Sembcorp Comments/Suggestions regarding determination of value of "X" for computation of the deviation (in %) for Wind and Solar (WS) Sellers from 01.04.2026 onwards under the provisions of the CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 in Petition No. 9/ SM/2025 (Suo-Motu) Order.

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1.	14. A total of 16 regional renewable energy (RE) stations were considered for the study, out of which six were solar power projects (three from the Western Region and three from the Southern Region). Similarly, six wind power projects were included, three from the Southern Region and three from the Western Region. Additionally, four hybrid power projects were selected from the Northern Region. A total of 41 weeks of time-block-wise data for selected renewable generating stations were analysed for the study to account for seasonal variation. 15. The study assessed the impact of DSM on the revenue of RE plants under different values of X, ranging from X = 100% to X = 0%. The findings indicate that the solar plants experienced a moderate range of revenue loss, varying from around 3.5% to 11.1%. Hybrid plants showed		The Grid India study conducted on 16 regional renewable energy (RE) stations itself recognises the fact of huge financial implication on the already commissioned projects: *"15. The study assessed the impact of DSM on the revenue of RE plants under different values of X, ranging from X = 100% to X = 0%. The findings indicate that the solar plants experienced a moderate range of revenue loss, varying from around 3.5% to **11.1%.** Hybrid plants showed a slightly wider loss range from 2.4% to **11.8%.** However, the highest impact was seen in wind power plants, where the percentage loss is from 2.8% to **48.2%,** reflecting their higher variability and forecasting challenges."* It may be noted that as per Grid India's own analysis and even after considering benefit of aggregation, the loss of revenue by wind and solar projects even at zero value of X is 3.35%. This is around 125% increase from the revenue loss of 1.49% based on 2024 Regulations. In contrast, the revenue impact for a project which was commissioned in 2018-19 based

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<table>
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<tr><td></td><td>a slightly wider loss range from 2.4% to 11.8%. However, the highest impact was seen in wind power plants, where the percentage loss is from 2.8% to 48.2%, reflecting their higher variability and forecasting challenges.</td><td></td><td>on the extant regulations was around 0.5%. These already commissioned projects would see a sharp rise of 700%. No project can absorb such huge loss of revenue. Further increase in value of "X" will lead to these projects being unviable to operate.

The existing Projects will not be able to bear the impact of such huge revenue loss as the same had not been envisaged at the time of conceptualisation and planning of the already commissioned / projects where bids have been submitted.

Therefore, the applicability of the changed deviation % formula with X should not be made applicable on the already commissioned / projects where bids have been submitted.</td></tr>
<tr><td>2.</td><td>22. Therefore, it is proposed that for the Existing Projects (WS Sellers), the trajectory for reduction of "X" shall be as follows:
<table><tr><th>With Effect From (w.e.f.)</th><th>Value of "X"</th></tr><tr><td>01.04.2026 to 31.03.2027</td><td>100%</td></tr><tr><td>01.04.2027 to 31.03.2028</td><td>80%</td></tr><tr><td>01.04.2028 to 31.03.2029</td><td>60%</td></tr></table></td><td>22. Therefore, it is proposed that for the Existing Projects (WS Sellers), (commissioned or under-construction or projects where bid submission date is prior to coming into effect of this order) "X" shall be 100%. ~~the trajectory for reduction of "X" shall be as follows:~~
<table><tr><th>~~With Effect From (w.e.f.)~~</th><th>~~Value of "X"~~</th></tr></table></td><td>The Existing Projects (commissioned or under-construction or projects where bid submission date is prior to coming into effect of this draft order) were conceptualised on the applicable / prevalent technical norms and parameters at the time of bidding for the Project. Since the tariff under the PPA is fixed for a term of 25 years and cannot be altered thereafter, the X-factor on Existing Projects would defeat the purpose of regulatory certainty since: -</td></tr>
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	01.04.2029 to 31.03.2030 — 40% 01.04.2030 to 31.03.2031 — 20% 01.04.2031 onwards — 0%	~~01.04.2026 to 31.03.2027 — 100%~~ ~~01.04.2027 to 31.03.2028 — 80%~~ ~~01.04.2028 to 31.03.2029 — 60%~~ ~~01.04.2029 to 31.03.2030 — 40%~~ ~~01.04.2030 to 31.03.2031 — 20%~~ ~~01.04.2031 onwards — 0%~~	• The Existing Projects will be impacted by the reduction of X Factor which had not been envisaged at the time of conceptualisation and planning of the Existing Projects. • However, the future projects would be able to factor in the X-Factor while setting up the projects. Therefore, the applicability of the X-Factor on the Existing Projects will result in 'regulatory uncertainty' and changes the level playing field between the Existing Projects vis-à-vis the future projects. The concept of 'regulatory certainty' is a statutorily recognized concept under the Clause 5.8.8 of the National Electricity Policy and Clause 4.0 of the Revised Tariff Policy.
3.	24. Further, the Commission is of the view that the green transition needs to align with the principle of equitable treatment of all grid-connected generators and should reflect the increasing maturity of the renewable energy sector. The Commission also believes that in the future, the intermittency of wind and	24. Further, the Commission is of the view that the green transition needs to align with the principle of equitable treatment of all grid-connected generators and should reflect the increasing maturity of the renewable energy sector. The Commission also believes that in the future, the intermittency of wind and solar needs to	**The concept of equitable treatment of all grid-connected generators is flawed, as source of generation of general seller and RE generators are different, RE source needs accurate forecasting and is primarily dependent upon forecast accuracy improvement by IMD.** Effective April 2026, the deviation bands for renewable energy generators are set to tighten, with penalties to be calculated based on 'Scheduled

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	solar needs to be addressed by way of improved forecasting, scheduling, and operational experience. The new WS projects are now expected to demonstrate the same level of discipline and compliance as conventional generators. This step marks a shift towards a more grid-supportive framework for renewable energy integration, which is crucial for ensuring long-term grid reliability amidst the rising share of RE in the generation mix. 25. Accordingly, the Commission, apart from inviting comments from the stakeholders on the proposed trajectory for reduction of "X" as outlined in para 22 of this order, also directs the Staff of the Commission to initiate the process of amendment to the DSM Regulations, 2024, for the following: (a) All existing Wind and Solar (WS) Projects shall be treated at par	be addressed by way of improved forecasting, scheduling, and operational experience. The new WS projects are now expected to demonstrate the same level of discipline and compliance as conventional generators. This step marks a shift towards a more grid-supportive framework for renewable energy integration, which is crucial for ensuring long-term grid reliability amidst the rising share of RE in the generation mix. 25. Accordingly, the Commission, apart from inviting comments from the stakeholders on the proposed trajectory for reduction of "X" as outlined in para 22 of this order, also directs the Staff of the Commission to initiate the process of amendment to the DSM Regulations,2024, for the following: (a) All existing Wind and Solar (WS) Projects shall be continued to be treated as per the provisions of the 2024 regulation without any change	Generation' rather than 'Available Capacity' / installed plant capacity. This shift significantly increases the financial and operational risks for renewable energy developers. For supporting compliance with these stricter deviation limits & X-Factor for future projects, it is imperative that weather forecasting capabilities be enhanced. The Improved forecasting from the IMD will be critical in enabling renewable generators to align with the principle of equitable treatment of all grid-connected generators, thereby minimizing deviations and associated penalties. By their very nature, General Sellers and Wind & Solar (WS) Sellers operate under fundamentally different conditions and constraints. Equating them under the same regulatory framework overlooks these inherent differences. This distinction was rightly acknowledged by the Forum of Regulators, which had previously advocated for a differentiated treatment for WS Sellers. Aligning WS Sellers with General Sellers disregards the unique challenges of variability and forecasting that are intrinsic to renewable energy generation.

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	with General Sellers from 01.04.2031 onwards. (b) All new Wind and Solar (WS) projects, with tendering or bid submission dates on or after 01.04.2026, shall be treated at par with General Sellers. (c) Further, to address the growing concerns regarding grid stability, no payment shall be made to the existing Wind and Solar (WS) Sellers for any over-injection during periods when the system frequency is at or above 50.05 Hz. This measure is necessitated as renewable capacity is being rapidly commissioned into the grid, and challenges in real-time grid operations are becoming more prominent. In this context, there is an urgent need to curb over-injection by the existing WS generators in the interest of grid security, particularly in view of the	in the formula for calculation of deviation percentage and tightening of bands. ~~treated at par with General Sellers from 01.04.2031 onwards.~~ (b) All new Wind and Solar (WS) projects, with tendering or bid submission dates on or after 01.04.2026, shall be treated at par with General Sellers. ~~(c) Further, to address the growing concerns regarding grid stability, no payment shall be made to the existing Wind and Solar (WS) Sellers for any over-injection during periods when the system frequency is at or above 50.05 Hz. This measure is necessitated as renewable capacity is being rapidly commissioned into the grid, and challenges in real-time grid operations are becoming more prominent. In this context, there is an urgent need to curb over-~~	Further, the study conducted by Grid India, already indicates that the solar plants experienced a moderate range of revenue loss, varying from around 3.5% to 11.1%. Hybrid plants showed a slightly wider loss range from 2.4% to 11.8%. However, the highest impact was seen in wind power plants, where the percentage loss is from 2.8% to 48.2%. This is primarily because the thermal plants are based on far more mature technology and variations are quite predictive in nature as the generation is dependent on coal, However Wind-Solar are natural sources dependent on variable parameters. Increasing the DSM burden on WS Sellers, without corresponding improvements in weather forecasting accuracy, risks being punitive rather than corrective. Despite regulatory expectations, forecasting quality has not significantly advanced over the years, leaving WS Sellers vulnerable to deviations beyond their control. Furthermore, linking DSM penalties to grid frequency levels may not yield the intended outcome of enhanced grid stability. Unlike conventional generators, WS Sellers have minimal control over their generation output, which is inherently variable and weather dependent. Instead, alternative mechanisms such as partial curtailment

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	anticipated large-scale penetration of renewable energy in the near future.	~~injection by the existing WS generators in the interest of grid security, particularly in view of the anticipated large-scale penetration of renewable energy in the near future~~	strategies or dynamic DSM pricing models should be explored to achieve grid stability in a more equitable and effective manner. Also, the existing implementation time of 7^{th}/8^{th} time block should be reduced to 4^{th} time block to improve the forecasting quality. If the Hon'ble Commission decides to retain the clause with no payment for overgeneration in case high grid frequency, then there should not be any DSM charges/penalty payable by the wind and solar generators for under generation in case of high grid frequency,