TATA

6/3/2020

TPREL/APERC/FY20/03-01
Date: 04.03.2018

To
The Commission Secretary
Andhra Pradesh Electricity Regulatory Commission
#11-4-660, 4th Floor, Singareni Bhavan, Red Hills,
Hyderabad - 500004

Sub: Submission of views/objections/suggestions on proposed amendments of the APERC Forecasting, Scheduling and Deviation Settlement of Solar and Wind Generation Regulation, 2017

Ref:

1. APERC public notice dated 13-02-2020 regarding submission of views/objections/suggestions on the amendments proposed by APTRANSCO vide letter no CGM/HRD&Plg/SE/Plg/EE/RAC&Reforms/APERC/D.No. 121/2019 dated 10.12.2019. on APERC Forecasting, Scheduling and Deviation Settlement of Solar and Wind Generation Regulation, 2017

Dear Sir,

We would like to introduce ourselves as Tata Power Renewable Energy Ltd (TPREL), a leading renewable energy company and a wholly owned subsidiary of The Tata Power Company Limited. TPREL have operating capacity of 2,559 MW, comprising of 927 MW wind and 1,632 MW solar. The company is under implementation of 870 MW.

06/03

At the outset we thank the Hon' APERC for giving us an opportunity to offer our views and suggestions on the proposed amendment by APTRANSCO, as referred above.

We have a total operational capacity of 205 MW renewables comprising of 105 MW Solar projects located in districts of Kadapa & Kurnool and 100 MW wind project located at Nimbagallu in the state of Andhra Pradesh, which would be severely affected by proposed amendments of the APERC Forecasting, Scheduling and Deviation Settlement of Solar and Wind Generation Regulation, 2017.

The proposed changes in the Regulations such as change in the error calculation formula, reducing the permissible deviation band , disallowing intra-day revisions, and increasing the DSM charges to Rs 2 per unit beyond the permissible band and removal of virtual pool will result in a significant cost increase and shall make our projects unviable.

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Tata Power Renewable Energy Limited
(Formerly known as Industrial Power Infrastructure Limited)
C/o The Tata Power Company Limited
Corporate Centre, A Block, 34, Sant Tukaram Road,
Carnac Bunder, Mumbai 400 009.
Tel : 91 22 6717 1000 Extn : 1626
CIN : U40108MH2007PLC168314

Our detailed views/observations/suggestions and comments on the above subject matter are enclosed as an Annexure along with this letter.

In light of above, we request the Hon'ble Commission to kindly consider our views/objections/suggestions favorably in the interest of the renewable energy development. We sincerely thank and appreciate the pivotal role the Commission is playing in promoting the renewable energy in the state of Andhra Pradesh.

Thanking You,
With Regards
For Tata Power Renewable Energy Limited

(Sivanarayana Venkat Gavadhakatla)
Group Head – Commercial Management

Enclosures: As above

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Annexure

Clause	Existing in Regulation	Proposed in Amendment	Views/Observations	Suggestions/Comments
2.1.a	"Absolute Error" means the absolute value of the error in the actual injection of wind or solar generators with reference to the scheduled generation and the Aval/ab/e Capacity (AVC), as calculated using the fo//owing formula for each 15-minute time block.	*The formula for error calculation is suggested to be changed as: Forecast Error (%) = 100 X (Schedule Generation — actual Injection)/Schedule Generation. * The term 'absolute error' substituted with 'forecast error'. *The term 'Available Capacity' substituted with 'Scheduled Generation'.*	The proposed error defination will be insufficient to handle varying seasons, especially during very low or zero generation/schedules. For example in case of off peak season for a wind project , the wind generation in many time blocks in a day are equivalent to zero or very low. The proposed error calculation on schedule basis will provide a band almost equivalent to zero compared to current available capacity of 15%. Hence making predictions to this narrow range in case of Wind is not possible.	In view of ensuring optimum and genuine forecasting, we suggest the Commission to define the error percentage normalized to available capacity which is as per the existing regulation, instead of schedule as proposed.
2.1.j	"deviation in a time block for a seller means its total actual injection minus its total scheduled generation. "	• Inclusion of 'Allowable forecasted error' in calculating th deviation wherein 'Allowable forecasted error' will be calculated as: 'Allowable forecast error' = 100 x (diversity factor 0.7 in control area at the beginning of the financial year) x (quantum of deviation limit permitted under CERC's DSM Regulation amended from time to time) / (quantum of VRE installed capacity).	It is impractical to the forecast the wind/solar power which is infirm in nature to accurate limits as per the proposed allowable band of +/- 4.89% with the proposed error definition. The generators will lose lot of revenue outside the band. After analysing the difficulties of wind/solar generators, CERC along with many SERCs including APERC have provided band of 15%. Deviating beyond the permissible Band, the generators are liable to pay DSM charges at 50p (15% -25%), Rs. 1.00 (25%- 35%) and Rs. 1.50 for above 35%.	Taking the cognizance of variable and uncertain nature of wind/solar. The wind/ solar generators are to exempt from the frequency linked deviation charges. The State Pool might be surplus or deficit depending on instantaneous DSM rate when solar or wind generators deviate vis-a-vis the deviation rate applicable on them on aggregation level. Calculating the same on individual basis will result in much higher DSM charges compared to that at aggregration level. Hence we recommend the commission to continue with the existing clause mentioned in the regulation
4.1	The Methodology for day-ahead scheduling of wind and solar energy generating stations which are connected to the Grid and rescheduling them on one and half-hourly basis and the methodology of handling deviations of such wind and solar energy generating stations shall be as stated hereunder and accordingly forecasting tools shall be provided by the generator concerned."	*It is suggested to remove the option of rescheduling of forecast on one and half-hourly basis during the day of operation and strictly adhere to schedule on a day-ahead basis over violation notices to the Discoms*	The accuracy of forecasting improves as one gets closer to time of dispatch. Also plenty of research say that that forecasting accuracy improves as more updates are done aligned with shorter scheduling. Knowing the difficulty Indian Electricity Grid Code Regulation, 2015 in its third amendment dated 10th August 2015 has accomodated 16 Revisions in case of wind and solar generation.	The suggestion for removal of one and half hourly revision on the basis of the argument that DISCOMS have to plan on a day ahead basis will lead instability in the grid due to larger deviations from Wind/Solar generation. Being infirm in nature, the day ahead schedule will not be able to capture the real time site conditions. Although, the Thermal plants which are firm in nature are allowed to submits revisions on chargable basis, how can Wind/Solar generation which is infirm in nature is expected to generate as per day- ahead schedule. Hence we suggest not to amend the existing clause
6.3	The deviation charges for over or under injection for sale/supply of power within the State are tabulated here under: <=15% = Nil, 15% to 25% = 50p, 25% to 35% = Rs. 1.00, >35% = Rs. 1.5 per unit	*The levy and collection of DSM charges should be amended as 1. within allowable forecast error : None 2. outside the allowable forecast error = Rs. 2 per unit*	The wind/ solar generators are to exempt from the frequency linked deviation charges. The Wind/Solar generators are paid as per Actual by the DISCOMs as per PPA. For example in case a wind/solar generator schedule's 100 MW for an hour and generates Zero because of extreme weather conditions (due to rain in case of solar or no wind), as per the proposed mechanism Approx 95 MWH of the energy deviated beyond the permissible limit. The generator is liable to pay an amount of Rs. 1,90,000 (95 MWH* 2000) on account of DSM, whereas the DISCOM pays the zero which is as per actual	Infact many of states have taken an opposite approach - that of reducing per unit DSM charges. In Gujarat, DSM charges are Rs 0.25/ Rs 0.5 and Rs 0.75 per unit. This is done in conjunction with marginal reduction in accuracy thresholds. The reduction in per unit DSM charge is in line with the recent PPA tariffs, which have been significantly lower than the Rs 5/unit benchmark used by FoR when determining the current DSM charges. Similarly, the Honourable APERC should consider reducing per unit DSM charges

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