

CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI

New Delhi, the 13<sup>th</sup> August, 2015

NOTIFICATION

No. 18/1/2013/Reg.Aff.(AS Regul.)/CERC.- In exercise of the powers conferred under Section 178 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:

**1. Short title and commencement**

- 1.1. These regulations may be called the Central Electricity Regulatory Commission (*Ancillary Services Operations*) Regulations, 2015.
- 1.2. These regulations shall come into force with effect from such date as may be notified by Commission.

**2. Definitions and Interpretation**

- 2.1. In these regulations, unless the context otherwise requires,
  - a. "Act" means the Electricity Act, 2003 (36 of 2003);
  - b. "actual drawal" in a time-block means electricity drawn by a buyer, as the case may be, measured by the interface meters;
  - c. "actual injection" in a time-block means electricity generated or supplied by the seller, as the case may be, measured by the Interface meters;
  - d. "beneficiary" means a person who has a share in an Inter-State Generating Station;
  - e. "Commission" means the Central Electricity Regulatory Commission referred to in sub-section (1) of section 76 of the Act;
  - f. "Congestion" means a situation where the demand for transmission capacity exceeds the Available Transfer Capability;
  - g. "Detailed Procedure" means the procedure issued under regulation 14;
  - h. "Deviation" in a time-block for a seller means its total actual injection minus its total scheduled generation and for a buyer means its total actual drawal minus its total scheduled drawal;
  - i. "Grid Code" means the Grid Code specified by the Commission under clause (h) of sub-section (1) of Section 79 of the Act;

- j. "interface meters" means interface meters as defined by the Central Electricity Authority under the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time;
- k. "Load Despatch Centre" means National Load Despatch Centre, Regional Load Despatch Centre or State Load Despatch Centre, as the case may be, responsible for coordinating scheduling in accordance with the provisions of Grid Code;
- k. "Nodal Agency" means the System Operator, namely National Load Despatch Centre through the Regional Load Despatch Centres who shall be responsible for implementation of the ancillary services at the inter-state level. At the intra state level, the State Load Despatch Centre would be the nodal agency as and when such services are introduced by the SERCs;
- l. "Virtual Ancillary Entity" means a virtual entity participating in the Regional Deviation Pool, as operationalized under Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014, which shall act as the counterparty for the schedule prepared for despatch of Reserves Regulation Ancillary Services Providers;
- m. "Reserves Regulation Ancillary Services or RRAS" means Ancillary Services that consist of either Regulation Down Service or Regulation Up Service;
- n. "Reserves Regulation Ancillary Services Provider or RRAS Provider" means the Regional Entity Generating Stations eligible to participate in the Reserves Regulation Ancillary Services, for providing Regulation Up or Regulation Down service;
- o. "Regulation Down Service" means an Ancillary Service that provides capacity that can respond to signals or instruction of the Nodal Agency for decrease in generation, within the technical limit and time limit, to respond to changes in system frequency or congestion in the system;
- p. "Regulation Up Service" means an Ancillary Service that provides capacity that can respond to signals or instruction of the Nodal Agency for increase in generation, within the technical limit and time limit to respond to changes in system frequency or congestion in the system;
- q. "regional entity" means a person whose metering and energy accounting is done at the regional level;
- r. "Scheduled generation" at any time or for a time block or any period means schedule of generation in MW or MWh ex-bus given by the concerned Load Despatch Centre;
- s. "Scheduled drawal" at any time or for a time block or any period time block means schedule of drawal in MW or MWh ex-bus given by the concerned Load Despatch Centre;

- t. "time-block" means a time block of 15 minutes each for which special energy meters record values of specified electrical parameters with first time block starting at 00.00 hrs;
- u. "un-requisitioned surplus" means the reserve capacity in a generating station that has not been requisitioned and is available for despatch, and is computed as the difference between the declared capacity of the generation station and its total schedule under long-term, medium-term and short-term transactions, as per the relevant regulations of the Commission.

2.2. Save as aforesaid and unless repugnant to the context or the subject-matter otherwise requires, words and expressions used in these regulations and not defined, but defined in the Act, or the Grid Code or any other regulations of this Commission shall have the meaning assigned to them respectively in the Act or the Grid Code or any other regulation.

### **3. Objective**

3.1. The objective of these regulations is to restore the frequency at desired level and to relieve the congestion in the transmission network.

### **4. Scope**

4.1. These regulations shall be applicable to the Regional Entities involved in the transactions facilitated through short-term open access or medium-term open access or long-term access in inter-State transmission of electricity.

### **5. Eligibility for participation for Reserves Regulation Ancillary Services (RRAS)**

5.1. All Generating Stations that are regional entities and whose tariff is determined or adopted by the Commission for their full capacity shall provide RRAS.

### **6. Role of Nodal Agency**

6.1. Nodal Agency shall prepare merit order stack of Inter-State Generating Stations as stipulated in regulation 6.2 and take despatch decision.

6.2. For Regulation-Up, the Nodal Agency shall prepare stack of un-requisitioned surplus capacities available in respect of Inter-State Generating Stations from lowest variable cost to highest variable cost in each time block, and taking into account ramp up or ramp down rate, response time, transmission congestion and such other parameters as stipulated in the Detailed Procedure. For Regulation-Down, a separate merit order stack from highest variable cost to lowest variable cost incorporating technical parameters as above shall be prepared.

6.3. Nodal agency shall prepare merit order stack factoring inter-regional and intra-regional transmission constraints, if any.

6.4. Nodal Agency shall monitor the frequency during continuous low frequency or high

frequency period, any system contingency, loading on tie line etc.

6.5. Nodal agency shall direct the selected RRAS Provider(s) based on the merit order for economical despatch for Regulation Up and Regulation Down, as and when requirement arises in the system on account of any of the following events:

- i. Extreme weather forecasts and/or special day;
- ii. Generating unit or transmission line outages;
- iii. Trend of load met;
- iv. Trends of frequency;
- v. Any abnormal event such as outage of hydro generating units due to silt, coal supply blockade etc.;
- vi. Excessive loop flows leading to congestion; and
- vii. Such other events.

6.6. Nodal agency shall direct the selected RRAS Provider(s) to withdraw their services after the circumstances leading to triggering of RRAS no longer exist. The time-frame for withdrawal of service shall be determined as per the Detailed Procedure.

## **7. Role of Reserves Regulation Ancillary Services Provider (RRAS Provider)**

7.1. The RRAS Provider shall on monthly basis submit details of fixed charges and variable charges, and any other applicable statutory charges, to the Regional Power Committees.

7.2. The RRAS Provider shall inject or back down generation as per the instruction of the Nodal Agency for Regulation Up and Regulation Down respectively.

## **8. Role of Regional Power Committees**

8.1. The Regional Power Committees shall intimate the Nodal Agency on monthly basis the details of fixed charges, variable charges and any other statutory charges applicable for the RRAS Providers for merit order dispatch.

8.2. The Regional Power Committee shall use the details of fixed charges, variable charges and any other statutory charges applicable for the RRAS Providers for preparation of their energy/ Deviation Accounts.

## **9. Dispatch of Reserves Regulation Ancillary Services**

9.1. Generation under the RRAS shall be scheduled to the Virtual Ancillary Entity in any one or more Regional Grids as decided by the Nodal Agency.

9.2. Once the time period as specified by the Nodal Agency in the scheduled procedure starts, RRAS shall be deemed to have been triggered.

9.3. The schedules of the RRAS Provider(s) shall be considered as revised by the quantum scheduled by the Nodal Agency under RRAS.

- 9.4. Any deviations in schedule of RRAS Provider(s) beyond the revised schedule shall be treated in accordance with the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014.

## **10. Withdrawal of Reserves Regulation Ancillary Services**

- 10.1. The Nodal Agency, having been satisfied that the circumstances leading to triggering of RRAS no longer exist, shall direct the RRAS Provider(s) to withdraw with effect from the time block as specified in the Detailed Procedure.

## **11. Scheduling of Reserves Regulation Ancillary Services**

- 11.1. The quantum of generation dispatched shall be directly incorporated in the schedule of respective RRAS Provider(s).
- 11.2. For Regulation Up Service, power shall be scheduled from the generating station to the Virtual Ancillary Entity by the concerned Nodal Agency, until such time the Nodal Agency gives instruction for withdrawal of service.
- 11.3. For Regulation Down Service, power shall be scheduled from the Virtual Ancillary Entity to the generating station, so that effective scheduled injection of the generating station comes down, until such time the Nodal Agency gives instruction for withdrawal of service.
- 11.4. Separate statement shall be maintained along with Regional Deviation Settlement Account for RRAS.
- 11.5. The energy despatched under RRAS shall be deemed as delivered ex-bus.

## **12. Energy Accounting**

- 12.1. Energy Accounting shall be done by the respective Regional Power Committee on weekly basis along with Deviation Settlement Account based on interface meters data and schedule.
- 12.2. The Regional Power Committees shall issue an Ancillary Services Statement along with the Deviation Settlement Mechanism Account.

## **13. Reserves Regulation Ancillary Services Settlement**

- 13.1. The settlement shall be done by the Nodal Agency under the Deviation Settlement Account under separate account head of Reserves Regulation Ancillary Services.
- 13.2. The payment to RRAS Provider(s) shall be from the Regional Deviation Pool Account Fund. Deficit, if any, in the Regional Deviation Pool Account Fund maintained by an RLDC due to despatch of Ancillary Services, shall be made up by Regional Deviation Pool Account Fund maintained by other RLDCs.

13.3. The RRAS Provider(s) shall be paid at their fixed and variable charges, with mark-up on fixed cost, as decided by the Commission through a separate order from time to time in case of Regulation Up services for the quantum of RRAS scheduled, from the Regional Deviation Pool Account Fund.

Provided that, the fixed and variable charges allowed by the Commission and as applicable at the time of delivery of RRAS shall be used to calculate the payment for this service and no retrospective settlement of fixed or variable charges shall be undertaken even if the fixed or variable charges are revised at a later date.

13.4. The RRAS Provider(s) shall adjust the fixed charges to the original beneficiaries for the quantum of un-requisitioned surplus scheduled under Regulation Up service.

13.5. For Regulation Down service, the RRAS Provider(s) shall pay back 75% of the variable charges corresponding to the quantum of Regulation Down services scheduled, to the Regional Deviation Pool Account Fund.

13.6. Any deviation from the schedule given under RRAS shall be in accordance with the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014, as amended from time to time or any subsequent re-enactment thereof.

13.7. Sustained failure to provide the RRAS (barring unit tripping) by RRAS Provider(s) shall attract penalties on account of gaming. Violation of directions of RLDC for RRAS shall also make the RRAS Provider(s) liable for penalties in terms of section 29 of the Act.

13.8. No commitment charges shall be payable to the RRAS Provider(s) for making themselves available for the RRAS.

#### **14. Detailed Procedure**

14.1. The Nodal Agency shall, after obtaining prior approval of the Commission, issue the Detailed Procedure within a period of 3 months of notification of these regulations.

14.2. The Detailed Procedure shall contain the guidelines regarding operational aspects of RRAS including scheduling and dispatch and any residual matter.

#### **15. Power to Relax**

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

**16. Power to issue directions**

16.1. If any difficulty arises in giving effect to these regulations, the Commission may on its own motion or on an application filed by any affected party, issue such directions as may be considered necessary in furtherance of the objective and purpose of these regulations.

**(Shubha Sarma)**  
**Secretary**