

To,

03-06-2024

**The Secretary,
Central Electricity Regulatory Commission,
Chandralok Building, Janpath, New Delhi.**

Subject: Comments on the Draft CERC Deviation Settlement Mechanism and Related Matters Regulations, 2024.

Respected Sir,

At the outset, we would like to congratulate CERC for notifying the draft **Draft CERC Deviation Settlement Mechanism and Related Matters Regulations, 2024.** With an ever expanding RE penetration into the Indian Grid and the recent regulatory developments in the last one year or so, the draft regulation shall provide the much needed clarification on several points that had been proposed in the draft procedures drafted by NLDC few months back. Also, it is expected that these procedures shall guide all concerned stakeholders at national, regional and state-level including RE generators and Qualified Coordinating Agency (QCA) in streamlining day-to-day grid operations and optimizing the impact of DSM charges.

REConnect Energy, over the years, has been contributing to the best of its abilities as the **largest Forecasting and Scheduling company and Qualified Coordinating Agency (QCA)** with more than **17,000 MW** capacity of wind and **12,000 MW** capacity of solar farms across **10 States** in India under its portfolio. Additionally, we are also involved in RE forecasting of 66 GW at national, regional and state level through Renewable Energy Management Centres.

We are the largest Qualified Coordinating Agency (QCA) in the states of Karnataka, Andhra Pradesh, Rajasthan, Madhya Pradesh, Uttar Pradesh and Punjab in terms of capacity. We have been successfully delivering our Forecasting services to all major private IPPs and PSUs having renewable energy assets. Many of these IPPs also have assets connected to the ISTS network and fall under the ambit of the proposed procedures.



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We are also working for various utilities on Demand Forecasting wherein we are helping them predict their demand accurately, thereby helping them manage the difference in supply and demand in a much coordinated manner.

We hereby submit our detailed comments [covered in Annexure-1] on the draft procedures. We are hopeful that our inputs as an experienced QCA shall be considered while finalizing the procedures.

With Regards,

Mithun Dubey
Vice President- Business Development



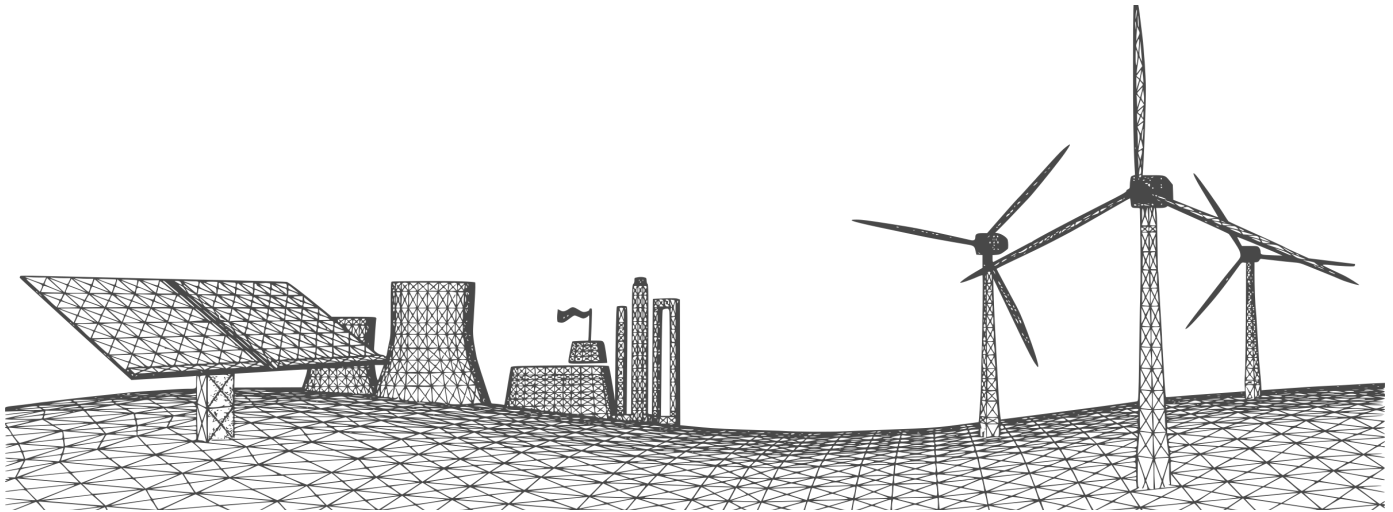
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REConnect Energy Comments on Draft CERC (Deviation Settlement Mechanism and Related Matters) Regulation, 2024

03-06-2024



Prepared by: REConnect Energy Solutions Ltd.

Annexure A

Sr. No	Description	Details
1	Clause 8 (4) Charges for Deviation	Deviation by way of over injection (Receivable by the Seller) (i) for VLwS (1) @ contract rate; (ii) for VLwS (2) @ 90% of contract rate (iii) for VLwS (3) @ 50% of contract rate, (iv) beyond VLwS (3) @ Zero;
	Comment	Being the QCA for almost 30 GW RE capacity in the country, we ran two cases, each for wind and solar and below were the observations: <ul style="list-style-type: none"> - Actual data was used for a period of 12 months for wind and solar, so that any seasonal variability and the resultant DSM impact can be captured. The PPA rate considered was Rs 3.00/kWh. It was observed that the DSM impact increased both for wind and solar, by virtue of an additional accuracy band being introduced and deviation rate(s) increasing from 50% to 100% in case of under-injection. - In the case of the Wind project of 200 MW capacity, the expected Deviation impact is increasing by ~50% from the current regulation calculations. Whereas in the case of the Solar project of 340 MW capacity, the expected Deviation impact increases by ~90% from the current regulation calculations. - While aggregation has been allowed at the pooling station through QCA, which may result in the reduction of DSM charges, considering any short-term weather event may impact the pooling station in entirety, it is suggested that the bands should be uniformly distributed in steps of standard deviation of 10% for each slab, with deviation charges beyond 30% being considered for 100% deviation charges. <p>Hence, it is requested that the following bands be considered:</p> <p>For solar or hybrid of wind-solar or wind generation station:</p>



		<p>VLWS (1) = Deviation up to 10% DWS VLWS (2) = Deviation beyond 10% DWS and up to 20% DWS VLWS (3) = Deviation beyond 20% Dws and up to 30% DWS</p> <p>Also, de-linking the deviation charges is a logical step as the RE plants come under the category of must-run plants and the generation is totally dependent on weather parameters. Unlike the case of conventional or RoR plants, which can ramp-up or down the generation depending on the frequency of the grid.</p> <p>Also, it is suggested that aggregation of schedules shall be allowed in line with the provisions of the IEGC 2023.</p> <p>As per IEGC, 2023 Clause 45.11 - Scheduling of WS seller and ESS by QCA:</p> <p><i>“(a) The regional entity renewable energy generating station(s) or Projects based on energy storage system(s) connected at a particular ISTS substation or at multiple ISTS substations located in a State may appoint a QCA on their behalf to coordinate and facilitate scheduling for such generating stations or energy storage system(s).</i></p> <p><i>(b) NLDC shall submit a procedure for aggregation of pooling stations for the purpose of combined scheduling and deviation settlement for wind or solar or renewable hybrid generating stations that are regional entities”</i></p> <p>Also, as per MoP Power Market Group Report, Clause 11.2 Enlargement of Balancing Areas:</p> <p><i>“At the same time, several interventions have been / are being carried out on a regional basis demonstrating the utilization of larger balancing areas. The Automatic Generation Pilot for secondary response has been successfully carried out considering a regional balancing area. Further the draft IEGC Regulations, 2022 has envisioned aggregation of pooling stations for the purpose of combined scheduling and deviation settlement for wind or solar or renewable hybrid generating stations. This would further enable balancing across larger areas.”</i></p>
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		<p>As evident from the above mentioned clauses, we can see that both IEGC and MoP Report mentioned balancing across larger areas. <u>Considering the IEGC as the base document referred for preparation of these draft regulations notified by CERC, there seems to be a mis-alignment in allowing aggregation at state level (with multiple ISTS pooling stations being aggregated) vs at the ISTS pooling station level.</u></p> <p>Also, we understand that aggregation plays an important role in increasing balancing area, minimizing project level deviations and helps in controlling deviation over a larger geographical area. As more and more renewable capacity is getting added into the grid primarily due to Inter State Transmission System (ISTS) projects where the usual project size ranges from > 50 MW to a few hundreds of MW, aggregation can play a crucial role in minimizing the deviation charges for individual projects thereby further encouraging rapid capacity addition of renewables into the Grid. Thus it is requested that the QCAs should be allowed to combine and create a virtual pool for wind or solar or renewable hybrid generating stations at least at the state level. As a further roadmap, an even larger balancing area may be allowed to be created having regional level aggregation including much tighter deviation / penalty free error band where the grid security aspect is further enhanced.</p> <p>If we take the example of a state like Karnataka which allows aggregation of RE pooling stations/forecast by creating a virtual pool, we have observed that while it becomes much easier for the SLDC to compute DSM at DISCOMs'/state level, but also essentially results in very low DSM charges resulting in benefit of the RE generators which are already affected by extremely low PPA rates being discovered in the reverse bidding auctions.</p> <p>A comparative example of average DSM charges for wind and solar for Rajasthan (state which does not allow aggregation) vs Karnataka (which allows aggregation) compared for a period of one year is as depicted below:</p>
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<p>2</p>	<p>Clause 8 (4) (a) and Clause 13 Contract Rate</p> <p>Comment</p>	<p>The contract rate for the purpose of deviation shall be equal to the weighted average of the contract rates of all individual WS seller(s) opting for aggregation at the pooling station;</p> <p>It is possible that at a same ISTS sub-station, there can be multiple arrangements for power sale from the REGS. Some contracts may be LTA while others may be MTOA/STOA. Also, it is being observed that the</p>



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		<p>arrangement is not uniform at pooling stations and there can be multiple commercial arrangements in case of a merchant capacity wherein the contract rate may differ on a day-to-day basis also. For captive capacity, there may not be a contract rate at all.</p> <p>Also, the contract rate(s) may vary significantly in case of LTOA/MTOA/STOA contracts and since this is a commercial information, the REGS may not be comfortable disclosing the same.</p> <p>In case of a co-located hybrid REGS, since the performance bands are different for solar/hybrid and wind, will there be two separate DSM charges?</p> <p>It is requested to clarify that in such a case, how will the weighted average be computed?</p> <p>Also, if it is possible, can a sample computation be demonstrated through an example and included in the final procedures and a pilot DSM be prepared for at least a couple of weeks before the implementation of final procedures.</p>
3	Clause(5) & Clause(6) (iii)	<p>Charges for Deviation, in respect of a Standalone Energy Storage System (ESS), shall be at par with the charges for Deviation for a general seller other than an RoR generating station or a generating station based on municipal solid waste or WS seller as specified in Clause (1) of this Regulation</p>
		<p>Considering Energy Storage System(ESS) at par with the Conventional Energy systems is not practical and defeats the whole purpose of ESS acting as a complementary support for wind and solar and enabling them in providing grid stability</p> <p>The Energy Storage System(ESS) should be considered under the same band as the rest of the Hybrid Renewable Energy projects, this will be beneficial for both the generators and the Grid managers. And this will also encourage the stakeholders to develop the ESS capacity further in the system- which otherwise is already impacted by factors such as high cost. .</p>

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