

CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI

New Delhi, 12<sup>th</sup> August, 2013

NOTIFICATION (DRAFT)

No. L-1/18/2010-CERC.- 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, hereinafter referred to as "the Principal Regulations".

**1. Short title, extent and commencement**

- (1) These Regulations may be called the Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Second Amendment) Regulations, 2013.
- (2) These Regulations shall come into force with effect from the date of their publication in the official Gazette.

**2. Amendment in Regulation 2 of Principal Regulations.-** Three new clauses shall be added in under sub-Regulation (1) of Regulation 2 of Principal Regulations as under, namely:

"(hhhh) : Coordinating Agency:

The agency appointed by Wind/Solar Generators connected on the pooling station commissioned on or after 3.5.2010, which may be one of the generators or any other mutually agreed agency for the following purpose:

- i. Provide schedules with periodic revisions as per Grid Code on behalf of all the wind/solar generators connected to the pooling station.
- ii. Responsible for metering, data collection/ transmission, communication, co-ordination with DISCOMS, RLDC, SLDC, RPC and other agencies.
- iii. Undertake commercial settlement of all charges on behalf of the generators, including payments to the Regional/ State UI pool accounts through the concerned SLDC.
- iv. Undertake de-pooling of payments received on behalf of the generators from the Regional/ State UI Pool accounts and settling them with the individual generators.

- v. Undertake commercial settlement of any other charges on behalf of the generators as may be mandated from time to time.

(iii) Pooling Station: The substation where pooling of generation of individual wind generators or solar generators is done for interfacing with the next higher voltage level substation. This shall be the first interface point with DISCOM/STU/CTU network, as the case may be.

(jjj) Reference Rate: Rate which shall be used for computing financial implications for the variability of Wind Generators under Renewable Regulatory Fund (RRF) Procedure issued with the approval of the Commission."

### **3. Amendment in Regulation 5 of the Principal Regulations:**

- (1) In sub-regulation (i) of Regulation 5.2 of the Principal Regulations, the words and figures "However, if frequency falls below 49.8 Hz, all partly loaded generating units shall pick up additional load at a faster rate, according to their capability" shall stand deleted.
- (2) In sub-regulation (j) of Regulation 5.2 of the Principal Regulations, the words "particularly when frequency is falling or is below 49.7 Hz" shall stand deleted.
- (3) In sub-regulation (m) of Regulation 5.2 of the Principal Regulations, the words and figures "49.7-50.2 Hz" shall be substituted with the words and figures "49.95-50.05 Hz".
- (4) In sub-regulation (a) of Regulation 5.4.2 of the Principal Regulations, the following phrase "whenever the system frequency falls to 49.8 Hz" shall stand deleted.
- (5) In sub-regulation (b) of Regulation 5.4.2 of the Principal Regulations, the following phrase "when frequency is 49.7 Hz or below" shall stand deleted.
- (6) The sub-regulation (g) of Regulation 5.4.2 of the Principal Regulations shall be substituted with the following:

"(g) RLDCs shall devise standard instantaneous message formats in order to give directions in case of contingencies and/or threat to the system security to reduce deviation from schedule by the bulk consumer, SLDC/State/Injecting Utilities at different overdrawal/under-drawal/over-injection/under-injection conditions depending upon the severity. The concerned SLDC/other regional entity shall ensure immediate compliance with these directions of RLDC and send a compliance report to the concerned RLDC."

#### **4. Amendment in Regulation 6 of the Principal Regulations:**

- (1) The Regulation 6.4.6 of Principal Regulations shall be substituted with the following:

"The system of each regional entity shall be treated and operated as notional control area. The algebraic summation of scheduled drawal from ISGS and from contracts through long-term access, medium-term and short-term open access arrangements shall provide the drawal schedule of each regional entity, and this shall be determined in advance on day-ahead basis. The regional entities shall regulate their generation and/or consumers' load so as to maintain their actual drawal from the regional grid close to the above schedule.

Maximum inadvertent deviation allowed during a time block shall not exceed the limits specified in the Deviation Settlement Mechanism Regulations. Such deviations should not cause system parameters to deteriorate beyond permissible limits and should not lead to unacceptable line loadings. Deviations, if any, from net drawal schedule shall be priced through the Deviation Settlement mechanism as specified by the Central Commission from time to time.

Every regional entity shall ensure reversal of sign of deviation from schedule within every six time blocks."

- (2) The Regulation 6.4.7 of Principal Regulations shall be substituted with the following:

"7. The SLDC, SEB / distribution licensee shall always restrict the net drawal of the state from the grid within the drawal schedules. The concerned SEB/distribution licensee/User, SLDC shall ensure that their automatic demand management scheme mentioned in clause 5.4.2 acts to ensure that there is no over-drawal. If the automatic demand management scheme has not yet been commissioned, then action has to be taken as per manual demand management scheme to restrict the net drawal from grid to within schedules and all actions for early commissioning of automatic demand management scheme would be initiated."

- (3) The Regulation 6.4.10 of Principal Regulations shall be substituted with the following:

"10. The ISGS would normally be expected to generate power according to the daily schedules advised to them barring any inadvertent deviations. Maximum deviation allowed during a time block shall not exceed the limits specified in the Deviation Settlement Regulations. Such deviations should

not cause system parameters to deteriorate beyond permissible limits and should not lead to unacceptable line loadings. Inadvertent deviations, if any, from the ex-power plant generation schedules shall be appropriately priced in accordance with Deviation Settlement Mechanism Regulations. In addition, deviations, from schedules causing congestion, shall also be priced in accordance with the Congestion Charge Regulations of CERC."

- (4) The Regulation 6.4.11 of Principal Regulations shall stand deleted.
- (5) The Regulation 6.4.12 of Principal Regulations shall be substituted with the following:

"12. However, notwithstanding the above, the RLDC may direct the SLDCs /ISGS /other regional entities to increase/decrease their drawal/generation in case of contingencies e.g. overloading of lines/transformers, abnormal voltages, threat to system security. Such directions shall immediately be acted upon. In case the situation does not call for very urgent action, and RLDC has some time for analysis, it shall be checked whether the situation has arisen due to deviations from schedules. These shall be got terminated first, through appropriate measure like opening of feeders , if necessary by SLDC/RLDC, before an action, which would affect the scheduled supplies to the long term, medium term customers or short term customers is initiated in accordance with Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-State Transmission and Related matters) Regulations, 2009 and CERC (Open Access in Inter-State Transmission) Regulations, 2008.

In case short term /Medium term or Long Term open access are curtailed, RLDC(s) shall submit a report regarding the reasons due to which it was not able to curtail deviations from Schedule and agencies which had not taken necessary actions."

- (6) Regulation 6.4.15 shall stand deleted.
- (7) Regulation 6.4.24 of Principal Regulations shall be substituted with the following:

"24. Hydro generating stations are expected to respond to grid frequency changes and inflow fluctuations. Maximum deviation allowed during a time block shall be as per the CERC Deviation Settlement Mechanism Regulations."

- (8) Regulation 6.5.9 of Principal Regulations shall stand deleted.

- (9) Regulation 6.5.13 of Principal Regulations shall be substituted with the following:

"13. The schedule finalized by the concerned load despatch centre for hydro generating station, shall normally be such that the scheduled energy for a day equals the total energy (ex-bus) expected to be available on that day, as declared by the generating station, based on foreseen/planned water availability/release. It is also expected that the total net energy actually supplied by the generating station on that day would equal the declared total energy, in order that the water release requirement is met."

- (10) Regulation 6.5.17 of Principal Regulations shall be substituted with the following:

"17. In case of any grid disturbance, scheduled generation of all the ISGS supplying power under long term/medium term/short term shall be deemed to have been revised to be equal to their actual generation and the scheduled drawals of the beneficiaries/buyers shall be deemed to have been revised accordingly for all the time blocks affected by the grid disturbance. Certification of grid disturbance and its duration shall be done by the RLDC.

Provided further that in case of grid disturbance, for above revision of generation schedule, long term, medium term and short term schedule shall be deemed to be revised in proportion of original Schedule in each category of transaction and corresponding drawals schedule shall be deemed to be revised accordingly.

Provided that the above shall be applicable till any of this transaction was not terminated by the RLDC by giving a notice.

Provided further that in case where Grid Disturbance affects only the Region either where Generator is located or Drawal entity is located, in such cases, for the short term transactions, following methodology shall be applied:

- (a) for quantum of Deviation, for the periods, till information of Grid Disturbance communicated to the affected entities by concerned RLDC, which was due to difference in Original schedule and revised deemed schedule, payment to/from Deviation settlement account shall be done at contracted energy price of the particular transaction.
- (b) If Generation is affected and drawal is not affected, drawee entity shall pay in its regional deviation account, for deviation at Contracted energy rate. Generator which had received payment shall reimburse drawee entity for this payment.

(c) If drawal is affected and Generation is not affected, Deviation settlement account of the Generation Region shall pay to drawee entity at the contracted energy rate."

(11) The sub-regulation 23 of the Regulation 6.5 shall be substituted as under:

"(23) With effect from 15.7.2013, Scheduling of wind power generation plants would have to be done for the purpose of deviation settlement where the sum of generation capacity of such plants connected at the connection points (called Pooling stations) to the transmission or distribution system is 10 MW and above and connection point is 33 kV and above, for pooling stations commissioned after 3.05.2010. For capacity and voltage level below this, as well as for old wind farms (A wind farm is collection of wind turbine generators that are connected to a common connection point), it could be mutually decided between the Wind Generator and the transmission or distribution utility, as the case may be, if there is no existing contractual agreement to the contrary. The schedule by wind power generating stations (excluding collective transactions) may be revised by giving advance notice to SLDC/RLDC, as the case may be. Such revisions by wind power generating stations shall be effective from 6th time block, the first being the time-block in which notice was given. There may be one revision for each time slot of 3 hours starting from 00:00 hours of a particular day subject to maximum of 8 revisions during the day."

(12) Sub-regulation 34 of Regulation 6.5 shall be substituted as under:

"34. While availability declaration by ISGS shall have a resolution of one decimal (0.1) MW and one decimal (0.1) MWh, all entitlements, requisitions and schedules shall be rounded off to the nearest two decimals at each control area boundary for each of the transaction, to have a resolution of 0.01 MW and 0.01 MWh."

## **5. Amendments to Annexure 1 of the Principal Regulations (Complementary Commercial Mechanism)**

(1) Para 3 Annexure 1 of the Principal Regulations shall be substituted as under:

"3. Wind energy being of variable nature, needs to be predicted with reasonable accuracy for proper scheduling and dispatching of power from these sources in the interconnected system. Hence wind generation forecasting is necessary for increased penetration. Wind generation forecasting can be done on an individual developer basis or joint basis for an aggregated generation capacity of 10 MW and above connected at a connection point of 33 kV and above. If done jointly, the wind forecasting facility shall be built and operated by wind developers in the

area and sharing of the cost shall be mutually discussed and agreed. For the purpose of this Regulation, the agency which would be assigned the work of forecasting, scheduling, metering and energy accounting, etc., shall be designated as coordinating agency.

This coordinating agency shall submit to SLDC an authorization on behalf of all generators that it is coordinating with copy endorsed to respective RLDC.

The RLDCs/SLDCs shall interact with coordinating agency only for forecasting, scheduling, metering and energy accounting, deviation and RRF settlement. SLDCs/RLDCs shall not be a party or respondent for any dispute between coordinating agency and its Generators."

- (2) In para 5 of Annexure 1 to the Principal Regulations, the words "who have not signed any PPA with the States or others as on date of coming into force of this IEGC" shall be substituted with the words "where pooling station was commissioned on or after 3.5.2010 and total connected generating capacity is 10 MW or above".
- (3) A new para shall be added after para 5 of Annexure 1 to the Principal Regulations as under:

"5A. If the capacity of the pooling station for Wind Generator at present is less than 10 MW, as and when its connected capacity becomes 10 MW or above, it shall participate in forecasting and scheduling. The ABT metering at pooling station shall be provided by the concerned DISCOM/STU or CTU as applicable. The cost of this shall be borne by all generators connected at that pooling station in proportion to their connected capacity and shall be paid by coordinating agency working on behalf of generators connected at the pooling station. Forecasting, scheduling and energy accounting shall be done at pooling station level.

In cases where pooling station capacity was augmented to 10 MW or above after 3.5.2010, both old and new generators connected at the pooling point shall participate in forecasting and scheduling.

Necessary arrangement of transferring real-time data from pooling station to SLDC/RLDC shall be made by coordinating agency and concerned DISCOM/STU shall facilitate this. The integration of this data with SCADA system of SLDC and onward transfer of the same to RLDC shall be the responsibility of SLDC. If required, this real time data may be accessed by coordinating agency for improving real time forecasting."

(4) In para 7 of Annexure 1 to the Principal Regulations, the words "who have not signed any PPA with the States or others as on date of coming into force of this IEGC" shall be substituted with the words "where the solar generation was commissioned on or after 3.5.2010 and total connected generating capacity is more than 5 MW".

(5) A new para shall be added after para 7 of Anneure 1 to the Principal Regulations as under:

"7A. For computation of financial implication on account of deviation in generation of renewable energy under Renewable Regulatory Fund in accordance with paras 5 and 7 above, Reference Rate shall be the Deviation Settlement Rate of average frequency of last year for the respective synchronized Grid i.e. NEW Grid and Southern Grid."

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Note: The Principal Regulations were notified in the Gazette of India Extraordinary, Part III Section 4 Ser. No. 115 on 28.4.2010. Addendum to the Principal Regulations was issued in Gazette of India Extraordinary, Part-III Section 4 at Ser No. 168 on 3.7.2010 and Corrigendum to the Principal Regulations was issued in Gazette of India Extraordinary, Part-III Section 4 at Ser No. 10 on 19.1.2011. The First amendment to the Principal Regulations was notified in the Gazette of India Extraordinary, Part III Section 4 Ser. No. 60 on 6.3.2012