

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 11/SM/2024

Coram:

Shri Jishnu Barua, Chairperson

Shri Ramesh Babu V., Member

Shri Harish Dudani, Member

Date of Order: 22.12.2024

In the matter of:

Removal of difficulties (Third Order) in giving effect to certain provisions of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023.

ORDER

The CERC (Indian Electricity Grid Code) Regulations, 2023 (hereinafter referred to as "Grid Code") were published on 11.07.2023, in the Gazette of India Extraordinary (Part-III, Section-4, No. 488). The provisions of the Grid Code have been notified to come into effect from 01.10.2023.

2. The Commission issued the removal of difficulties (first order) on 30.09.2023 and the removal of difficulties (second order) on 18.12.2023, to give effect to certain provisions of the Grid Code based on the representations received from various stakeholders.

3. Further, the First Amendment to the Grid Code was published on 29.10.2024, in the Gazette of India Extraordinary (Part-III, Section-4, No. 880 effective from 29.10.2024.

4. NLDC, vide its letter dated 30.09.2024, submitted as follows:

"5. Scheduling of infirm power

While it is necessary to allow for injection of infirm power before COD for facilitating testing and commissioning, it is equally important to ensure that the infirm power is scheduled so as to minimize imbalances in the system. The DSM rate for infirm power from RE plants was zero from 2014 to 2022 and many of the existing RE plants have come through bids floated during this period. CERC order dated 06.02.2023 in 01/SM/2023 provided for treatment of deviation



in case the infirm injection by generators is scheduled. Chapter 7 of IEGC 2023, (i.e. Scheduling and Despatch code) deals with the procedure for scheduling injection and drawal of power by the regional entities and the modalities for exchange of information, including scheduling for intra-state and cross-border entities transacting power through the Inter-State Transmission System etc. It may be noted that while the grid code outlines modalities for scheduling under general network access (GNA and T-GNA), the scheduling modalities for infirm power are yet to be notified. Thus, it is desirable that the modalities for scheduling of infirm power before COD needs to be explicitly covered in the above chapter of IEGC.

The DSM Regulation 2024 (Reg. 8.8) provides that if infirm power is scheduled after trial run as specified in the Grid Code, the charges for deviation over the scheduled infirm power shall be as applicable for a general seller (GS) or WS Seller as the case may be.

Thus, separate modalities need to be defined for scheduling of infirm power injected by WS sellers (viz. REGS including Energy Storage System - ESS) and General Seller (i.e. generators other than REGS and ESS). The following is proposed in this regard:

.....

a. Scheduling of Infirm Power injected by a General Seller (i.e. Generators other than REGS or ESS)

Scheduling of infirm injection by such generators shall be permitted only after the first-time synchronization of the generating unit with the grid.

The maximum period of infirm injection permitted to such generators shall be one (1) year after the first synchronization. Thus, such generators may opt to schedule their infirm power to any buyer through bilateral contracts or through any collective market segment (I-DAM or HP-DAM) after obtaining standing clearance / NOC from RLDC as per the extant procedures. In case the tenure of infirm injection is extended beyond one year as per the provisions of IEGC, such generators would be required to obtain a fresh NOC (from RLDC) for scheduling their infirm injection.

The deviation charge computation for such period of infirm injection shall be done as per the CERC (DSM) Regulations 2024 and such generators would be treated as General Sellers (GS).

b. Scheduling of Infirm Power injected by a WS Seller (i.e. REGS or ESS)

Scheduling of infirm injection by such generators (WS Sellers) shall be permitted only after completion of successful Trial Run as defined in the Grid Code. The number of Wind Turbine Generators (WTG) or Solar Inverters or ESS (and its corresponding MW capacity) which could complete the successful trial run and obtain confirmation from the respective RLDC to this effect shall become eligible for scheduling of infirm power for the corresponding capacity from 00 hours of D+2 day (where D is the date of issuance of successful trial run certificate by RLDC). For example, if RLDC issues certificate of successful trial run for 25 number of WTG (of 2 MW each) on 14.09.2024, then 50 MW of infirm power can be scheduled from that Wind Power Plant from 00 hours of 16.09.2024.

The Deviation charge computation for such period of infirm injection shall be done as per the CERC (DSM) Regulations 2024 and such generators would be treated as WS Sellers.”

As per the above, NLDC has submitted that while the grid code outlines modalities for scheduling under general network access (GNA and T-GNA), the scheduling modalities for infirm power are yet to be notified and it is desirable that the modalities for scheduling of infirm power before COD be explicitly covered in the above chapter of IEGC.

5. It has been brought to our notice that scheduling of infirm power is being carried out by RLDCs. CERC (Deviation Settlement Mechanism and Related Matters) First amendment Regulations, 2024 effective from 23.12.2024, provides as follows:

“(8) The charges for injection of infirm power shall be zero:

Provided that if infirm power is scheduled after a successful trial run as specified in the Grid Code, the charges for deviation over the scheduled infirm power shall be as applicable for a general seller or WS seller, as the case may be:

Provided further that when the system frequency, $f > 50.05\text{Hz}$, the charges for deviation of scheduled infirm power by way of over injection by a general seller or WS seller, as the case may be, shall be zero.”

6. While finalising the abovesaid amendment for DSM Regulations, a number of stakeholders made submissions about scheduling of power to be continued prior to COD for various reasons. Further, during the visit of the officers of the Commission to various RE projects in Karnataka and Rajasthan on 30.11.2024 and 11.12.2024 respectively, certain issues were highlighted by the representatives of RLDC and RE developers, which have been considered.

7. We observe that scheduling of infirm power is being carried out but the modalities of scheduling of infirm power need to be explicitly specified in the Grid Code through amendment to the Grid Code which may take some time. Since the scheduling is already being carried out there is a requirement to specify the modalities of such scheduling till the time amendments are carried out in the Grid Code for clarity of the stakeholders.

8. The scheduling of power prior to COD is required to be considered keeping in view the following Regulations of the Grid Code:

- (a) Regulation 19 which allows interchange of infirm power for a specified period.
- (b) Regulation 22 which provides for Trial Run for a generating station with minimum capacity for such trial run and maximum number of installments in which the same can be achieved.
- (c) Regulation 27 whereby a generating station declares COD for its project where an REGS can declare COD subject to fulfilments of conditions as per PPA, if any.

9. The issues are dealt with in subsequent paragraphs.



Trial Operation REGS for Installed capacity of 250 MW or more

10. Clause 3(a) of Regulation 22 of the Grid Code provides as under:

“(a) Trial run of the solar inverter unit(s) shall be performed for a minimum capacity aggregating to 50 MW:

Provided that in the case of a project having a capacity of more than 50 MW, the trial run for the balance capacity shall be performed in a maximum of four instalments with a minimum capacity of 5 MW:

Provided further that the trial run for solar inverter unit(s) aggregating to less than 50 MW for entities covered under clause (e) of Regulation 4.1 of the GNA Regulations, shall be allowed for the capacity for which Connectivity has been granted to such entity.”

As per the above, the trial run of the solar project shall be performed for a minimum capacity aggregating to 50 MW and in case the project has a capacity of more than 50 MW, the trial run for the balance capacity shall have to be performed in a maximum of four instalments.

During the public hearing on the draft first amendment to the Grid Code as well as during the visit of the officers of the Commission to various RE projects in Rajasthan and Karnataka, the RE developers suggested that in the case of projects with higher Installed capacity, the restriction on the number of instalments leads to difficulty in achieving successful trial run in a short span of time and, accordingly, the number of instalments may be reviewed.

11. We direct that in the case of a project covered under Regulation 22(3)(a) of the Grid Code, having installed capacity of 250 MW or more, the trial run may be performed in instalments, with a minimum capacity of 50 MW in each instalment without any limit on the number of instalments.

Injection of power after successful Trial Operation

12. Regulation 19(7) of the Grid Code provides as under:

“(7) The onus of proving that the interchange of infirm power from the unit(s) of the generating station is for the purpose of pre-commissioning activities, testing and commissioning, shall rest with the generating station, and the concerned RLDC shall seek such information on each occasion of the interchange of power before COD. For this, the generating station shall furnish to the concerned RLDC relevant details, such as those relating to the specific commissioning activity, testing, and full load testing, its duration

and the intended period of interchange. The generating station shall submit a tentative plan for the quantum and time of injection of infirm power on day ahead basis to the respective RLDC.”

As per the above, the injection of infirm power is allowed before the COD, only for the purpose of pre-commissioning activities, testing and commissioning purpose.

13. Regulation 21 of the Grid Code provides as under:

“21. NOTICE OF TRIAL RUN

(1) The generating company proposing its generating station or a unit thereof for trial run or repeat of trial run shall give a notice of not less than seven (7) days to the concerned RLDC, and the beneficiaries of the generating stations, including intermediary procurers, wherever identified:

Provided that in case the repeat trial run is to take place within forty eight (48) hours of the failed trial run, fresh notice shall not be required.”

As per the above, the Generating Station is required to give at least a seven-day prior notice to the concerned RLDC, and the beneficiaries of the generating stations, including intermediary procurers.

14. We observe that Regulation 25(2) of the Grid Code provides as under:

“25. CERTIFICATE OF SUCCESSFUL TRIAL RUN

(2) After completion of a successful trial run and receipt of documents and test reports as per Regulation 24 of these regulations, the concerned RLDC shall issue a certificate to that effect to the concerned generating station, ESS or transmission licensee, as the case may be, with a copy to their respective beneficiary(ies) and the respective RPC, within three days.”

As per the above RLDC shall issue a certificate for the successful trial run only after the completion of the trial run and submission of test certificate as per Regulation 24 of the Grid Code which provides as under:

“24. DOCUMENTS AND TESTS PRIOR TO DECLARATION OF COMMERCIAL OPERATION

(1) Notwithstanding the requirements in other standards, codes and contracts, for ensuring grid security, the tests as specified in the following clauses shall be scheduled and carried out in coordination with NLDC and the concerned RLDC by the generating company or the transmission licensee, as the case may be, and relevant reports and other documents as specified shall be submitted to NLDC and the concerned RLDC before a certificate of successful trial run is issued to such a generating company or the transmission licensee, as the case may be.

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(6) Documents and Tests Required for the Generating Stations based on wind and solar resources:

(a) The generating company shall submit a certificate confirming compliance with CEA Technical Standards for Connectivity in accordance with sub-clause (a) of clause (4) of Regulation 26 of these regulations.

(b) Type test report for Fault Ride through Test (LVRT and HVRT) for units commissioned after the specified date as per CEA Technical Standards for Connectivity mandating LVRT and HVRT capability shall be submitted.

(c) The following tests shall be performed at the point of interconnection:

(i) Frequency response of machines as per the CEA Technical Standards for Connectivity.

(ii) Reactive power capability as per OEM rating at the available irradiance or the wind energy, as the case may be.

Provided that the generating company may submit offline simulation studies for the specified tests, in case testing is not feasible before COD, subject to the condition that tests shall be performed within a period of one year from the date of achieving COD.”

As per the above, successful trial run certificate issuance by RLDC would ensure that the compliance with CEA standards have been undertaken, type test reports have been furnished and necessary testing has been carried out by the REGS. Similar requirements are there in the Grid Code for thermal and hydro generating stations.

15. We are of the view that the requirements to be completed under the Grid Code by a generating station including REGS, thermal or hydro generating station before issuance of a successful trial run certificate, are critical from a system's perspective before allowing the scheduling of such power into the grid. Hence, notwithstanding any provisions to the contrary in the PPA, any scheduling of power shall be allowed only after issuance of a successful trial run certificate by the RLDC. Prior to issuance of such a certificate, a generating station would be required to seek prior permission of RLDC on each occasion of interchange of infirm power with details such as those relating to the specific commissioning activity, testing, and full load testing, its duration and the intended period of interchange (as per Regulation 19(7) of the Grid Code). RLDCs are directed to maintain such information for each such occasion and specific testing carried out by the generating station as per the said Regulation.

16. However, post issuance of successful trial run certificate, there may not be any testing and commissioning activities and the injection of power for a period after successful trial run shall be dealt with as per subsequent paragraphs.

17. Regulation 27 of the Grid Code provides as follows:

“27. DECLARATION OF COMMERCIAL OPERATION (DOCO) AND COMMERCIAL OPERATION DATE (COD)

(1) A generating station or unit thereof or a transmission system or an element thereof or ESS may declare commercial operation as follows and inform CEA, the concerned RLDC, the concerned RPC and its beneficiaries:

.....

(e) Generating Stations based on Wind and Solar resources; ESS and Hybrid Generating Station

i) The commercial operation date in the case of units of a renewable generating station aggregating to 50 MW and above or such other limit as specified in clause (3) of Regulation 22 of these regulations, shall mean the date declared by the generating station after undergoing a successful trial run as per clause (3) of Regulation 22 of these regulations, submission of declaration as per clause (4) of Regulation 26 of these regulations, and subject to fulfilment of other conditions, if any, as per PPA.

(ii) In the case of a generating station as a whole, the commercial operation date of the last unit of the generating station shall be considered as the COD of the generating station.”

As per the above, RE Generating Station may declare the COD post completion of successful trial run subject to the fulfilment of other conditions, if any, as per PPA.

18. Once successful trial operation is achieved, a generating station should declare COD at the earliest. In case a generating station is not declaring COD post successful trial operation, reasons for the same should be recorded in writing. We have perused a few standard PPAs. On perusing the said PPAs and provisions of the Grid Code, we are of the view that where the PPA have explicit provisions for treatment of power post successful trial operation, the same shall be treated as per provisions of the PPA. In all other cases, for a generating station with identified beneficiary(ies), the first right of refusal for such power shall be with beneficiary(ies) with whom the generating station has entered into a PPA directly or through REIA/Intermediary Procurer. In such cases, the power post successful trial operation shall be first offered to such beneficiary(ies) with advance notice of at least seven days. In case there is an intermediary procurer such as REIA, REGS shall give advance notice to such REIA/Intermediary procurer who in turn shall give notice to beneficiaries. In case beneficiary (ies)/ REIA do not respond within such a notice period whether it wishes to offtake the power or not, it shall be considered as a deemed refusal of the beneficiary(ies)/REIA. In that case, the generating station shall be allowed to sell such power in the market. REIA/Intermediary procurer shall furnish details of consent of beneficiary to offtake the power and whether beneficiary did not respond to the offer of such power.

19. Keeping in view of above facts, and the imminent requirement of scheduling the infirm power by the various RE Developers and as per the suggestions of the NLDC, post successful trial operation in terms of the provisions of the Grid Code, the

scheduling of power from the Generating Station shall be allowed in terms of our directions in this Order, only after a successful trial operation certificate is obtained from RLDC.

Directions under Power to Remove Difficulty

20. Regulation 58 of the Grid Code vests the Commission with the power to remove difficulty under certain circumstances. Regulation 58 of the Grid Code is extracted below:

“58. POWER TO REMOVE DIFFICULTY

If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, on its own motion or on an application made before it by the nodal agency, by order, make such provisions not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations.”

Further, the Commission has been vested with the power to issue Suo Moto orders and practice directions from time to time, as per the exigencies, with regard to the implementation of these Regulations and matters incidental or ancillary thereto, as the case may be, as provided under regulation 60 of these regulations.

“60. ISSUE OF SUO MOTO ORDERS AND DIRECTIONS

The Commission may from time to time issue suo motu orders and practice directions with regard to implementation of these regulations and matters incidental or ancillary thereto, as the case may be.”

21. Considering the difficulties raised by the stakeholders under the Grid Code, in exercise of our powers under Regulation 58 read with Regulation 60 of the Grid Code, we hereby issue the clarifications and practice directions as discussed above on the issues raised by the stakeholders.

22. The dispensations provided through instant Order shall remain in force till suitable provisions are specified in the Grid Code through amendment.

23. Accordingly, Suo Motu Petition 11/SM/2024 is disposed of in terms of the above.

Sd/
(Harish Dudani)
Member

Sd/
(Ramesh Babu V.)
Member

Sd/
(Jishnu Barua)
Chairperson

