



GRIDCO LIMITED

POWER PROCUREMENT BRANCH

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Dated/ 18.10.2022

To

The Secretary,
Central Electricity Regulatory Commission, Third Floor,
Chandralok Building, 36, Janpath, New Delhi - 110001
Email: secy@cercind.gov.in / shilpa@cercind.gov.in

Sub: Views of GRIDCO on Draft Central Electricity Regulatory Commission
(Indian Electricity Grid Code) Regulations, 2022

Ref: Public Notice No. L-1/265/2022/CERC dated 7.6.2022, 30.08.2022 and
29.09.2022 of CERC

Sir,

In response to the public notices of Hon'ble CERC under reference, please find enclosed herewith the views of GRIDCO on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022.

Hon'ble Commission is requested to take into consideration the views of GRIDCO before finalizing the above the above Draft IEGC Regulations, 2022.

Encl: Views of GRIDCO

Yours faithfully,

Mishra
18/10/2022

for
Chief General Manager (PP)

C.C to:-

1. E.A. to MD, GRIDCO for kind appraisal of MD, GRIDCO
2. P.S. to Dir (Comml) GRIDCO for kind appraisal of Dir (Comml) GRIDCO
3. P.S. to Dir (F & CA) GRIDCO for kind appraisal of Dir (F & CA) GRIDCO

Views of GRIDCO on Draft Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2022

On dated 07.06.2022, Hon'ble Commission has published the CERC (Indian Electricity Grid Code) Regulations, 2022 inviting comments/ suggestions/ objections from the stakeholders, while the Explanatory Memorandum to the above Draft Regulations was published on dated 09.10.2022. The views of GRIDCO on the said Draft Regulations are given here under:

1. **Draft Regulation 5(2)**

“5(2) Demand Forecasting:

- (i) Each distribution licensee within a State shall estimate the demand in its control area including the demand of open access consumers and factoring in captive generating plants, energy efficiency measures, distributed generation, demand response, for the next five (5) years starting from 1st April of the next year and submit the same to the STU by 31st July every year. The demand estimation shall be done using trend method, time series, econometric methods or any state of the art methods and shall include daily load curve (hourly basis) for a typical day of each month.*
- (ii) STU, based on the demand estimates furnished by the distribution licensees of the concerned State as per clause (i) of this sub-Regulation and in co-ordination with all the distribution licensees, shall estimate by 30th August every year, the demand for the entire State duly considering the diversity for the next five (5) years starting from 1st April of the next year.*
- (iii) Forum of Regulators may develop guidelines for demand estimation by the distribution licensees for achieving consistency and statistical accuracy by taking into consideration the factors such as economic parameters, historical data and sensitivity and probability analysis.”*

Views:

- 1.1 It is proposed that Forum of Regulators (FOR) in the first implementation year may develop guidelines for demand estimation, basing on which the distribution licensees will estimate the demand in their respective control area so also STU for the State. Therefore, no timeline for distribution licensee & STU should be prescribed for the first year of implementation without stipulating the timeline for Forum of Regulators to develop the said guidelines.

1.2 From the next year onwards, after successful implementation of the load forecasting as per prescribed guidelines of FOR, the time line for Load forecasting by Distribution Licensee and that by STU for the state may be adhered to.

2. **Draft Regulation 5 (3) (a) to 5 (3) (g)**

“5(3) Generation Resource Adequacy Planning:

- (a) *After the demand estimation as per sub-Regulation (2) of this **Regulation**, each distribution licensee shall*
- (i) *assess the existing generation resources and identify the additional generation resource requirement to meet the estimated demand in different time horizons, and*
 - (ii) *prepare generation resource procurement plan.*
- (b) *Assessment of the existing generation resources shall be done with due regard to their capacity contribution to meet the peak demand.*
- (c) *Generation resource procurement planning (specifying procurement from resources under State control area and regional control area) shall be undertaken in different time horizons, namely long-term, medium term and short-term to ensure*
- (i) *adequacy of generation resources and*
 - (ii) *planning reserve margin (PRM) taking into account loss of load probability and energy not served as specified by CEA.*
- (d) *In order to ensure optimum and least cost generation resource procurement planning, each distribution licensee shall give due consideration to the factors such as its share in the national coincident peak, seasonal requirement and possibility of sharing generation capacity seasonally with other States. For this purpose, each STU on behalf of the distribution licensees in the State shall provide to NLDC by 30th September every year, the details regarding demand forecasting, assessment of existing generation resources and such other details as may be required for carrying out a national level simulation for generation resource adequacy for States.*
- (e) *Based on the information received under clause (iv) of this sub-Regulation and after considering inter alia the national level planning reserve margin, share of each State in the national coincident peak, seasonal requirements of States and possibility of sharing generation capacity seasonally among States, NLDC shall carry out a simulation by 31st October every year, to*

assist the States in drawing their optimal generation resource adequacy plan. While carrying out the simulation, NLDC shall also take into consideration the information related to demand estimation, generation planning and related matters as available with CEA. The simulation carried out by NLDC for this purpose shall be considered merely an aid to the distribution licensees in the respective States in their exercise of generation resource adequacy planning and the distribution licensees shall be responsible for all commercial decisions on generation resource procurement.

- (f) *After considering the demand forecasting and the generation resource procurement planning carried out based on the principles specified under this Regulation, each distribution licensee shall ensure demonstrable generation resource adequacy as specified by the respective SERC for the next five (5) years starting 1st April of the next year. **Failure of a distribution licensee to meet the generation resource adequacy target approved by the SERC shall render the concerned distribution licensee liable for payment of resource adequacy non-compliance charge as may be specified by the respective SERC.***
- (g) *For the sake of uniformity in approach and in the interest of optimality in generation resource adequacy in the States, FOR may develop a model Regulation stipulating inter alia the methodology for generation resource adequacy assessment, generation resource procurement planning and compliance of resource adequacy target by the distribution licensee.*

Views:

- 2.1 For the first year of implementation (From April to March for the first year), no time line may be fixed for distribution licensee, STU and NLDC for Generation Resource Adequacy Planning.
- 2.2 The same may be fixed after development of a model regulation by FoR, stipulating inter alia the methodology for generation resource adequacy assessment, generation resource procurement planning and compliance of resource adequacy target by the distribution licensee.
- 2.3 Distribution licensee may be liable for payment of resource adequacy non-compliance charge due to their failure to meet the generation resource adequacy target approved by SERC provided that the distribution licensee has not followed the model regulation, framed by FoR while assessing and planning their generation resource adequacy requirement.

2.4 Resource Adequacy non-Compliance Charge should not be also applicable in case of non-availability of adequate Generation Resources due to any Force Majeure conditions, natural disasters and the factors not within the control of the distribution Licensee.

3. **Draft Regulation 5 (4) (a)**

“5(4) Transmission resource adequacy assessment:

(a) CTU shall undertake assessment and planning of the inter-State transmission system as per the provisions of the Act and shall inter alia take into account:

- (i) adequate power transfer capability across each flow-gate;*
- (ii) import and export capability for each control area;*
- (iii) import and export capability between regions; and*
- (iv) cross-border import and export capability.”*

Views:

3.1 Penal provision on CTU may be prescribed in the above Grid Code for their failure to provide adequate power transfer capability across each flow-gate, import and export capability for each control area, import and export capability between region and cross-border import and export capability.

4. **Draft Regulation 5(4)(b)**

“(b) STU shall undertake assessment and planning of the intra-State transmission system as per the provisions of the Act and shall inter alia take into account:

- (i) import and export capability across ISTS and STU interface; and*
- (ii) adequate power transfer capability across each flow-gate.”*

Views:

4.1 There should be penal provision on STU in the above Grid Code for their failure to provide adequate import and export capability across ISTS and STU interface and adequate power transfer capability across each flow gate.

5. **Draft Regulation 21 (3)**

“(3) The transmission licensee proposing its transmission system or an element thereof for trial run shall give a notice of not less than seven days to the concerned RLDC and CTU.”

Views:

5.1 Notice should also be given to the concerned stakeholders of the transmission system or an element thereof, undergoing trial run for witnessing such trial run.

5.2 Therefore, the above Regulation should be modified accordingly:

“(3) The transmission licensee proposing its transmission system or an element thereof for trial run shall give a notice of not less than seven days to the concerned RLDC, CTU and the concerned Stakeholders.”

6. **Draft Regulation 23 (1)**

“(1) Trial run of a transmission system or an element thereof shall mean successful energisation of the transmission system or the element thereof at its nominal system voltage through interconnection with the grid for continuous twenty-four (24) hours flow of power and communication signal from the sending end to the receiving end and with requisite metering system, telemetry and protection system:

Provided that under exceptional circumstances and with the prior approval of CEA, a transmission element can be energized at lower nominal system voltage level.”

Views:

6.1 Maintaining nominal system voltage 24 hours continuously for the transmission system or element thereof may not be possible always. The same may be modified in line with Clause No.3 (b) (Standards for Operation and Maintenance of Transmission Lines) of the Central Electricity Authority (Grid Standards) Regulations, 2010, specifying the limits for variation in nominal system voltage.

7. **Draft Regulation 29 (2) (a)**

“29(2) Isolation, Taking out of service and Switching off of an element of the grid:

(a) No element(s) of the grid shall be isolated from the grid, except (i) during emergency as per the Detailed Operating Procedure(s) of NLDC or RLDC or SLDC, as the case may be, where such isolation would prevent a total grid collapse or would enable early restoration of power supply; (ii) for safety of human life; (iii) when serious damage to a costly equipment is imminent and such isolation would prevent it; and (iv) when such isolation is specifically instructed by NLDC or RLDC or SLDC, as the case may be.”

Views:

- 7.1 Isolation of the element (s) of the grid is necessary for safety of animals also. The above Regulation may be modified accordingly:

*“No element(s) of the grid shall be isolated from the grid, except (i) during emergency as per the Detailed Operating Procedure(s) of NLDC or RLDC or SLDC, as the case may be, where such isolation would prevent a total grid collapse or would enable early restoration of power supply; (ii) for safety of human **and animal life**; (iii) when serious damage to a costly equipment is imminent and such isolation would prevent it; and (iv) when such isolation is specifically instructed by NLDC or RLDC or SLDC, as the case may be.”*

8. **Draft Regulation 31 (2) (b)**

“(b) Each SLDC shall develop methodology for daily, weekly, monthly, yearly demand estimation in MW and MWh for operational analysis as well as resource adequacy purposes. Each SLDC, while estimating demand may utilize state of the art tools, weather data, historical data and any other data. For this purpose, all distribution licensees shall maintain historical database of demand.”

Views:

- 8.1 Guidelines may be prescribed by Forum of Regulators (FOR) for SLDCs to develop daily, weekly, monthly, yearly demand uniformly across the country with better accuracy for estimation in MW and MWh for operation analysis as well as resource adequacy purposes.

9. **Draft Regulation 43 (5)**

“(5) Entities connected to both inter-State transmission system and intra-State transmission system shall be under control area jurisdiction of RLDC, if more than 50% of quantum of connectivity is with ISTS, and if more than 50% of the quantum of connectivity is with intra-State transmission system, then it shall be under control area jurisdiction of SLDC.”

Views:

9.1 The IEGC has not stipulated the control area jurisdiction in case of 50% quantum of connectivity with inter-State transmission system and other 50% with intra-State transmission system.

10. **Draft Regulation 46 (4) (h) (ii)**

“(ii) In case a generating station, or unit thereof, opts to go under unit shut down (USD), the generating company owning such generating station or unit thereof shall fulfil its obligation to supply electricity to its beneficiaries who had made requisition from the said generating station prior to it going under USD, by entering into a contract(s) covered under the Power Market Regulation or by arranging supply from any other generating station or unit thereof owned by such generating company subject to honouring of rights of the original beneficiaries of the said generating station or unit thereof from which supply is arranged.”

Views:

10.1 In the event of non-supply of power to the beneficiaries under unit shut down (USD), a mechanism for compensation to the affected beneficiaries may be suitably prescribed in the Grid Code.

11. **Draft Regulation 47 (9) (a) & (b)**

“(9) Energy Metering and Accounting:

(a) The CTU shall be responsible for installation, operation and periodic calibration of Interface Energy Meters (IEMs) covering all the ISTS interface points, points of connections between the regional entities, cross border entities and other identified points for recording of actual active and reactive energy interchanged in each time-block through those points.

(b) The installation, operation, calibration and maintenance of Interface Energy Meters (IEMs) with automatic remote meter reading (AMR) facility shall be in accordance with CEA (Installation and Operation of Meters) Regulations, 2006, as amended from time to time.”

Views:

- 11.1 The CTU shall also be responsible for Time-Synchronisation of Interface Energy Meters;
- 11.2 To conform to designated accuracy class i.e. 0.2s for metering core(s)/winding (s) in accordance with CEA Metering Regulations, they shall also ensure periodical determination of ratio error and phase angle error of Instrument Transformers such as Current Transformers and Voltage Transformers, associated with energy metering conforming to applicable prevailing Indian Standards.
- 11.3 Therefore, the above Regulation should be modified in the following manner:
“47 (9) *Energy Metering and Accounting:*

(a) The CTU shall be responsible for installation, operation, periodic calibration, time-synchronization of Interface Energy Meters (IEMs) and confirmation on designated accuracy class i.e. 0.2s for metering core(s)/winding(s) of current transformers & voltage transformers through periodical determination of ratio error and phase angle error, covering all the ISTS interface points, points of connections between the regional entities, cross border entities and other identified points for recording of actual active and reactive energy interchanged in each time-block through those points.”