

Before the Central Electricity Regulatory Commission

In the matter of:

Draft Deviation Settlement Mechanism and Related Matters) Regulations, 2021

Submission by Prayas (Energy Group), Pune

29th October, 2021

The Central Electricity Regulatory Commission (CERC) issued draft DSM regulations on 7th September, 2021 along with an Explanatory Memorandum and invited public comments on the same.

Firstly, we welcome the publication of these draft DSM regulations which mandate an important element of the framework which ensures reliability, security and stability of the grid in the country. The important points in our submission are

- a. Provide certainty on Normal Rate of Charges for Deviations by keeping the existing DSM price (ACP of DAM) as the ceiling for one year.
- b. Remove incentive to over-schedule and under-inject for Wind and Solar generators by either tightening the under-injection error band or providing a graded payment for over-injection.
- c. In the absence of a contract rate (for OA/CPP sellers), the payment into the pool by wind-solar generators for under-injection could be at the Green DAM ACP rather than the ACP of the DAM.
- d. The Commission should set a definitive timeline or a sunset clause (say March, 2023/24) by which all W-S generators will have to align their deviation accounting to their scheduled generation rather than their available capacity.
- e. Reconsider the definition of 'Renewable Rich State' or 'RE-rich State' from an absolute number of 1000 MW to a percentage (say 10/20%) of total installed capacity.

Prayas (Energy Group)'s detailed comments and suggestions are listed below:

1. **Provide certainty on Normal Rate of Charges for Deviations**

The draft proposes to link the normal rate of charges for deviation to the Weighted Average Ancillary Service Charge and also delinks the deviation charges from system frequency. As noted in the EM,

In the absence of large frequency excursions as at present, there hardly remains any scope for frequency linked price arbitrage. Therefore, the system frequency is no longer a correct indicator of generation being short or surplus, and also link between the system marginal price and frequency hardly exists.

Thus the proposal is to move to a centralised mode of frequency regulation through Ancillary Services rather than continue with the existing decentralised frequency linked DSM framework. This is a necessary and logical move going ahead. However, the draft notes a proviso in regulation 7(1) namely,

Provided that for a period of one year from the date of effect of these regulations or such further period as may be notified by the Commission, the normal rate of charges for deviation for a time block shall be equal to the highest of [the weighted average ACP of the Day Ahead Market segments of all the Power Exchanges; or the weighted average ACP of the Real Time Market segments of all the Power Exchanges; or the Weighted Average Ancillary Service Charge of all the regions] for that time block.

Given that the Ancillary Services framework is still in the development phase and the Average Ancillary Service Charge price discovery and its variations/volatility is not yet known, the proviso brings in added uncertainty in terms of not knowing the likely exposure in terms of deviation charges. Hence we suggest that the draft be modified such that existing DSM price (ACP of DAM) would act as a ceiling. The proviso could be modified as

Provided that for a period of one year from the date of effect of these regulations or such further period as may be notified by the Commission, the normal rate of charges for deviation for a time block shall be equal to the lowest of [the weighted average ACP of the Day Ahead Market segments of all the Power Exchanges; or the weighted average ACP of the Real Time Market segments of all the Power Exchanges; or the Weighted Average Ancillary Service Charge of all the regions] for that time block.

After there is sufficient experience with the Ancillary Services market and based on an analysis of the same, the Commission could then fully link the DSM price to the Weighted Average Ancillary Service Charge.

2. Remove incentive to over-schedule and under-inject for Wind and Solar generators

The EM (page 15) notes that,

For over injection, they (i.e. Wind-Solar) will neither be paid nor will they have to pay any deviation charge. For under injection, they have been exempted from the payment of deviation charge up to 10% deviation unlike the current tolerance band of (+/-) 15%. This is based on the experience gained over the period in terms of improved forecasting and aggregation of scheduling at the pooling station thereby reducing error for individual generators. Under injection beyond the limit of 10% during a time block shall attract charges for deviation at the rate of 10% of the normal charges for deviation applicable during that time block.

The draft proposes no payment nor any deviation charge for any and all over-injection. Currently, wind-solar generators get paid at the fixed rate upto 15% over-injection and a graded reduction in fixed rate of 10% each for the energy over-injected in each band of 15-25%, 25-35% and >35%. In this case, the fixed rate is the PPA rate or the national APPC for OA participants.

The proposal to neither pay nor levy any DSM charge for any over-injection is likely to inadvertently provide an economic incentive for wind and solar generators to marginally over-schedule and under-inject, thereby minimising the possibility of not getting paid at all for any over-injected energy. There are two possibilities to address this issue.

- a. The Commission could consider further tightening the under-injection exemption error to say 7-8% instead of 10%.
- b. For over-injection payments, instead of moving from the existing graded reduction (100%-70%) directly to zero, the Commission could consider an appropriate payment level for over-injection like 50-75% of the fixed rate upto 10/15% over-injection and zero payment for >10/15% over-injection.

We strongly welcome and support the tightening of the exemption band for RE under injection deviation error from 15% to 10%.

Further, for the Deviation by way of under injection over 10%, the draft proposes a charge payable by the seller which would be

*10% of the normal rate of charges for deviation beyond 10% Deviation-WS seller (in %):
Provided that such seller shall pay back to the Deviation and Ancillary Service Pool Account for the total shortfall in energy against its schedule in any time block due to under injection, (a) at the contract rate at which it has been paid based on schedule, or (b) in the absence of a contract rate at the rate of the Area Clearing Price of the Day Ahead Market for the respective time block.*

In the absence of a contract rate (for OA/CPP sellers), the proposed rate is the ACP of the DAM rather than the existing national APPC. Given that an integrated DAM (with a separate green DAM) would soon be operationalised, we suggest that the Commission modify the above proviso to,

(b) in the absence of a contract rate at the rate of the Area Clearing Price of the Green Day Ahead Market for the respective time block.

The Commission could consider shifting to the green DAM price after sufficient experience is gained in this market segment.

3. Computation of Deviation for Renewables

The existing and the proposed regulations define Deviation for Renewables as follows

$$\text{Deviation-WS seller (in \%)} = 100 \times \frac{[(\text{Actual Injection in MWh}) - (\text{Scheduled generation in MWh})]}{[(\text{Available Capacity})]}$$

It is well known that for various reasons, the denominator in the above formula has been kept at Available Capacity rather than the more logical and consistent parameter of Scheduled Generation. While this was a necessary starting point to begin the DSM framework for renewables, we urge the Commission to set a definitive timeline or a sunset clause (say March, 2023/24) by which all W-S generators will have to align their deviation accounting to their scheduled generation rather than their available capacity.

4. Reconsider the definition of 'Renewable Rich State' or 'RE-rich State'

The proposed regulations define 'RE-rich State' as

'Renewable Rich State' or 'RE-rich State' means a State whose combined installed capacity of solar and wind power projects under the control area of the State is 1000 MW or more;

Given the rapid pace at which RE capacity is being added in most states, it would be better to consider a definition of RE-rich State which is not based on an absolute MW number like 1000 MW but a percentage number, say RE being 10/20% of the total installed capacity in the state.

* * * * *