

Ref No: VGEPL/CERC/Reg/2021/10/01

Date: 22nd October 2021

Confidential
By Hand delivery / FAX / Email

To,

The Secretary,
3rd & 4th Chanderlok Building 36,
Janpath Rd, New Delhi, Delhi 110001

Subject : Submission of comments, objections and suggestions on Draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2021

Reference : Public Notice No. L-1/260/2021/CERC dated 7th September, 2021 Inviting written comments/ suggestions/ objections on the Draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2021

Dear Sir,

In reference to the above subject, the Hon'ble Commission has prepared the Draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2021 and the same is posted on the website of the Hon'ble Commission (www.cercind.gov.in) inviting comments/ suggestions/ objections from stakeholders vide the public notice as referred above.

At the outset, we broadly welcome the initiative taken by the Hon'ble Commission to bring draft regulation with the objective to provide a regulatory mechanism for treatment and settlement of deviation from schedule of drawal or injection of electricity in the interest of reliability, security and stability of the grid.

We convey our gratitude for providing us the opportunity to participate in the consultative process for finalization of the subject draft. We are submitting our comments, objections and suggestions along with the rationale for the same as an **Annexure - I** to this letter.

We sincerely request the Hon'ble Commission for its kind consideration of the same, while finalization of subject amendment in regulation.

About Vector Green Energy Pvt. Ltd.

Vector Green Energy Private Limited ("Vector Green") is an operating cum holding company for renewable energy projects in India and wholly owned by India Infrastructure Fund II, which is managed by Global Infrastructure Partners, India.

Although a recent entrant to the sector, Vector Green has rapidly grown to an operating base of ~650 MW (including solar & Wind) with operations across 11 states and another 90 MWp Solar under development in Gujarat. Our portfolio includes a 24 MW wind plant located in Maharashtra as well as ~10 MW of rooftop projects located across the country, of which some are located on prominent buildings such as the "*Rashtrapati Bhavan*".

Thanking You,

Yours faithfully

For **Vector Green Energy Private Limited**

Sameer Mathur

(Chief Operating Officer)

Enclosure : Annexure - I having comments and suggestions with rationale

Annexure – I

Sl.	Suggestion/ Comments	Rationale
1	The proposed amendment should be deferred for 5 years	<p>In spite of use of most sophisticated software, advanced artificial intelligence, world's best weather data from renowned international weather forecasting organisations, and round the clock monitoring by QCAs and developers, the improvement in forecasting accuracy is not able to meet the accuracy requirements of existing regulations. The deviation quantum and DSM penalty being paid by RE developers is testimony to it.</p> <p>DSM for solar and wind has always being an area of contention and various litigations are going around DSM in numerous states before State Regulatory Commissions or in High Courts. DSM for Solar and Wind is yet to implemented by all State Load Despatch Centres, which proves the technological and regulatory barriers in implementation of this regulation.</p> <p>Forecasting and Scheduling for solar and wind need more time to be standardized, where all developers reach a minimum level of accuracy before any tightening of regulatory compliance, as the proposed amendment will be a huge burden for the developers who are continuously working for improving the forecasting accuracy and save on DSM penalty. It will put additional burden on the RE developers who are operating projects on a very competitive tariff. States like Punjab, Madhya Pradesh, Bihar, Haryana, Uttar Pradesh are yet to implement DSM for solar and wind, owing to multiple reasons and pending litigations at different forums.</p> <p>We request to extend the implementation of the current amendment in DSM regulation by minimum 5 years as the forecasting of solar and wind generation to reach a maturity, the ancillary market is still under development and need time to be fully functional. The recent price volatility on the power exchange also shows the inherited risk associated with linking the penalty with average clearing price of power exchange where the price was moving to as high as Rs. 20/kWh.</p> <p>The current tariff for solar and wind energy in India are one on the lowest in world, and this is possible due to the various regulatory, policy and administrative initiatives taken by the agencies, but making the regulatory requirement at this stage will deter investment and also may raise tariff for future tender as developers will have to build this uncertain cost in their tariff in bids</p>

Sl.	Suggestion/ Comments	Rationale
2	Allow virtual pooling of wind and solar capacities connected to ISTS station	<p>This will help the Regional Load Despatch Centres in better management of grid. Virtual pooling allows developers located at different locations in a region to virtually pool their forecasted generation through a common QCA and send one combine forecast to load despatch centre. Experience of state level virtual pooling have shown that developers and the LDCs benefit from pooling of capacities located in different geographies. Virtual Pooling of capacities help in reducing number of schedules being sent to LDC as a combine schedule is sent for all the capacities being tied up by one QCA and due to pooling there is higher accuracy level.</p> <p>Virtual pooling in Andhra Pradesh and Karnataka for STU connected projects, have huge benefit as developers have lower cash outflow in form of DSM penalty and the State Load Despatch Centres are in better position to manage the grid as there is less number of schedules being received and the deviation between the forecasting and actual generation is also reduced due to balancing effect of projects being located in different locations.</p> <p>Forum of Regulators in the Model Regulations on Forecasting, Scheduling and Deviation Settlement of Wind and Solar Generating Stations at the State level, has proposed for treating all RE generators as virtual pool, as aggregation will be advantageous, reducing the impact on the Discoms as well as the generators.</p>
3	Gradual reduction in DSM band post a period of 5 year, to make it more align with the improvement in forecasting accuracy and implementation of DSM for solar and wind in all states	<p>A prospective and gradual reduction of DSM band from current 15% band will propel developers/ QCAs/ forecasters to invest in improvement of forecasting accuracy, data flow from site to the forecasting agency system and advance modelling tools to process weather data being received from multiple agencies.</p> <p>One of critical factor in accurate forecasting is sharing of plant performance on real time and it requires good and stable IT network for smooth flow of data between RE developers and QCA. Most of the RE plants faces issue of IT network issues as most of the solar and wind plants are located in remote part of the country, where in spite of advent of 4G internet service, round the clock connectivity between the plant and remote servers is a distance dream.</p> <p>Developers to maintain a seamless flow of data have setup multiple channels for communication between the plant SCADA and forecasters servers. This all have been done at the cost to developers, but round the clock communication have not been observed till now.</p>

Sl.	Suggestion/ Comments	Rationale
		<p>We expect improvement in network connectivity at remote places in future, as there is growing investment and investors interest in broadband connectivity by satellite. This may improve the connectivity and change the face of forecasting but, all this will take time and the cost will also need to be rationalized to make it affordable to be used by solar and wind plants</p>
4	<p>The definition of “Available Capacity” need to be broadened to make it more inclusive and align with the changing technology as advent of Hybrid Solar and wind project, with or without storage need to be considered</p>	<p>The current definition which define cumulative capacity rating of wind turbines or solar inverters that are capable of generating power in a given time block as “Available Capacity” have a limited scope as currently wind solar hybrid projects are being setup, whose rated capacity is higher than their contracted capacity. For them declaring the available capacity is a tough task and their need schedule have to be abide by the contracted capacity clause of PPA.</p> <p>As the government is promoting new technologies and storage is going to be most critical of it, inclusion of battery storage in new upcoming solar and wind plants will add complicity in declaring the “Available Capacity” as energy stored in battery may be discharged in grid during non-generating hours.</p> <p>These need to be brought in the regulation to make it more compliance with the changing requirement and new and complex projects being setup in the country.</p>
5	<p>Provision of Zero deviation charge for Over injection by WS Seller need to be modification with following addition:</p> <p><i>Provided that such seller receive payment from the Deviation and Ancillary Service Pool Account for the total excess energy against its schedule in any time block due to over 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.</i></p>	<p>If it is inevitable to implement this regulation, Zero deviation charge will be helpful but the current proposed modification in regulation will be a huge burden and may make new project with tariff as low as Rs.2.00/kWh unviable to operate.</p> <p>As it is, an accepted fact that zero deviation is impossible to achieve at current technological supports and in solar and wind generation, the generation will always deviate from the schedule. The deviation will sometime on higher side and sometimes on lower side but matching the generation and schedule is impossible, as the developer/QCA don't have control over the nature, which affect the generation.</p> <p>This limitation in accurate forecasting bring the need to reduce the burden being brought to the developer in form of penalty for over injecting.</p>