective of ensuring that solvency problems of Utilities do not get camouflaged as Liquidity problems.

Additional Prudential norms are to be followed by PFC and REC for all types of loans to DISCOMs, TRANSCOs, and GENCOs. These include Working Capital, Capex and Non-Capex Loans.

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These norms include compliance of availability of audited accounts, timely filing of tariff petitions, timely issue and implementation of tariff orders with cost reflective tariffs, no outstanding Government dues, no outstanding subsidy dues w.e.f. 1.4.2019, adhering to AT&C loss & ACS-ARR gap reduction trajectories agreed under any of the GoI schemes etc. Through these guidelines, working capital loans to Utilities have been restricted which are increasingly bringing the insolvency concerns of Utilities to saliency.

4. Mandating Accounting Standards for Distribution Utilities

Intent is to bring about uniformity in financial reporting by DISCOMS across the country by mandating Common Accounting Standards, uniform treatment of power specific transactions and uniform reporting through Special Purpose Financial Statements.

The Accounting Rules under formulation contains necessary disclosures and accounting formats over and above those mandated by GAAP and Ind-AS to ensure that important information normally hidden in the accounts or that not disclosed is available in public domain for analysis.

While the Accounting Standards are under final stages of formulation, this would help to achieve transparency and disclosure of information hitherto not available in the public domain.

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Investment Promotion



Investment Promotion

1. Charging Infrastructure for Electric Vehicles

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>F. No.:12/2/2018-EV</u> <u>Charging Infrastructure for Electric Vehicles - Revised Guidelines and Standards</u>	<u>01.10.2019</u>
<u>Amendment in revised guidelines of Charging Infrastructure for Electric Vehicles</u>	<u>08.06.2020</u>

With the objective of facilitating creation of charging infrastructure for Electric Vehicles (EVs), in April,2018, it was clarified that the charging of batteries of EVs through charging stations does not require any license under provisions of the Electricity Act, 2003.

Guidelines and Standards for Charging Infrastructure for Electric Vehicles were issued by Ministry of Power on 01.10.2019 with an objective to enable faster adoption of electric vehicles in India by ensuring safe, reliable, accessible and affordable Charging Infrastructure and eco-system.

Ministry of Power has issued the revised consolidated Guidelines & Standards for charging infrastructure on 14thJanuary, 2022, having various provisions to facilitate accelerated establishment of charging infrastructure for EVs, which includes:

- a) Tariff for supply of electricity for Public Charging Station (PCS) shall be a single part tariff and shall not exceed "Average Cost of Supply" till 31stMarch, 2025.
- b) DISCOMs may leverage on funding from the Revamped Distribution Sector Scheme (RDSS). The cost of such works carried out by the DISCOMs under this funding shall not be charged from the consumers for Public Charging Stations for EVs.
- c) Charging stations meant for 100% in-house/captive utilization are free to choose charging specifications as per requirement.
- d) DISCOMs have been directed to provide electricity connection to Public Charging Station (PCS) in accordance with the timelines specified in the "Electricity (Rights of Consumers) Rules 2020".
- e) Any PCS/chain of charging station may also obtain electricity from any generation company through open access.
- f) For PCS land available with Government/Public entities shall be provided to Government/Public entity on a revenue sharing basis at a fixed rate of Rs.1/kWh (used for charging) to be paid to the land owning agency, initially for a period of 10 years.

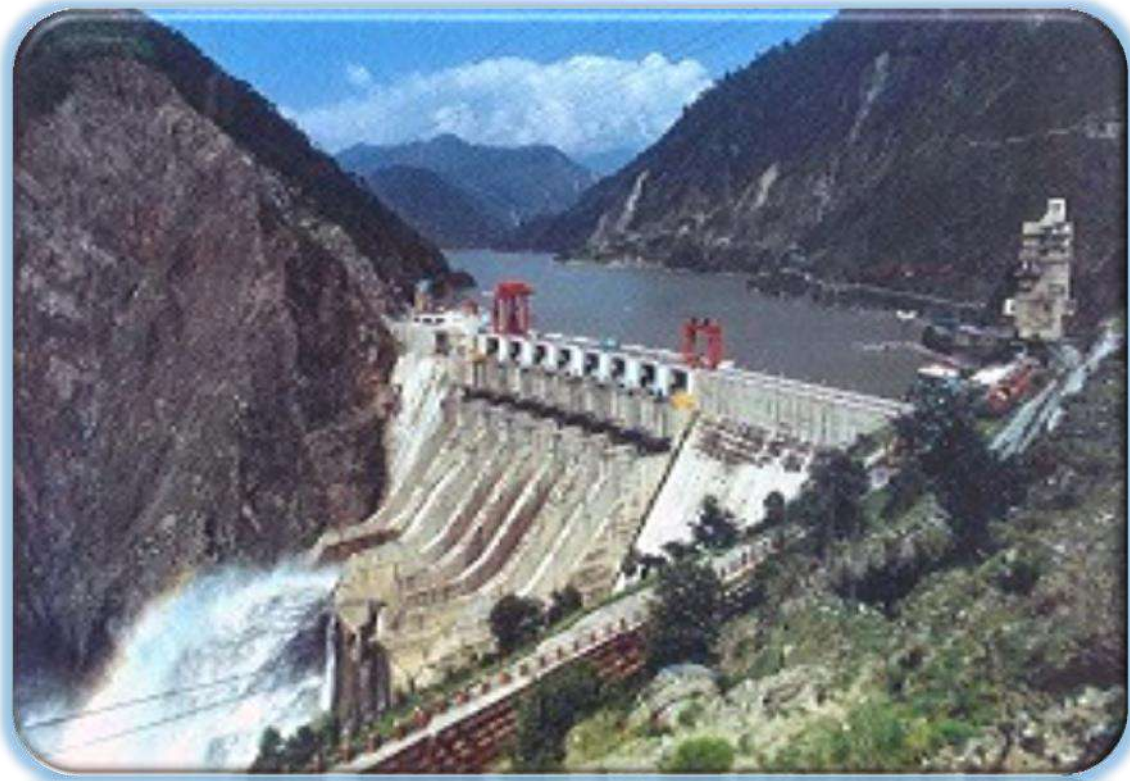
2. Transparency in the allocation of FlyAsh

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>F. No.: 9/7/2011-S.Th. (Vol. IV)</u> <u>Supply of Fly ash to the end users by the power plants to increase fly ash utilisation</u>	<u>22.09.2021</u>
<u>Amendment-Supply of Fly ash to the end users by the power plants to increase fly ash utilisation</u>	<u>08.11.2021</u>

The demand for fly ash has been increasing. In order to using transparency in the allocation of fly ash, orders have been issued providing for allocation of fly ash on transparent bidding basis. This will help to reduce the electricity tariff for consumer.

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Hydro



Hydro

1. Measures to promote Hydropower Sector

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>F. No.:15/2/2016-H-I(Pt.)</u> <u>Measures to promote Hydropower Sector</u>	<u>08.03.2019</u>

Orders were issued on 08.03.2019, providing for measures to promote the hydro power Sector. These include declaring all Hydro Power as Renewable Energy, providing for Hydro Purchase Obligation as a separate entity within Non-Solar Renewable Purchase Obligation, Tariff Rationalization measures for bringing down hydropower tariff, Budgetary support for Flood Moderation/ Storage Hydro Electric Projects to reduce the tariff of Hydro Power projects the amount for Flood Moderation/ Storage cost shall be released after valuation on case-to-case basis as per guidelines, Budgetary Support to cost of Enabling Infrastructure i.e., roads/bridges.

2. Guidelines to reduce the incidence of time and cost overruns in Hydro Power Projects

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>F. No.: 2/3/2016-NHPC</u> <u>Guidelines to reduce the incidence of time and cost overruns in Hydro Power Projects</u>	<u>08.11.2019</u>

Construction of Hydro Electric Projects usually gets delayed on account of various reasons resulting in Time and Cost overrun. Guidelines to reduce the incidence of time and cost overruns in hydro power projects were issued on 08.11.2019 for strict compliance by CPSUs. These guidelines covered various aspects viz. realistic scheduling, usage of software tools, concept of sunset date, listing critical/ non critical works, delegation of power, timely settlement of claims, adoption of international best practices, resource mobilization, dispute resolution, incentivizing labour on achieving project milestones in time, etc.

3. Dispute Avoidance Mechanism

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>Concept Note on Dispute Avoidance Mechanism</u>	<u>27.09.2021</u>

A Dispute Avoidance Mechanism through 'Independent Engineer' has been put in place for avoidance of contractual disputes in hydro projects executed by CPSUs under Ministry of Power at the inception stage itself. Ministry has prepared a panel of domain experts with high level of integrity and proven track record. The CPSE & Contractor shall jointly select one Member from the panel of experts for each package of works. The Expert would be designated as 'Independent Engineer' (IE) for each contract. Any dispute will be referred to the Independent Engineer who will resolve it after hearing both parties and inspecting the site.

4. Dispute Resolution through Conciliation - Constitution of Conciliation Committee of Independent Experts (CCIE)

Government has decided to constitute three (3) Conciliation Committees of Independent Experts (CCIE), for settlement of disputes through Conciliation for Contractual Disputes in Projects implemented by CPSUs / Statutory Bodies under the administrative control of Ministry of Power. Each CCIE shall have three members having high level of integrity and proven track record.

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Energy Conservation



Energy Conservation

1. Energy Accounting & Auditing in DISCOMs

<i>Order / Corrigendum/ Amendment</i>	<i>Date of Issue</i>
<u>File No. 18/1/BEE/DISCOM/2021</u> <u>Gazette Notification 7th Oct 2021 for Energy Audit and Accounting in DISCOM- Regulation 2021</u>	<u>07.10.2021</u>

Bureau of Energy Efficiency (BEE) notified a regulation to Conduct Energy Audit in DISCOMs vide notification dated 7th October, 2021. As per this notification, all DISCOMs are mandated to conduct periodic energy accounting and annual energy audit. This regulation also requires DISCOMs to create a centralized energy accounting and audit cell with adequately qualified personnel.

Owing to the impact of energy auditing on the entire distribution and retail supply business and absence of an existing framework with dedicated focus on the same, it was imperative to develop a set of comprehensive guidelines that all Distribution utilities across India can follow and adhere to.

Accordingly, Regulations on Manner and Intervals for Conduct of Energy Audit and Accounting in Electricity Distribution Companies has been framed. Energy Accounting means accounting of all energy inflows at various voltage levels in the distribution periphery of the network, including renewable energy generation and open access consumers, and energy consumption by the end consumers. Energy accounting and a consequent annual energy audit would help to identify areas of high loss and pilferage, and thereafter focus efforts to take corrective action.

These Regulations for Energy audit in Electricity Distribution Companies provides broad framework for conduct of Annual Energy Audit though and Quarterly Periodic Energy Accounting with necessary Pre-requisites and reporting requirements to be met. Objectives to be achieved through annual energy audit and periodic energy accounting are:

- Development of a comprehensive energy accounting system to quantify and determine actual losses in the power distribution system, which is segregated across technical and commercial.
- Identify areas of leakage, wastage or inefficient use, thereby paving the way for tackling the present challenges of high Transmission and Distribution (T&D) losses by fixing the responsibilities & accountability.
- Facilitate the better accounting of consumer category-wise subsidy payable by state govt. to DISCOMs and brings transparency among DISCOMs and State Govt.
- Enable and ensure an independent 3rd party energy audit of the distribution system to arrive at a true and fair picture of T&D losses.
- To enable the Distribution utilities in undertaking targeted efficiency improvement activities to reduce T&D losses in priority areas / customer segments.
- Providing a basis for prioritizing energy capital investments and help budget more accurately to achieve maximum results.
- Identification of overloaded segments of the network for necessary capacity additions.



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