

THE CENTRAL ELECTRICITY REGULATORY COMMISSION (PLANNING, CO-ORDINATION AND DEVELOPMENT OF ECONOMIC AND EFFICIENT INTER-STATE TRANSMISSION SYSTEM BY CENTRAL TRANSMISSION UTILITY AND OTHER RELATED MATTERS) REGULATIONS, 2018

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THE CENTRAL ELECTRICITY REGULATORY COMMISSION (PLANNING, CO-ORDINATION AND DEVELOPMENT OF ECONOMIC AND EFFICIENT INTER-STATE TRANSMISSION SYSTEM BY CENTRAL TRANSMISSION UTILITY AND OTHER RELATED MATTERS) REGULATIONS, 2018¹

In exercise of powers conferred under clause (c) and (d) of sub-section (1) of section 79 of the Electricity Act, 2003 and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission hereby makes the following regulations, namely:—

1. Short title and commencement.—(1) These regulations may be called the Central Electricity Regulatory Commission (Planning, Co-ordination and Development of Economic and Efficient Inter-State Transmission System by Central Transmission Utility and other related matters) Regulations, 2018.

(2) These regulations shall come into force from date² of its publication in Official Gazette.

2. Objectives of the Regulations.—The objectives of this Regulation are to:

- (1) lay down the broad principles, procedures and processes to be followed for planning and development of an efficient, co-ordinated, reliable and economical system of Inter-State Transmission System (ISTS) for smooth flow of electricity from generating stations to the load centres;
- (2) ensure wider participation of stakeholders in the planning process and specify the procedures for stakeholders consultation and participation;
- (3) specify procedures to bring about transparency in the planning process; and
- (4) demarcate the roles and responsibilities of various organizations in line with the Act for meeting above objectives;

3. Scope and extent of applications of Regulations.—(1) These regulations shall be applicable to Central Transmission Utility (CTU), State Transmission Utilities (STUs), generating companies including companies having captive generating plants connected to or intending to connect with ISTS, transmission licensees, distribution licensees, Regional Power Committees (RPCs), National Load Despatch Centre (NLDC), Regional Load Despatch Centres (RLDCs) and State Load Despatch Centres (SLDCs) and any other recognized entity under the Act involved in planning and development of inter-state transmission system.

1. *Vide* Notification No. L-1/220/2017-CERC, dated 23rd July, 2018, published in the Gazette of India, Extra., Pt. III, Sec. 4, No. 323, dated 24th August, 2018.

2. Came into force on 24-8-2018.

(2) These regulations shall be in addition to the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for Grant of Transmission License and Other Related Matters Regulations), 2009; Central Electricity Regulatory Commission (Grant of Regulatory Approval for Execution of Inter-State Transmission Scheme to Central Transmission Utility Regulations), 2010; and the Tariff Regulations issued by the Central Commission from time to time under section 61 of the Act.

4. Definitions and Interpretations.—(1) In these regulations, unless the context otherwise requires, 'Act' means the Electricity Act, 2003 (36 of 2003).

(2) The words and expressions used in these Regulations and not defined herein but defined in the Act or any other Regulation of the Commission shall have the meaning assigned to them under the Act or other Regulations of the Commission.

5. Roles and Responsibilities of various Organizations.—The roles and responsibilities of various organizations for the purpose of planning as under:

- (1) The Central Transmission Utility (CTU) shall plan the inter-state transmission systems and while doing so, shall be responsible for preparation of base case and to undertake system studies for development of the transmission system. It shall also ensure proper coordination with various agencies such as CEA, transmission licensees, distribution licensees, Generating Companies, STUs, RLDCs and SLDCs involved in the planning process.
- (2) The National Load Dispatch Centre and Regional Load Dispatch Centre(s) shall provide periodic operational statistics and feedback to Central Transmission Utility along with supporting analysis and details which have a bearing on the planning process of inter-state transmission system.
- (3) The generating companies who are connected or intend to connect to inter-state transmission network shall provide the technical data as per format specified by the Central Transmission Utility in the detailed procedure.
- (4) Generating Stations connected to or intending to connect to ISTS shall furnish status of their projects to CTU from time to time as specified in detailed procedure.
- (5) Regional power Committee(s) shall assist the Central Transmission Utility in preparation of base case in consultation with STUs/ Distribution licensees of the region. It shall also discuss and suggest modifications when base case along with system studies is shared by the Central Transmission Utility. RPCs shall monitor implementation of matching intra-state system on quarterly basis.

6. Augmentation of the transmission system.—(1) The Central Transmission Utility shall, while planning to augment ISTS in the form of expansion or upgradation shall consider the following:

- (a) New and emerging technologies;
- (b) Cost-benefit analysis outcome;
- (c) Likely shutting down of old/inefficient generating stations;
- (d) Renewable capacity addition;
- (e) Renewable Purchase Obligation;
- (f) System adequacy from the perspective of black start/start-up supply;
- (g) Requirement of reactive power;
- (h) Optimal utilization of resources to ensure an efficient and economical system with due consideration to power market, cross border interconnection or any other policy initiatives of Government of India.

(2) When the augmentation of transmission system is undertaken for renewable energy sources, transmission system shall be planned by considering estimated renewable capacity additions in the Perspective Plan: Renewable Purchase Obligation (RPO) of each State; and utilizing the available margins in the system being planned for conventional power.

(3) The Central Transmission Utility may have consultations, with regard to renewable energy potential and its capacity addition, with Ministry of New and Renewable Energy (MNRE), Government of India or its authorized agencies and Departments responsible for renewable energy development of the State Government, in advance.

7. Process of Transmission Planning.—The Central Transmission Utility shall carry out transmission planning for augmentation and strengthening as under:—

- (1) The Central Transmission Utility shall review and carry out transmission planning exercise at least twice a year;
- (2) Consider applications for long term access, projections of electricity demand and generation, policy imperatives including renewable energy addition, national electricity plan and operational feedback from NLDC/RLDCs/SLDCs in terms of reliability and congestions;
- (3) Prepare base case for each probabilistic scenario (options) by considering details of generation as per national level data registry maintained by CEA, details of demand from distribution licensees or State Transmission Utilities (demand projections estimated by STUs in coordination with distribution licensees) or Authority, existing and under-construction inter-State and intra-State transmission network up to desired voltage level for the above exercise;
- (4) Distribution licensees and STUs shall provide the required inputs. In case, the required input is not made available by STU/distribution licensee, CTU shall approach RPC for required input.
- (5) System studies shall be conducted for various probabilistic scenarios which includes generation and load scenarios during peak, off-

peak and other than peak/off-peak hours for different seasons considering low, moderate and high renewable capacity addition, varying import/export requirements of each state and scheduling of various generating stations under economic dispatch for which variable cost of existing and upcoming generating stations shall be factored in.

- (6) In case requirement of total Injection to ISTS happens to be more than withdrawal requirement from ISTS, planning of ISTS shall be done for various scenarios of dispatch factoring known firm tie-ups of power.
- (7) While planning the transmission system, options of upgrading the existing ISTS in place of building new transmission lines such as increasing line loading through use of compensation, reconductoring, etc., for optimally utilizing the existing assets, should also be considered.
- (8) Based on progress of implementation of generating stations and upstream/downstream systems, mid-course correction for transmission system to the extent possible should be made in terms of (i) Reconfiguration of planned transmission system, (ii) Phasing of transmission elements and (iii) Delay/Deferment of some of the transmission elements.
- (9) The Central Transmission Utility shall also review the inter-State transmission system in the event of change in commissioning schedule of upstream and downstream system, shift of target region, phase out of generation units, operational feedback of Regional Load Dispatch Centres and exist from long term access.
- (10) Before finalizing the transmission scheme, CTU shall publish the details of all probabilistic scenarios and suggested transmission schemes on its website and seek stakeholder's comments. CTU shall finalise the transmission scheme after considering the responses received from stakeholders.
- (11) Associated Intra State network planning by STU shall be integrated with planning of inter-state network. After finalization of the transmission scheme, the base case prepared as per sub-Regulation (2) and system studies carried out as per sub-Regulation (3) above along with underlying assumptions, methodology and planning criteria shall be placed before the concerned Regional Power Committee(s); All such proposals to RPC(s) shall be accompanied with documents mentioned at Regulation 8(3) below.
- (12) RPC(s), on receipt of proposal from CTU, shall consider and convey its recommendations to CTU within 2 months of receipt of such proposal.

- (13) In case RPC doesn't agree with the proposal either fully or partially and CTU is of the view that the scheme is in interest of grid security/stability or decongesting the network or overcoming a contingency, it shall record this in writing and seek regulatory approval of the Central Commission. However, prior to seeking regulatory approval, CTU shall share the reasons for not agreeing with the recommendations of concerned RPC(s) with that RPC.
- (14) In case a transmission system is required in national interest or is of security/strategic importance and is funded through grant by Government of India/State Government, CTU may, incorporate such system/scheme directly on seeking regulatory approval of the Commission.

8. Stakeholder Consultation and Transparency.—(1) CTU shall consult stakeholders such as generators, STUs, RLDCs, SLDCs and distribution licensees and maintain transparency at all stages of planning of augmentation or strengthening of ISTS.

Provided that consultations with generators/distribution licensees shall mean consultations with the Chief Executive Officer of concerned generator/distribution licensees or its specifically designated nominee. If a generator/distribution licensee does not respond within 45 days, it shall be construed that consultation with that generator or distribution licensee is complete and CTU shall proceed further.

(2) The Central Transmission Utility shall ensure transparency while carrying out transmission planning under section 38 and section 39 of the Act through sharing of information, underlying assumptions, methodology, planning criteria and result of system study regularly.

(3) The Central Transmission Utility shall publish the following on its website and update the same on a half yearly basis:

- (a) Detailed justification for the scheme along with details of the complete scheme;
- (b) Results of System studies;
- (c) Assumptions made in system studies and inputs received from stakeholders;
- (d) Comments/suggestions of stakeholders along with treatment;
- (e) Likely capital costs and estimated monthly tariff; and
- (f) Status of upstream/downstream system.

(4) CTU in discharge of its functions under section 38(2)(b) of the Act may make such procedure and prescribe such forms as may be necessary for the purpose of planning and co-ordination relating to Inter-State Transmission System, which is not inconsistent with these regulations or any other regulations of the Commission.

9. Regulatory filings by CTU and Transmission Licensees.—9.1 Application for Regulatory approval by CTU:

(1) At the time of filing application before the Commission for grant of regulatory approval, the CTU shall submit the following:

- (a) Recommendations on the scheme by the concerned RPC(s);
- (b) Results of the system studies carried out by CTU;
- (c) Assumptions and Inputs considered in system studies;
- (d) Status of upstream/downstream transmission system; and
- (e) Status of consultation with the stakeholders along with Comments/suggestions of stakeholders and its treatment.

9.2. Application for Transmission License:

(1) At the time of consideration of application by this Commission for grant of transmission license to a transmission licensee, the CTU while making its recommendations shall submit the following:

- (a) Recommendations of the scheme by the concerned RPC(s);
- (b) Results of the system studies carried out by CTU;
- (c) Assumptions and Inputs considered in system studies;
- (d) Status of upstream/downstream transmission system; and
- (e) Status of consultation with the stakeholders along with Comments/suggestions of stakeholders and its treatment.

9.3 Application for Grant of tariff:

(1) The transmission licensee shall submit a certificate of CTU specifying the following along with the application for determination of tariff in accordance with relevant provisions of tariff regulations in vogue:

- (a) The scheme is implemented as per the terms and conditions of the license and regulatory approval granted or both, as the case may be;
- (b) The scheme has achieved/likely to achieve its desired objectives as per system studies made; and
- (c) Information with respect to status of implementation of upstream/downstream systems.

10. Miscellaneous.—The Central Transmission Utility shall be the custodian of the base case files and system study files along with all relevant details of final accepted network configuration.

(2) CTU shall furnish to the Commission status of on-going schemes and status of approval of proposed schemes on quarterly basis.

11. Manpower Deployment in Transmission Planning.—CTU and STU shall ensure proper and adequate manpower for conducting transmission planning exercise. CTU, in consultation with STUs shall prepare a scheme for

certification of personnel involved in planning at CTU and STU and submit to the Commission for approval within 6 months of issue of this Regulation.

12. Power to Relax.—The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an affected person to remove the hardship arising out of the operation of Regulation, applicable to a class of persons.

13. Power to Remove Difficulty.—If any difficulty arises in giving effect to any provision of these regulations, the Commission may, on its own motion or on an application made before it by any affected person, by order, make such provision not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations.
