

**CENTRAL ELECTRICITY REGULATORY COMMISSION**  
**NEW DELHI**

No. L-7/139(159)/2008

Dated: 22<sup>nd</sup> December 2009

**NOTIFICATION**

In exercise of powers conferred under Sections 79(1)(c) and 178(1) of the Electricity Act, 2003 (36 of 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:-

**CHAPTER – I: PRELIMINARY**

**1. Short Title and Commencement.** (1) These regulations may be called the Central Electricity Regulatory Commission (Measures to relieve congestion in real time operation) Regulations, 2009.

(2) These regulations shall come into force from the date of their notification in the Official Gazette.

**2. Definitions and Interpretation:-** (1) In these regulations, unless the context otherwise requires-

(a) “Available Transfer Capability (ATC)” means the transfer capability of the inter-control area transmission system available for scheduling commercial transactions (through long term access, medium term open access and short term open access) in a specific direction, taking into account the network security. Mathematically ATC is the Total Transfer Capability less Transmission Reliability Margin.

(b) “Commission” means the Central Electricity Regulatory Commission referred to in Section 76 of the Electricity Act, 2003 (36 of 2003).

(c) “Congestion” means a situation where the demand for transmission capacity exceeds the Available Transmission Capability;

- (d) “Congestion charge” means the supplementary charge kicked in on one or more Regional entities in one or more Regions for transmission of power from one Region to another or from one State to another within a Region when the deviations from the schedule cause the net drawal of power in the inter-regional or intra-regional transmission links to go beyond the Total Transfer Capability limit;
  - (e) “Control area” means an electrical system bounded by interconnections (tie lines), metering and telemetry, where it controls its generation and/or load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system;
  - (f) “Credible contingency” means the likely-to-happen contingency, which would affect the Total Transfer Capability of the inter-control area transmission system;
  - (g) “Regional entity” means such persons whose metering and energy accounting is done at the regional level;
  - (h) “Transmission Reliability Margin (TRM)” means the amount of margin kept in the total transfer capability necessary to ensure that the interconnected transmission network is secure under a reasonable range of uncertainties in system conditions;
  - (i) “Total Transfer Capability (TTC)” means the amount of electric power that can be transferred reliably over the inter-control area transmission system under a given set of operating conditions considering the effect of occurrence of the worst credible contingency.
- (2) The words and expressions used in these regulations and not defined herein but defined in the Act shall have the meaning assigned to them under the Act.

## **CHAPTER –II: MEASURES TO RELIEVE CONGESTION**

### **3. Calculation of Total Transfer Capability (TTC), Available Transfer Capability (ATC) and Transmission Reliability Margin (TRM)**

- (1) The National Load Despatch Centre shall assess the Total Transfer Capability (TTC), Available Transfer Capability (ATC) and Transmission

Reliability Margin (TRM) of inter-regional links / Corridors in consultation with Regional Load Despatch Centers, and revise, if necessary, the TTC, ATC and TRM declared by the Central Transmission Utility (CTU) as per the detailed procedure mentioned in the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 .

- (2) TTC, ATC, and TRM along with the details of basis of calculations, including assumptions if any, shall be put up on the website of NLDC and RLDC at least three months in advance. The specific constraints indicated by the study would also be put on the website.
- (3) Regional Load Despatch Centres shall assess Total Transfer Capability (TTC) , Available Transfer Capability (ATC) and Transmission Reliability Margin (TRM) of individual control areas within the Region, if required, and the same would be put on the website of respective RLDC, along with the details of basis of calculations, including assumptions if any, three months in advance. The specific constraints indicated by the study would also be put on the website.

Provided that the NLDC shall perform transmission system reliability studies for the summer, monsoon, winter and pre-winter/post winter (when the all-India demand is least) scenarios for peak and off-peak, to determine the TTC of its system. The worst credible contingency shall be studied to ensure equipment loadings, voltage stability, and transient stability.

Provided further that National Load Despatch Centre (NLDC) and/or concerned Regional Load Despatch Centre (RLDC) , may revise the TTC , ATC and TRM due to change in system conditions, which includes change in network topology or change in anticipated active or reactive generation or load, on account of outage or otherwise, of one or more generators or transmission lines, at any of the nodes in the study. Such revision should clearly state the reasons thereof. The TTC, ATC and TRM may again be revised on the day-ahead basis depending on system conditions anticipated at that time.

Provided also that when advance measurement techniques like Phasor Measuring Units (PMUs) become available to the NLDC and RLDCs for real-time field measurements, the inference from these measurements would be suitably used for assessment of Total Transfer Capability.

#### **4. Applicability of Congestion Charge.**

(1) To relieve congestion in the real time, a congestion charge shall be applied as a commercial measure. The congestion charge will be payable by a Regional entity or entities causing congestion in the inter-regional link or intra-regional link and receivable by a Regional entity or entities relieving congestion.

(2) Congestion charge may be imposed on any Regional entity or entities in any Region or Regions for causing congestion and paid to any Regional entity or entities in any Region or Regions for relieving congestion as per the detailed procedure under these regulations formulated by NLDC and approved by the Commission.

(3) The congestion charge shall be payable by the overdrawing regional entity in addition to the Unsheduled Interchange charges which would be payable as per Central Electricity Regulatory Commission (Unsheduled Interchange charges and related Matters) Regulations,2009 or any reenactment thereof.

**5. Rate of congestion charge.** The Commission may, from time to time, by order specify the rate of congestion charge applicable to whole or a part of the region.

**6. Notice for application of congestion charge.** When, in the opinion of the National/Regional Load Despatch Centre, flow of electricity on an inter-regional /intra-regional corridor/ link used for transfer of electricity has crossed the ATC of such corridor/link, the NLDC/RLDC shall issue a warning notice to the defaulting entities. If the flow of electricity on the inter-regional /intra-regional corridor/ link exceeds the TTC, the NLDC/RLDC may, after notice through fax/voice message and through posting on its website and the common screen available on the Energy Management System, which is common to NLDC, RLDC and SLDCs, decide to apply congestion charge on the defaulting entities from a particular time-block in accordance with regulation 4:

Provided that notice of at least two clear time blocks shall be given by the Regional Load Despatch Centre before congestion charge becomes applicable, not counting the time block in which the notice is issued.

**7. Notice for withdrawal of congestion charge.** When in the opinion of the National / Regional Load Despatch Centre, flow of electricity on the affected

transmission link /corridor has come down to the ATC, it may, after notice through fax/voice message and through posting on its website and the common screen available on the Energy Management System, withdraw congestion charge from a particular time-block:

Provided that notice of one time block shall be given by the Regional Load Despatch Centre before congestion charge is withdrawn, not counting the time block in which the notice is issued.

### **CHAPTER – III: CONGESTION CHARGE ACCOUNT**

**8. Congestion Charge Account.** (1) Each Regional Load Despatch Centre shall maintain a separate bank account called “Congestion Charge Account” wherein all money received on account of congestion charge shall be credited. The amount standing to the credit of Congestion Charge Account, if any, shall be transferred to a Fund at regular intervals as per methodology notified by the Commission.

(2) Congestion charge account shall presently be maintained and operated by the Regional Load Despatch Centre in the same manner as the account for Unscheduled Interchange Charges.

Provided that Congestion Charge Account may be maintained by any other entity as the Commission may direct by notification from time to time.

(3) The Commission will separately notify the procedure regarding the maintenance and operation of the funds accumulated out of the congestion charges.

### **CHAPTER – IV: PAYMENT AND UTILISATION OF CONGESTION CHARGE**

**9. Statement of Congestion Charge.** The statement of payment and disbursement of congestion charge shall be issued by the Regional Power Committee Secretariat on weekly basis along with statement for Unscheduled Interchange charge. A monthly report on the collected and disbursed congestion charges shall be given to the Commission by Regional Load Despatch Centres.

**10. Payment to Congestion Charge Account.** The Regional Entity liable to pay congestion charge shall deposit the amount in Congestion Charge Account within 10 days of issue of statement by the Regional Power Committee Secretariat:

Provided that when payment of congestion charge is delayed beyond two

days from due date, that is to say, beyond twelve days of the issue of statement by the Regional Power Committee Secretariat, the Regional entity responsible for delay in depositing congestion charge amount shall be liable to pay interest at the rate of 0.04% per day.

**11. Release of Congestion Charge Amount.** The Regional Load Despatch Centre shall, within three working days of receipt of congestion charge payment, release the amount payable to the Regional Entity entitled to receive congestion charge, along with interest, if any, on account of delay in payment of congestion charge.

**12. Utilisation of Congestion Charge.** The undisbursed amount of congestion charge collected from the constituents in the account mentioned in Regulation 8 shall be utilized, with the prior approval of the Commission, to relieve congestion including but not limited to carrying out specific system studies to optimize the utilization of the inter-regional links, installation of special protection schemes, installation of shunt capacitors, etc. in accordance with the procedure notified under Regulation 8 .

Provided that the Regional Load Despatch Centres/any other entity entrusted with maintenance and operation of the funds shall submit report to the Commission on a six monthly basis, furnishing details of undisbursed amount and utilisation thereof.

**13. Dispute Redressal Mechanism.** All disputes arising under these regulations shall be decided by the Commission based on an application made by the person aggrieved in accordance with Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 or any re-enactment thereof.

**14. Power to Relax.** The Commission may by order, for reasons to be recorded in writing and after giving an opportunity of hearing to the parties likely to be affected, relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.

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(Alok Kumar)  
Secretary