Central Electricity Regulatory Commission

Notification

New Delhi, the ___ March, 2015

No. _____. - In exercise of powers conferred under clause (h) of sub-section (1) of Section 79 read with clause (g) of sub-section (2) of Section 178 of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, the Central Electricity Regulatory Commission hereby makes the following regulations to amend the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 including the first and second amendments thereof (hereinafter referred to as "the Principal Regulations"), namely:-

1. Short title and commencement - (1) These regulations shall be called the **Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Third Amendment) Regulations, 2015**,

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

2. **Amendment of Regulation 1 of Part 1 of Principal Regulations:** Sub-Regulation (v) under Regulation 1.4 of the Principal Regulations, shall be substituted as under:-

   "Part 6: Scheduling and Despatch Code: This section deals with the procedure to be adopted for scheduling and Despatch of generation of the Inter-State Generating Stations (ISGS) and scheduling for other transactions through long-term access, medium-term and short-term open access including complementary commercial mechanisms, on a day-ahead and intra-day basis with the process of the flow of information between the ISGS, National Load Despatch Centre (NLDC), Regional Load Despatch Centre (RLDC), Power Exchanges and the State Load Despatch Centres (SLDCs), and other concerned persons.

   Most of the wind and solar energy generators are presently connected to intra-State network and in future are likely to be connected to the inter-state transmission system (ISTS) as well. Keeping in view the variable nature of generation from such sources and the effect such variability has on the inter-state grid, and in view of the large-scale integration of such sources into the grid envisaged in view of the Government of India's thrust on renewable sources of energy, scheduling of wind and solar energy generators covered under the control area of RLDCs, has been incorporated in this code."

3. **Amendment of Regulation 2 (Definitions) of Principal Regulations:** Sub-Regulation (eee) of Regulation 2 of the Principal Regulations, shall be substituted as under:-

(eee) "Pool Account" means regional account for (i) payments regarding Deviation Charges (Deviation Charge Account) or (ii) reactive energy exchanges (Reactive Energy Account) (iii) Congestion Charge, as the case may be;

4. **Amendment of Regulation 2 of Part 2 of Principal Regulations:** Regulation 2.4.5 of the Principal Regulations, shall be substituted as under

"**2.4.5** RPC Secretariat or any other person as notified by the Commission from time to time, shall prepare monthly Regional Energy Account (REA), weekly deviation charge account, reactive energy account, and congestion charge account, based on data provided by RLDC, and deviation charge account for wind and solar energy generators whose scheduling is done by the RLDCs, based on data provided by SLDC/RLDC of the State/Region in which such generators are located and any other charges specified by the Commission for the purpose of billing and payments of various charges."

5. **Amendment of Regulation 5.5 of Part 5 of Principal Regulations:** Regulation 5.5.1 (b) of the Principal Regulations, shall be substituted as under :-

"A daily report covering the performance of the regional grid shall be prepared by each RLDC based on the inputs received from SLDCs / Users and shall be put on its website. This report shall also cover the wind and solar power generation and injection into the grid."

6. **Amendment of Regulation 6.2 of Part 6 of Principal Regulations:** In Regulation 6.2 of the Principal Regulations, the words "This code also provides the methodology for re-scheduling of wind and solar energy on three (3) hourly basis and the methodology of compensating the wind and solar energy rich State for dealing with the variable generation through a Renewable Regulatory charge. For this, appropriate meters and Data Acquisition System facility shall be provided for accounting of UI charges and transfer of information to concerned SLDC and RLDC." shall be substituted by the words "This code also provides the methodology for re-scheduling of wind and solar energy generators whose scheduling is done by the RLDCs, on one and half hourly basis and the methodology of handling deviations of these wind and solar energy generators. For this, appropriate meters and Data Acquisition System facility shall be provided for accounting of DSM charges and transfer of information to the concerned SLDC and RLDC."

7. **Amendment of Regulation 6.4(2) of Part 6 of Principal Regulations:** Regulation 6.4(2)(b) of the Principal Regulations shall be substituted as under:-

"(b) Ultra Mega Power Projects including projects based on wind and solar resources and having capacity of 500 MW and above"

8. **Amendment of Regulation 6.5 of Part 6 of Principal Regulations:** Regulation 6.5 (23) of the Principal Regulations, shall be substituted as under :-

"**(i)** RE generation is uncertain and variable but uncertainty and variability can and should be minimized to the extent possible through proper forecasting. Accuracy of forecasts can be increased *inter alia* by maximizing geographic diversity in RE generation as the errors in forecasts tend to offset each other, the larger the number of generators covered and broader the area included in the forecasts. In order to maximize the accuracy of forecasts, meteorological models must incorporate data about maximum possible RE generators in as high a resolution (spatial and temporal) as possible – e.g., wind turbine technical specifications, equipment failure, weather data (wind speed, temperature, pressure), etc. This data should be provided on a mandatory basis by the wind and solar generators to the concerned RLDC.

(ii) Forecasting would be done by the wind and solar generators as well as the concerned RLDC. The forecast by the concerned RLDC would be with the objective of secure grid operation. The forecast by the wind and solar generator would be wind-farm/solar facility centric and would form the basis of scheduling. The wind and solar generator will have the option of accepting the concerned RLDC's forecast for preparing its schedule or provide the concerned RLDC with a schedule. The concerned RLDCs may engage forecasting agency(ies) at the centralized level and prepare a schedule of inter-State renewable generating stations. Any commercial impact on account of scheduling based on the forecast would, however, be borne by the wind and solar energy generator.

(iii) The schedule by wind and solar power generating stations whose scheduling is done by the RLDCs (excluding collective transactions) may be revised by giving advance notice to the concerned RLDC, as the case may be. Such revisions by wind and solar energy generating stations shall be effective from 4^{th} time block, the first being the time-block in which notice was given. There may be one revision for each time slot of one and half hours starting from 00:00 hours of a particular day subject to maximum of 16 revisions during the day.

(iv) The schedule of solar generation whose scheduling is done by the RLDCs, shall be given by the generator based on availability of the generator, weather forecasting, solar insolation, season and normal solar generation curve."

9. **Amendment of Annexure-1 of Principal Regulations:** Regulation 4 of the Annexure-1 of the Principal Regulations, shall be substituted as under :-

"The wind and solar energy generators whose scheduling is done by the RLDCs, shall forecast renewable energy generation at the following time intervals:

(i) Day ahead forecast: Wind and solar energy generation forecast with an interval of 15 minutes for the next 24 hours for the aggregate Generation capacity of 50 MW and above.

(ii) The schedule by such wind and solar energy generating stations whose scheduling is done by the RLDCs, and supplying inter-state power under long-term access and medium-term and short-term open access may be revised by giving advance notice to RLDC. Such revisions by wind and solar energy generating stations shall be effective from 4th time-block, the first being the time-block in which notice was given. There may be maximum of 16 revisions for each one and half hour time slot starting from 00:00 hours during the day."

10. **Amendment of Annexure-1 of Principal Regulations:** Para 5 of the Annexure-1 of the Principal Regulations, shall be substituted as under :-

"The charges payable for deviation form schedule for the wind and solar energy generators whose scheduling is done by the RLDCs, shall be delinked form frequency and shall be accounted for and settled in accordance with the provisions of the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations as amended from time to time."

11. **Amendment of Annexure-1 of Principal Regulations:** Paras 6, 7 and 9 of the Annexure-1 of the Principal Regulations, shall be deleted.

(Shubha Sarma)
Secretary

Note: Principal Regulations were published in Gazette of India, Extraordinary, Part-III, Section 4 at Serial No. 115 on 28.4.2010, the first amendment to the Principal Regulations were published in the Gazette of India, Extraordinary, Part-III, Section 4 at Serial No. 60 on 6th March, 2012 and the second amendment to the Principal Regulations were published in the Gazette of India, Extraordinary, Part-III, Section 4 at Serial No. 08 on 6th January, 2014.