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Handwritten notes: 30/PPD, DP/PPD, 4/3, 23/2020

To  
 The Secretary  
 A.P. Electricity Regulatory Commission  
 4<sup>th</sup> floor, Singareni Bhavan, Red Hills  
 Hyderabad - 500 004

March 2, 2020

Respected Sir,

Sub : Submission of suggestions on the amendments proposed to Regulation 4 of 2017 by AP Transco relating to Forecasting, Scheduling and Deviation Settlement of Solar and Wind Generation Regulation, 2017, in O.P.No.2 of 2020.

With reference to your public notice dated 13.2.2020, calling for views/objections/suggestions from interested public on the subject issue, I am submitting the following points for the consideration of the Hon'ble Commission:

1. In its letter dated 10.12.2019, AP Transco has submitted that "during implementation of the Regulation 4 of 2017 (APEREC Forecasting, Scheduling and Deviation Settlement of Solar and Wind Generation Regulation, 2017) which is effective from 01.07.2018 for levying and collection of deviation charges from Qualified Coordinating Agencies (QCAs), certain observations were noticed in adopting the Clauses viz., 2.1 (a), 2.1 (j), 4.1, 6.3 and 2.1 (aa) in day to day operation of grid with mix of VRE generation and conventional generation and of the view to amend the above Clauses." The detailed report submitted to the Hon'ble Commission by AP Transco, explaining the reasons for seeking the proposed amendments, makes the deficiencies in the said regulation clear and underlines the need for bringing about the proposed amendments.
2. The Discoms have been facing problems, both in terms of purchasing solar and wind power at higher costs and backing down thermal power plants with relatively cheaper power and paying fixed costs therefor in order to purchase must-run solar and wind power whenever surplus power is available. The Discoms have also been facing another kind of problems when solar and wind power units generate and supply power lesser than what they forecast and schedule. In such a situation, the Discoms are constrained to purchase power in the market, if available, and face uncertainties relating to price, or are resorting to power cuts, if power from market sources or under unscheduled inter-change from other States is not available. The difficulty is more severe when solar and wind power units fail to generate and supply during peak hours, if they make forecast and schedule accordingly.

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3. If the Discoms are forced to purchase power from the market or impose power cuts when solar and wind units fail to generate and supply power as per forecast and schedule they make, especially during peak hours, it implies that either generating capacities of thermal power units to fill the generation gap caused by solar and wind power units are not available, or that the thermal power units cannot ramp up their generation immediately, even if capacity backed down is available.
4. If solar and wind power units fail to generate and supply power as per their respective capacity utilisation factors (CUF), there are no penalties on them. It is only when they over or under generate and supply power to Discoms contrary to forecast and schedule they make, they have to pay deviation charges to State pool account as per the subject regulation. Compared to a number of benefits solar and wind power generators are enjoying by virtue of policies of the Governments, terms and conditions in the PPAs and orders given by the Commission, and compared to the kind of problems and additional financial burdens the Discoms are facing to purchase solar and wind power, on the one hand, and due to failure of the solar and wind units to generate and supply power as per forecast and schedule they make, the deviation charges for under or over injection of power into the grid, as per the subject regulation, are a pittance. While the Discoms have to pay higher tariffs, generic or discovered through competitive biddings, based on long-term PPAs they had with solar and wind power units for 20 to 25 years, purchase solar and wind power irrespective of requirement and availability of power from other sources at relatively lower prices, pay fixed charges for backing down thermal power units in order to purchase power from must-run solar and wind units, purchase power in the market at higher prices when solar and wind power units fail to generate and supply power as per forecast and schedule they make, or impose power cuts, if power is not available, in addition to grid integration costs, etc., all that solar and wind power units have to pay are deviation charges for over or under injection of power, that, too, as per forecast and schedule they themselves make. While the benefits are loaded in favour of the solar and wind power units, risks and burdens are heavily loaded on the Discoms and their consumers of power. AP Transco has asserted that the objectives of the subject regulation to maintain grid discipline and grid safety are not realised, as utilities are facing difficulties with uncertainty in VRE generation. Therefore, a realistic assessment has to be made to determine deviation charges, keeping in view the burdens being imposed on the Discoms and their consumers due to failures of commission and omission of solar and wind power units. I request the Hon'ble Commission to examine the veracity of calculations made and deviation charges proposed by AP Transco, as per amendment proposed to clause 6.3 of the subject regulation, and determine the same realistically.



5. The amendment proposed by AP Transco to clause 2.1(a) of the subject regulation to substitute "forecast error" for the existing "absolute error," and "scheduled generation" for "available capacity" is justified. When grid requirements are planned, taking into account forecast and schedule made by the must-run solar and wind power units, along with other sources, on day ahead basis, for deviations caused by solar and wind units, they should be held responsible based on the impact of such deviations and for that "forecast error" and "scheduled generation" should be the basis.
6. Allowing a deviation limit of +/- 250 MW only by CERC is irrational and reflects its unjustifiable pro-developer proclivity. As clarified by AP Transco, such an irrational approach makes the deviation charges insignificant compared to the burdens the Discoms and their consumers of power have to bear and bails out the generators from paying deviation charges fully depending on the percentage of deviation. Therefore, the amendment proposed by AP Transco to 2.1(j) of the subject regulation, making provision for 'allowable forecast error' in percentage, should be brought about.
7. The amendment proposed by AP Transco to clause 4.1 of the subject regulation, seeking removal of the option to solar and wind units to reschedule on one and a half hourly basis during the day of operation and making them strictly adhere to scheduling on day ahead basis is justifiable for the reasons explained in the detailed report.
8. The proposal of AP Transco to delete the phrase of virtual pooling from clauses 2.1(aa) and 6.9 of the subject regulation is justified from the point of view that for grid indiscipline caused by a few generators, deviating from forecast and scheduling of generation they make, other generators in the virtual pool should not be penalised. However, relating to deviations, either over or under injection of power into the grid, by different units of solar and wind power under a QSA, the generators of the units may avail themselves of the risks or benefits collectively by adjusting total generation of all such units cumulatively to be in tune with forecast and scheduling all the units make. In other words, if cumulative generation and supply of all units under a QSA is in tune with cumulative forecast and scheduling, it won't cause problems related thereto to the Discoms. If there is deviation in cumulative generation and supply, to that extent deviation charges can be levied and collected. If the developers of solar and wind power units under a QSA prefer continuance of virtual pooling, the same may be continued.

9. I request the Hon'ble Commission to bring about the amendments to the subject regulation proposed by AP Transco appropriately to protect consumer interest. I request the Hon'ble Commission to provide me an opportunity to make submissions in person during the public hearing proposed.

Thanking you,

Yours sincerely,

**M. Venugopala Rao**  
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Copy to:

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