



ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
4th Floor, Singareni Bhavan, Red Hills, Hyderabad 500004

21st DAY, THE THURSDAY OF SEPTEMBER
TWO THOUSAND AND TWENTY-THREE
(21.09.2023)

Present
Justice C.V. Nagarjuna Reddy, Chairman
Sri Thakur Rama Singh, Member
Sri P.V.R. Reddy, Member

OP No. 26 of 2023

In the matter of the notification of the order on the Deviation Settlement Mechanism (DSM) for wind and solar generators connected to the intra-state grid and selling power outside the state in line with the new CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2022.

Andhra Pradesh State Load Despatch Centre (APSLDC)

.... PETITIONER

The Andhra Pradesh State Load Despatch Centre (APSLDC) has filed a petition praying the Commission to issue an order to make applicable the relevant provisions of CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2022 with retrospective effect from 05.12.2022 (the date of notification of CERC DSM regulations) for the deviation settlements of wind and solar generators connected to intra-state grid and selling power outside the State repealing the existing applicable provisions (Appendix 1) of Regulation 4 of 2017 issued by APERC. The Commission heard the matter finally on 21.06.2023 in the presence of Sri P. Shiva Rao, learned standing counsel for APSLDC, and passes the following:

Order

1. In support of the prayer, APSLDC in its petition submitted that APERC issued Regulation 4 of 2017 on forecasting, scheduling and deviation settlement of solar and wind generators connected to the AP grid. Appendix - 1 of the said Regulation provides for the Deviation Settlement Mechanism (DSM) for wind and solar generators connected to the AP grid and selling power outside the state. The Order issued by APERC in O.P.No.2 of 2020 on 01.03.2021 approving certain amendments to Regulation 4 of 2017 are applicable only for wind and solar generators connected to the grid and selling power intra-state. The said order will be operational subject to the result of the W.P.No.13860 of 2019 in the Hon'ble High Court. That the present request is made seeking an amendment to Regulation 4 of 2017 relating to inter-state transactions. That the APSLDC is an apex body and is vested with powers to maintain the grid in a smooth, economical, reliable and secure manner. The effective commercial mechanism for Deviation Settlement to monitor and control the deviations against the final schedule issued by SLDC for wind and solar generators is very much necessary for the maintenance of Grid discipline. That in the case of generators other than those connected to inter-state lines in Andhra Pradesh, the DSM settlements are being done by APSLDC. All inter-state transactions are to be regulated in accordance with the regulations issued by CERC. But all DSMs of wind and solar generators connected to the AP grid and selling power outside the state are being regulated as per Regulation 4 of 2017. With this, it would not be possible to maintain the grid in a safe, secure and reliable manner in real-time operations as the provisions are not stringent for the deviations

whereas the the provisions in the latest CERC regulations on DSM are more stringent on the same. The brief comparison of some important provisions in APERC regulation and CERC regulations relating to DSM are as under.

Sl . N o	APERC regulation, 2017	CERC Regulations, 2022
1	Over injections are allowed up to injection quantum and paying 70% of a fixed rate for excess injections more than 35 per cent	Over injections are allowed up to 10% and excess injections over 10 % no payment will be made
2	Fixed rate for deviation (Average Power Purchase Cost (APPC) rate notified by CERC)	Weighted average area clearing price (ACP) of the Day A head segments of all the power exchanges for the respective time block
3	For under generation over 35% the generators have to pay 130% of fixed rate	For under generation over 10% the generators have to pay 110% of ACP of all power exchanges for the respective time block

That APSLDC has analysed the existing inter-state over-injection/under-injection energy data and receivable amounts by the generators as per Regulation 4 of 2017 and CERC DSM regulations, 2022. There is a considerable difference in the amount of the receivables/ Payables

to/by the generators as per the existing Regulation 4 of 2017. Thus APDISCOMs would be losing a considerable amount in the form of DSM charges in the case of wind/solar generators availing inter-state open access even though the generation cost per unit in the present scenario is very paltry. Whereas the latest CERC DSM regulations will protect the APDISCOMs from losing substantial amounts. That APSLDC is unable to take a firm view of whether DSM regulations of CERC would be applicable since there is a provision available in Regulation 4 of 2017 to intra-state wind/solar generators availing the inter-state open access.

The APSLDC has also referred to the Order issued by this Commission in O.P No. 77 of 2021 on 05.01.2022 in their petition.

2. The Commission hosted the petition dated 02.03.2023 and public notice dated 17.05.2023 inviting comments from all stakeholders. The public was also informed in the public notice dated 17.05.23 that the subject matter of the petition will be taken up for public hearing on 21-06-2023 at 11.00 AM in the Court hall of the Commission and any interested person/organization desirous of being heard in person, may appear before the Commission on the said date of public hearing. None appeared from the general public at the hearing in response to the public notice. However, the Indian Wind Power Association (IWPA) submitted their objections.
3. The objections raised by IWPA are as below:
 - There is no clause provided in APERC F&S Regulation, 2017 which gives power to the Commission to add, vary, alter, modify or amend any provisions of the Regulation. Thus, in accordance with the provisions under the Electricity Act, 2003, the Commission may issue a draft amendment to the impugned regulations and invite public comments on the same.

- Wind and Solar are both intermittent sources, and it is impossible to forecast the actual generation with accuracy, especially at the individual project level or at the PSS level, for each 15-minute interval as needed by the current bandwidth of F&S Regulation, 2017. Further with no appropriate means/forecasting tools to predict wind & solar energy generation, the proposed amendments would harm the commercial prospects of the Wind and solar developers with no fault of theirs.
- It is a well-known fact that most of the Qualified Coordinating Agencies (QCA) adopt the internationally approved forecasting methodology & tools which provide optimum results if aggregation of forecasted data is done over a large area. Thus, it is suggested to first permit project aggregation at the state level to decrease the unpredictability of wind & solar generation and once the forecasting error is reduced, the Commission may move ahead with tightening of the permissible deviation band in line with CERC DSM Regulation, 2022.
- The penalty may be linked to the project PPA rates rather than the Area Clearing Price since exchange prices can be quite volatile.
- If the Commission decides to move ahead with tightening the deviation band to plus or minus 10% for inter-state sale of power, then the Wind and solar generators should be allowed to buy/sell power from spot markets on a real-time basis to square up their position and avoid penalty on deviation
- If the Commission decides to move ahead with reducing the deviation band in line with CERC DSM Regulation, 2022, the restriction on the number of revisions for Wind and solar generators' schedules may be reviewed so that they may find it possible to operate within the permissible schedules.
- Lastly, with respect to the prayer of SLDC that the amendments shall be given effect with retrospective effect from 05.12.2022, retrospective

application of any regulation or amendment in regulation is not permitted in law. The developers/investors need to make informed decisions before proceeding ahead with any investment. Thus if the Commission decides to move ahead with aligning the deviation band permissible for inter-state sale of power with CERC Regulation, 2022, it should be applicable from the date of notification of the amended regulation by the Commission.

4. The Commission has carefully examined the submissions of APSLDC and the objections raised by IWPA in this regard. The Commission is of the view that the Grid is to be operated in a very narrow band of frequency as provided in the Indian Electricity Grid Code (IEGC) and an effective commercial mechanism is necessary particularly for the wind and solar power plants to ensure the grid discipline. All the inter-state transactions of the entities connected to CTU and inter-state transactions of intra-state entities where the APERC regulations are silent on such transactions shall be governed by the CERC regulations. All intra-state wind and solar generator schedules are being regulated by the SLDC as per the Grid Code and hence even if any of them sell power outside the State, Appendix 1 of Regulation 4 of 2017 issued by APERC shall be applicable. However, the provisions of Appendix 1 are not stringent as stated by APSLDC and they are to be modified keeping in view of the latest requirement of the Grid operation and CERC DSM Regulations, 2022. Hence, APSLDC prayed the Commission to make applicable the relevant provisions of CERC DSM Regulations, 2022 in place of Appendix 1 of Regulation 4 of 2017. In this regard, as regards the IWPA's objection that there is no clause provided in APERC F&S Regulation, 2017 which gives power to the Commission to add, vary, alter, modify or amend any provisions of the Regulation, it is to be noted that as per clause 8 of Regulation 4 of 2017, the Commission on its own motion or on an

application filed by an affected party, issue such directions as may be considered necessary in furtherance of the objective and purpose of the regulation. The SLDC being the grid operator and controller has filed the petition in furtherance of the objective of the Regulation. Under Section 21 of the General Clauses Act, 1977, Power to make a Regulation include power to amend, modify and vary the Regulation. The regulation being the creature of the Commission it can always amend when such amendment is required to carry out the objects and purpose of the Regulation. Therefore, nothing prevents the Commission from considering the request of APSLDC for amending the existing Regulation. As regards the other objections regarding the non-availability of better forecasting tools, day by day, the accuracy level of the forecasting tools being used by various QCAs or wind generators using artificial intelligence is increasing, and hence there is no merit in the objection. As regards the objection that the Wind and solar generators should be allowed to buy/sell power from spot markets on a real-time basis to square up their position and avoid penalty on deviation in case of tightening the deviation band, the Commission is inclined to consider the request since the deviation is adjusted with spot market energy at the expense of the wind and solar generators who are at deviation. As regards the number of revisions of schedules, the CERC has finalised the revisions taking into account all objections into consideration and hence consideration of this issue afresh is not necessary. As regards the objection regarding the retrospective effect of the application of CERC DSM regulations, 2022 in place of Appendix 1 of Regulation 4 of 2017, giving weight to the grievance, the Commission is inclined to consider the objection and hence this order will be given prospective effect from the date of issue of this order.

5. Accordingly, accepting the views of APSLDC on effective commercial DSM mechanism for maintaining grid discipline in view of the significant installed capacity of wind and solar generation in the State of Andhra Pradesh, the Commission is inclined to allow the prayer of APSLDC prospectively it from the date of issue of this order duly providing the option to the wind and solar generators to buy/sell power from spot markets on a real-time basis to square up their position against the deviation or pay penalty for the deviation as per the relevant provisions of CERC DSM Regulations, 2022.
6. Therefore, clause 6.4 of Regulation 4 of 2017 shall be substituted as below:
“6.4. The Deviation charges for under or over-injection by wind and solar generators connected to the intra-state Grid and supplying power outside the State shall be payable as per the relevant provisions of CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2022 and its amendments from time to time duly providing the option to the wind and solar generators to buy/sell power from spot markets on a real-time basis to square up their position against the deviation or pay penalty for the deviation as per the relevant provisions of CERC DSM Regulations, 2022. The SLDC shall frame the guidelines for squaring up the deviations with spot market energy and host the same on its website.”
7. Further, it is made clear that this order is subject to the result of W.P.No.13860 of 2019 in the Hon’ble High Court.
8. Accordingly, the petition is disposed of.

Sd/-
P.V.R Reddy
Member

Sd/-
Justice C.V. Nagarjuna Reddy
Chairman

Sd/-
Thakur Rama Singh
Member