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The Central Electricity Regulatory Commission (CERC) has proposed a draft with significant changes to the Deviation Settlement Mechanism (DSM), which governs penalties when renewable generators deviate from their scheduled output. The reforms are aimed at strengthening grid stability or grid balancing, which is important looking at India's main target to achieve 500 GW of non-fossil fuel-based installed electricity capacity by 2030, a goal set at COP-26.

But, the proposed draft, on which CERC has sought industry feedback, is already creating concerns among the key players both in solar and wind energy categories. They argue that it could raise costs and risks for renewable energy developers, particularly wind projects. The Commission has invited stakeholder comments and industry bodies like Wind Independent Power Producers Association (WIPPA) have already appealed against the proposals.

So, what is grid balancing and why it is important? The textbook definition of grid balancing is the process of keeping electricity supply and demand equal at all times to maintain a stable power grid. The power plants do this by adjusting their output, while consumers adjust their usage to prevent blackouts or overloads. This has become increasingly important with the rise of intermittent renewable energy sources like wind and solar. For balancing, services grid operators use mechanisms like battery energy storage, to quickly react to any imbalances and maintain a consistent grid frequency.

KEY CHANGES

What are these key changes that CERC proposes to bring into effective April 1, 2026? Under the current system deviations are measured against available capacity. Under the proposed system, a hybrid formula has been worked out based on both scheduled generation (expected supply to discoms) and available capacity, with more emphasis on the former with the passage of time. Deviation from scheduled generation is a factor in grid instability, as it disrupts discoms' planning. This change will make deviation charges stricter and costlier for wind and solar projects.

It proposes tighter tolerance bands which would mean projects will be penalised for smaller deviations, raising compliance and forecasting pressures.

According to Aditya Pyassi, CEO of the Indian Wind Turbine Manufacturer Association (IWTMA), "The CERC endeavours of fostering greater grid



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Proposed rules for RE generators questionable

The stiff penalties for deviations from scheduled generation will push costs for renewable energy players, which could mean higher tariffs for consumers

discipline are welcome. However, we need to see and acknowledge the fact that India is on a historic path targeting the integration of 500 GW of renewable by 2030 and to maintain RE project viability, and it is very important to go about it in a graded manner."

Another aspect that needs to be kept in mind is that at present we do not have good quality and granular weather stations to give an assessment of how the wind and sunshine will vary renewable energy generation, he said, adding that "tightening of the DSM band should be done for RE projects after ensuring there are enough quality weather sub-stations across India so as to ensure projects' viability. Besides, if the implementation is for projects installed on retrospective basis it will create problems for existing projects as they wouldn't have the requisite generation projection technology."

There is also a need to have a liquid and functional ancillary power market so that power can be sold and managed

Under the proposed system, a hybrid formula has been worked out based on both scheduled generation (expected supply to discoms) and available capacity

according to schedules, he said.

Tighter deviation thresholds and increased penalties for under-injection, combined with the denial of payments for over-injection beyond certain limits, will have direct financial consequences on the projects. Independent analyses indicate adverse impacts ranging from 1.26 per cent to 2.51 per cent of Gross Annual Revenue for existing wind projects. Given the thin margins in RE projects, such penalties can render them unviable, discouraging new investments. And for consumers, it will indeed pinch their pocket, as tariffs are bound to go up.

Another aspect that both the regulators and the industry have to be mindful of is the mismatch between DSM and renewable energy realities. Wind and solar power are inherently variable and dependent on weather conditions.

Current forecasting technologies are unable to consistently achieve the 5-10 per cent accuracy now mandated. Penalising RE developers for deviations beyond their control effectively punishes natural variability.

FLAWED ASSUMPTIONS

According to the National Solar Energy Federation of India, "The proposed DSM framework and the proposed formula that emphasises scheduled generation are based on flawed assumptions and risk undermining the viability of

renewable energy projects. The erratic nature of wind generation, coupled with forecasting limitations, makes it impractical to impose tighter deviation bands and penalties. Instead, a market-driven, flexible, and equitable DSM framework should be adopted — one that supports grid stability without compromising the growth and sustainability of India's renewable energy sector."

Ankit Jain, Vice President and Co-Group Head Corporate Sector Ratings, ICRA Ltd, is of the view that "power producers will have to invest in better forecasting accuracy for power supply. Further, for the developers with existing power purchase agreements, tightening of the deviation penalties can impact the profitability and, consequently, the project debt coverage metrics. This would also mean that they will have to stay agile in terms of scheduling and forecasting, which will increase the operational costs. For the new PPAs however, the projects will be required to install advanced forecasting systems and/or integrate batteries with projects which will result in higher capital costs which could ultimately push the tariffs upwards."

While the developers and the regulator are trying to work out a mechanism where implementation is done in a graded manner, what is more important is that they have to be mindful of the consumer's pocket.