



केन्द्रीय विद्युत विनियामक आयोग
CENTRAL ELECTRICITY REGULATORY COMMISSION



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No. L-1/260/2021/CERC

Dated: 17.12.2024

In the matter of

Central Electricity Regulatory Commission (Deviation Settlement and Related Matters) (First Amendment) Regulations, 2024 – Statement of Objects & Reasons (SOR) thereof.

STATEMENT OF REASONS

1. Introduction

1.1 The Central Electricity Regulatory Commission (hereinafter referred to as the “CERC” or “the Commission”) issued the CERC (Deviation Settlement and Related Matters) Regulations, 2024 (hereinafter referred to as “the DSM Regulations 2024”) vide Notification No. L-1/260/2021/CERC Dated: 05th August 2024 effective from 16.09.2024.

1.2 The Commission received representations from the stakeholders seeking clarity on the treatment of deviation for infirm power and in respect of certain other provisions in the Regulations such as Available Capacity, Contract Rate in case of third-party sale under open access etc. Accordingly, the Commission issued the Draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) (First Amendment) Regulations, 2024 (hereinafter referred to as the “Draft Regulations”). Subsequently, the Commission also issued the Explanatory Memorandum for the same,

wherein the rationale behind the Draft Regulations was explained.

- 1.3 **Comments/suggestions/objections** were sought from the stakeholders and interested persons on the Draft Regulations by November 1, 2024. In response, the Commission received submissions from twenty-four (24) stakeholders. The list of the stakeholders is attached as **Annexure I** to this document. Subsequently, a Public Hearing on the Draft Regulations was conducted on November 4, 2024, via video conferencing. The list of stakeholders who presented during the Public Hearing is attached as **Annexure II**.
- 1.4 The Commission, complying with the provisions of the Act and the Electricity (Procedure for Previous Publication) Rules, 2005, proceeded to finalize the first Amendment to the DSM Regulations 2024. The Commission considered the comments of the stakeholders on the Draft Regulations, views of the participants in the Public Hearing as well as their written submissions received during and after the Public Hearing. The Regulations have been finalized after due consideration of various issues raised. The analysis of the issues and findings of the Commission thereon are discussed in the subsequent paragraphs.
- 1.5 It may be noted that all the suggestions given by the stakeholders have been considered, and the Commission has attempted to elaborate upon and respond to each suggestion as well as convey the Commission's decisions on each suggestion in the Statement of Reasons. However, if any suggestion is not explicitly elaborated upon, it does not mean that the same has not been considered. Wherever possible, the comments and suggestions have been summarised clause-wise, along with the Commission's analysis and ruling on the same. However, in some cases, due to overlapping of the issues/comments, two or more clauses have been combined in order to minimise repetition.
- 1.6 The main issues raised during the public consultation process and the Commission's analysis and decisions on the issues that underlie the Regulations as finally notified are given in the subsequent paragraphs.

2. Amendment to Regulation 3 (1) (g) of the Principal Regulations (Definition of Available Capacity)

Commission's Proposal

- 2.1. The Commission, in the Draft Amendment Regulations, proposed inserting the following words after the words "that are capable of generating power in a given time block" in sub-clause (g) of clause (1) of Regulation (3) of the Principal Regulations:
"and shall be limited to the quantum of connectivity granted"

Comments received

- 2.2. Some stakeholders (**CESC, RAP**) have welcomed the suggestions proposed in the Amendment.
- 2.3. **Ayana Renewables** alternatively suggested that AvC be limited to the quantum of connectivity granted with a 5% margin to accommodate occasional over-injections due to environmental factors. This buffer would prevent penalties for minor, uncontrollable deviations and acknowledge renewable generation's operational unpredictability and forecasting limits.
- 2.4. Stakeholders such as **Adani Power and the Association of Power Producers** suggested **reconsidering** and removing the restriction stating that if the definition of Available Capacity is limited to the quantum of connectivity granted, then such developers who have installed higher capacity for meeting the CUF requirements, shall be at a disadvantage.
- 2.5. **Mahindra Susten commented that** any restriction on excess RE Generation is against the provisions of the Acts and Policies that have already granted must-run status to RE Plants. Any excess generation during the peak seasons for RE generation should be allowed to fulfil the demand, and the developer should not be penalised.

Analysis and Decision

- 2.6. The Commission has noted the suggestions provided. Under the GNA Regulations, quantum of Connectivity is converted into deemed GNA and the 2023 Grid Code provides for the scheduling of power only up to the GNA quantum for a generating station. As scheduling is permitted up to GNA quantum, AvC beyond such quantum cannot be considered for the purpose of DSM. Further, GNA Regulations provide that a generating station or ESS, with prior CTU approval, may add additional generation capacity or ESS, including capacity owned by other entities, within the quantum of connectivity granted. However, the net injection from such a generating station or ESS should not exceed the total granted connectivity at any time. Allowing AvC to exceed the connectivity granted could result in misleading computation of deviation percentages. Accordingly, the Commission reaffirms its decision to restrict the AvC to the quantum of connectivity granted. A generating station may install excess capacity as per its requirement beyond the Connectivity quantum but since the same cannot be scheduled, it cannot be considered under AvC. Power evacuation should remain within the limits of infrastructure designed

for the generating entity, thus preventing over-injection beyond connectivity limits, which could compromise grid stability. Additionally, it is clarified that the proposed amendment in the draft pertains only to the computation of % deviation and will not impact existing operational practices.

3. Amendment to Regulation 3 (1) (j) and Regulation 3 (1) (y) of the Principal Regulations (Definition of Contract Rate and Reference Charge Rate)

Commission's Proposal

3.1. The Commission in the Draft Amendment Regulations proposed inserting the following words before the words 'in case of captive consumption of a captive generating plant based on renewable energy sources' in sub-clause (j) of clause (1) of Regulation (3) of the Principal Regulations:

"in respect of a WS seller or a MSW seller or such other entity as applicable, selling power through open access to a third party or"

3.2. The Commission in the Draft Amendment Regulations proposed inserting the following words before the words 'in case of captive consumption of a captive generating plant based on resources other than renewable energy sources' in sub-clause (y) of clause (1) of Regulation (3) of the Principal Regulations:

"in respect of a general seller selling power through open access to a third party or"

Comments received

3.3. Some stakeholders (**Adani Power, CESC**) have welcomed the suggestions proposed in the Amendment.

3.4. Some stakeholders like **NTPC, Mahindra Susten, NSEFI, and Tata Power** suggested considering the PPA tariff or mutually agreed tariff between parties as contract rate, and **Tata Power and NSEFI** further suggested that in the absence of any such contract, consider the weighted average ACP of I-DAM.

3.5. **Apraava Energy** commented that if the contract rate is considered as the weighted average ACP of I-DAM, then developers will tend to under schedule during high price periods and over schedule during low price periods. So, the Commission may reconsider the contract rate for the same wherever it is available regardless of short-term contract or long-term contract.

- 3.6. **Serentica Renewables** suggested that for captive (or third party) sales, the DSM charges should be either based on the agreed transfer price (contract price) or REIA bid discovered price for the relevant month when RE Developer partly or fully commissions capacity.
- 3.7. **Ayana Renewables** suggested that in the case of captive consumption of a captive generating plant based on renewable energy sources, the National APPC rate should be applicable.

Analysis and Decision

- 3.7. The Commission has reviewed the comments received and reiterates that the proposed inclusion seeks to address an inadvertent omission in the Principal Regulations, which did not account for cases involving the sale of power through third parties under open access. The proposed amendment ensures comprehensive coverage of all such scenarios. The suggestion of transfer price as agreed between captive consumers/third parties cannot be accepted as being private contract arrangements having no regulatory sanction. As for the issue of determining the National APPC, it is clarified that this is beyond the scope of the current regulatory dispensation. Accordingly, the Commission has decided to go ahead with the amendment as proposed in Regulation 3(1)(j) and Regulation 3(1)(y) of the Principal Regulations.

4. Amendment of Regulation 8 (Charges for Deviations) of the Principal Regulations

Commission's Proposal

- 4.1. The Commission in the Draft Amendment Regulations has proposed the substitution of Clause (8) of Regulation 8 of the Principal Regulations as under:

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

Provided that if infirm power is scheduled after a 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.”

Comments received

- 4.2. Several stakeholders like **Serentica Renewable, Mahindra Susten, Adani Power Ltd, Adani Green Energy Ltd., Purvah Green Energy, NSEFI, Ayana Renewable, Sembcorp, ReNew Power, Continuum Green Energy, APP and Tata Power** have suggested allowing scheduling of infirm power. Many have further suggested to continue allowing the scheduling of infirm power as per Suo-motu order 01/SM/2023. It was argued that allowing the scheduling of infirm power would bring certainty for the grid operator about the amount of power that is coming into the Grid with a certain % of deviation depending upon various other factors. Some have also argued that there is the possibility of delay in receiving a certificate for successful completion of the trial run, and this could also tend to have a huge revenue impact on the generator. Also, injecting the power into the grid without schedule during these trial run operations may pose a risk to grid stability. It was further argued that not allowing the scheduling of Infirm Power from FTC to Successful Trial Run may lead to wastage of natural resources in the form of power output from RE Plant which could support the Grid in fulfilling the demand-supply gap.
- 4.3. **Adani Green, Adani Power, and APP** suggested phase-wise implementation of a trial run. It was proposed that the provisional trial run may be allowed to be completed in 45 days while the final trial run is to be completed within one year to complete PPC testing and pending compliances.
- 4.4. **NLCIL** commented that for thermal generators, the revenue generated from infirm power is adjusted against the project capital cost during tariff determination. Eliminating this income source would lead to increased capital costs for generators and ultimately burdening discoms and end consumers . Accordingly, it was requested that the energy cost incurred during the infirm power injection be reimbursed to the generator. **MB Power** suggested that for thermal generators, the energy charges for injecting the infirm power in the grid should not be zero & should be determined as per DSM Regulations, i.e., Reference Rate. **THDCIL** suggested that the charges for injection of unscheduled infirm power may be 130 paise per kWh. **NTPC** requested to allow the scheduling of infirm power before the trial run for Renewable Energy Projects. For thermal generators, it was requested that in the case of Section 62 thermal

generators, the shortfall in the recovery of fuel cost, i.e., fuel cost after adjusting the revenue earned from scheduling of infirm power, may be reimbursed to the generators from DSM pool.

- 4.5. **Sembcorp** sought clarification as to what is referred to as “charges,” i.e. if these are for deviation or charges of energy sale.
- 4.6. **Mahindra Susten** commented that the Infirm Power, which is scheduled after Trial Run and up to COD, is to be completely exempted from Deviation Charges.
- 4.7. **NHPC** suggested that a separate provision may be provided for plants commissioned under Section 62 of the Act as hydro power projects are prone to geographical surprises and challenges which delay the CODs of the projects. In such situations, machines are operated wherever possible by diverting the streams to keep them healthy, which results in the injection of infirm power.
- 4.8. **Mr. Arkajyoti Bhattacharjee** suggested that the charges for deviation of scheduled infirm power by way of over injection by a general seller or WS seller shall be zero when the system frequency, $f \Rightarrow 50.05\text{Hz}$. **NHPC** suggested that the frequency limit be imposed only for plants to be commissioned under Section 63 of the Act. **Apraava and Mahindra Susten** suggested that the proviso linking frequency with an injection of infirm power by the WS seller is to be deleted since the deviation of the WS seller is delinked from the frequency in case of power sold after commissioning.

Analysis and Decision

The Commission has reviewed the suggestions received and examined the provision proposed in the draft amendment. The Commission extended the implementation of Regulations 8 (8) of Principle DSM Regulations, 2024 regarding the treatment of deviation for infirm power more than twice, in view of the communications received from various RE developers on the possibility of delay in receiving certificates for successful completion of trial run and clarity on deviation charges for infirm power without schedule. Further, the Commission also floated the draft amendment not only to bring further clarity on the provisions regarding infirm power but also to provide an opportunity to the stakeholders to understand the technical aspects, if any, associated with the delay in trial runs in case of wind and solar based power projects. In view of the comments received from the stakeholders, the Commission/staff also visited a few RE projects to understand

operational challenges, if any, in completing the trial run. It transpired that successful trial runs in most cases can be achieved in a short span of time. The Commission gathered several instances where RE developers had completed trial runs successfully in less than a week after First Time Charing (FTC) certificates from the concerned RLDCs. RE developers stated that they undergo PPC testing which includes active power and reactive power capability before the successful trial run certificate is issued by RLDC. REGS also needs to furnish various type test reports as mandated in the 2023 Grid Code. The requirements to be completed under the 2023 Grid Code by a generating station including REGS, thermal or hydro generating station before issuance of successful trial run certificate are critical from a system perspective before allowing the scheduling of such power into the grid. Any scheduling of power before the machines are tested and established can pose a threat to grid security. Staff has been directed to process necessary changes in the Grid Code enabling the scheduling of infirm power after successful trial run.

The Commission would like to reiterate that injection of infirm power is akin to over injection and is intended for testing and should be used only for testing and other commissioning activities with prior approval from the concerned RLDCs. Prolonged injection of infirm power, without adequate safeguards, could pose a threat to grid security and also lead to load-generation imbalance.

In the case of a conventional power plant, injection of infirm power is required for testing various equipment where multiple rotating machines require commissioning, control loops need fine-tuning, and operational reliability must be demonstrated during an extended testing phase. For assessing the impact of reported revenue loss for the conventional power plants due to injection of infirm power, the Commission gathered data on the instances and duration of injection of infirm power by the thermal power plants and found that such instances are occasional and not on a continuous basis all through the period leading up to trial run or COD. As such, the argument that the proposition of no payment up to the trial run would lead to huge financial loss or increase the burden of the beneficiaries is not sustainable. Grid security is surely of paramount interest for all stakeholders, more so in the context of the country's commitment to add 500 GW of renewable energy by 2030.

The Commission recognizes the importance of trial runs, as they confirm that all necessary protection mechanisms are in place, ensuring the safe injection of power into the grid without compromising its reliability. Moreover, for WS sellers, the available capacity can only be determined after a successful trial run, making this milestone critical for grid operations.

With the rapid growth of renewable energy (RE) installations and the anticipated expansion of this sector, the proper management of infirm power injections has become increasingly important to maintain grid safety and stability. The Commission is of the view that the injection of infirm power must be strictly limited to testing purposes and conducted in accordance with the provisions of the Grid Code. Scheduling of such power before the successful completion of a trial run should not be permitted to ensure grid security and reliability. Consequently, no charges shall be paid for the injection of infirm power prior to the trial run. Even if the infirm power is scheduled after trial run, 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. Further the general seller or WS seller shall adhere to their schedule of injection so that the grid frequency is maintained and remains within the allowable band.

Accordingly, the Commission decides to retain the provision proposed in the draft amendment.

5. Additional comments

5.1. **THDCIL** commented that in the case of Pumped Storage Plants (PSP), whose tariff is determined under Section 62 of the Electricity Act, 2003, neither a reference rate nor a contract rate is available as the Annual Fixed Cost (AFC) of the PSP is recovered entirely through Fixed Charges. Additionally, during the charging of the PSP, the input energy is arranged by the buyers, hence no contract rate is applicable. Therefore, it is submitted that for PSPs, a reference rate and contract rate of 20 paise/kWh should be considered for the computation of deviation charges as the rate is aligned with the energy charge rate specified in the CERC Tariff Regulations, 2024, for the sale of excess energy. They have further suggested adding a proviso in Regulation 10 (1) regarding the schedule of payment so as to consider the due date of payment as the immediate succeeding working day in case the last day is an official holiday.

- 5.2. **Mahindra Susten** sought clarification on whether the entities who received penalties based on Principle Regulations may also be covered under this amendment. If yes, then whether revised penalty notices are to be issued to Generating Units by the concerned RLDCs based on this amendment.
- 5.3. **WBSETCL** suggested that the DSM 1st Amendment should be implemented from the 2nd of December 2024 as it would be Monday.
- 5.4. **Tehkhand Waste to Electricity Project** requested the concession provided to Waste to Energy Projects in DSM Regulations 2022 to be continued for a few more years and requested to reconsider the provision for WtE Projects in the DSM Regulations 2024
- 5.5. **NTPC** commented as follows:
- i. to add provision for interest on delayed payments from the DSM pool account. If deviation payment to a regional entity is delayed beyond ten days from statement issuance by the RPC, a late payment surcharge of 0.04% per day should apply.
 - ii. For blocks having ramps, if a seller meets the 1% ramp rate yet deviations occur, it should be compensated at the Reference Charge Rate for over-injections and under-injections, regardless of frequency.
 - iii. During thermal generator startup, DSM charges for deviations should be set at the Reference Charge Rate for over and under-injections until reaching MTL, regardless of grid frequency.
 - iv. Equitable incentive for supporting the grid vis a vis penalty imposed for deviating from the schedule, and the incentive for supporting the grid by over-injection or under-injection may be increased up to 50% of the Reference charge rate.
- 5.6. **Adani Green, Adani Power, and APP** requested not to discriminate against solar power generators and keep them at par with the wind power generators by removing the restriction of 4 attempts/instalments for completion of trial run.

Analysis and Decision

The Commission has noted the suggestions. With regard to the query on the reference charge rate for Pumped Storage Plants (PSPs) whose tariffs are determined under Section 62 of the Electricity Act, 2003, it is clarified that the reference charge rate for such plants will be governed by the provisions of the CERC Tariff Regulations, 2024, as amended from time to time.

It is also clarified that the provisions of this amendment will come into effect from 23rd December 2024. Accordingly, the computation of DSM, including incentives and penalties, will be governed by the provisions of the amended regulations for the period starting from 23rd December 2024. For the period prior to 23rd December 2024, DSM calculations, including applicable incentives and penalties, will continue to be carried out as per the provisions of the Principal Regulations and relevant notifications issued on 15th September 2024, 22nd October 2024, and 29th November 2024. This amendment will not have retrospective applicability.

All other suggestions are beyond the scope of the present regulatory proposition.

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