CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 9/SM/2025 (Suo-Motu)

Coram:

Shri Jishnu Barua, Chairperson
Shri Ramesh Babu. V, Member
Shri Harish Dudani, Member
Shri Ravinder Singh Dhillon, Member

Date of Order: 31st March, 2026

IN THE MATTER OF:

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 Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024- Regarding

ORDER

The Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 (hereinafter "DSM Regulations, 2024") were notified on 5th August, 2024, and became effective from 16th September, 2024.

2. As per **Clause (4) of Regulation 8** of the DSM Regulations, 2024, the revenue-neutral tolerance band for Solar/ Wind-Solar Hybrid Generating Stations will change from +/- 10% to +/- 5%, and for Wind Generating Stations it will change from +/- 15% to +/- 10% from 01.04.2026 onwards. As per 'Note 1' in clause (4) of Regulation 8 of the DSM Regulations, 2024, the volume limits of a Wind-Solar (WS) Seller are as follows:

WS Seller	**Volume Limit (for the period from 16.09.2024 to 31.03.2026)**	**Volume Limit (for the period from 01.04.2026 onwards)**
A generating station based on solar or a hybrid of wind–solar resources	$VL_{WS}(1)$ = Deviation up to 10% D_{WS} $VL_{WS}(2)$ = Deviation beyond 10% D_{WS} and up to 15% D_{WS}	$VL_{WS}(1)$ = Deviation up to 5% D_{WS} $VL_{WS}(2)$ = Deviation beyond 5% D_{WS} and up to 10% D_{WS}

A generating station based on wind resource	VL$_{WS}$(1) = Deviation up to 15% D$_{WS}$ VL$_{WS}$ (2) = Deviation beyond 15% D$_{WS}$ and up to 20% D$_{WS}$	VL$_{WS}$ (1) = Deviation up to 10% D$_{WS}$ VL$_{WS}$(2) = Deviation beyond 10% D$_{WS}$ and up to 15% D$_{WS}$

3. **Clause (2)(a) of Regulation 6** of the DSM Regulations, 2024, stipulates that the deviation in a time block for WS-Sellers (D_{ws}) (in %) shall be computed for the period from the date of commencement of these regulations to 31.03.2026, as per the following formula:

D_{ws}% *= 100 x [(Actual injection in MWh) – (Scheduled generation in MWh)] / [(Available Capacity)]*

While **Clause (2)(b) of Regulation 6** stipulates that the deviation in a time block for WS-Sellers (D_{ws}) (in %) shall be computed for the period from 01.04.2026 onwards, as per the following formula:

D_{ws}% *= 100 x [(Actual Injection in MWh) – (Scheduled generation in MWh)] / [(**X% of Available Capacity**) + (**100-X**) % of **Scheduled Generation**)*

Provided 'X' shall be stipulated by the Commission through separate order(s) after public consultation.

4. The Commission in the draft DSM Regulations, 2024, had received several comments from the stakeholders to reconsider the available capacity in the denominator for the computation of deviation for the WS sellers. Some stakeholders had suggested using 'Scheduled Generation' in the denominator for calculating the deviation % for the WS seller. In contrast, some had suggested using both 'Available Capacity' and 'Scheduled Generation' in the denominator, with a specific weight assigned to each. The Commission considered the stakeholders' suggestions regarding the DSM Regulations, 2024, and decided that the existing deviation formula, using 'Available Capacity' in the denominator, will remain in force until 31.03.2026. After this date, a phased transition to use 'Scheduled Generation' in the formula will be initiated through separate Order(s), following consultation with the stakeholders.

5. The relevant extract of the Statement of Reasons (SOR) of the DSM Regulations, 2024, is reproduced below:

"5.4 The Commission recognizes that while RE generators have historically been given certain advantages in DSM due to the intermittent nature of their output, the landscape has

evolved over the period. With improvement in forecasting techniques and the growing importance of grid security, it is appropriate to gradually align the deviation criteria for RE generators with those applicable to conventional generators. However, the Commission also understands the inherent complexities in forecasting wind and solar generation. Therefore, the Commission believes that providing some relaxations — over and above those available to general sellers — continues to remain necessary. As such, the Commission has decided that the existing formula, as provided in the draft, will continue to be effective up to 31.03.2026. ***Post this, the formula of deviation will be replaced from available capacity to scheduled generation in a phased manner, for which separate Order(s) will be issued by the Commission after due consultations with stakeholders.****"*

6. Accordingly, the Commission engaged in analysing the available data for the determination of the value of 'X' for the WS sellers for the computation of deviation from 01.04.2026 onward. A meeting was held with the Regional Energy Management Centres (REMCs) on 25 October 2024 to review the measures taken to improve forecasting, as REMCs have been operational since the FY 2020–21. As decided in the aforesaid meeting, Grid-India conducted a simulation study of inter-state wind and solar power projects to analyse the impact of changes in the tolerance band and conduct a sensitivity analysis to determine the value of "X".

7. Thereafter, the Commission issued a Public Notice on 10.09.2025 along with a proposal for "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 Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024" and proposed that for the Existing Projects (WS Sellers), the trajectory for reduction of "X" shall be as follows:

With Effect From (w.e.f.)	**Value of "X"**
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%

8. The Commission invited comments/ suggestions/ objections from the stakeholders on the proposal. The last date for submission of comments/ suggestions/ objections was 5.10.2025. At the request of the stakeholders, the last date for submission of comments was extended till 17.10.2025.

9. In response, the Commission received submissions from forty-six (46) stakeholders. The list of stakeholders is attached as **Appendix-I** to this Order. Subsequently, a Public Hearing on the proposal was conducted on December 03, 2025, via video conferencing. The list of stakeholders who presented during the Public Hearing is attached as **Appendix-II**.

10. The Commission considered the comments of stakeholders on the proposal, the views of participants in the Public Hearing. Both the comments made by the stakeholders on the said Proposal (https://cercind.gov.in/comments-DSM24.html) and the presentations made during the public hearing (https://cercind.gov.in/presentation-XFactor.html) have been uploaded on the Commission's Website. The Order has been finalised after due consideration of various issues raised by the Stakeholders. The analysis of the issues and findings of the Commission thereon is discussed in the subsequent paragraphs.

11. It may be noted that all the suggestions given by the stakeholders have been considered, and the Commission has attempted to elaborate upon and respond to each suggestion as well as convey the Commission's decisions on each suggestion here. However, if a suggestion is not explicitly elaborated upon, it does not mean that it has not been considered. Wherever possible, the comments and suggestions have been summarised along with the Commission's analysis and ruling on the same. However, in some cases, due to overlapping issues, comments have been combined to minimise repetition.

12. The main issues raised during the public consultation process and the Commission's analysis and decisions on the issues are given in the subsequent paragraphs.

Comments Received

Insufficient Data Set and Forecasting Technology Related Issues

13. Stakeholders such as **ACME, Gentari, HFE, KPI, MRPL, Serentica, Sekura, Evren, IWPA, MNRE, NSEFI** submitted that the study for determining the 'X' factor for DSM penalties should cover a larger number of plants, across regions, seasons, and 3-5 years, rather

than just 16 projects over 41 weeks. Some stakeholders, such as **Tata Power, Evren, NSEFI and ReNew,** also submitted that the trajectory proposed by CERC for reducing the value of "X" to 0% is not supported by any data or justification. Ground realities do not support the assumption that forecasting accuracy has significantly improved. The proposal also fails to account for the economic impact on existing renewable energy projects. **IWPA** submitted that the study intentionally included some projects with "poor" forecasting and some with "best" to gauge a range, but it does not tell us the average level of forecasting . There is no behavioural adaptation in the simulation either. Further, the historical data analysis might not capture those future strategic scheduling adjustments or their reliability.

14. Stakeholders such as **ACME, AGEL, Gentari, Tata Power, Serentica, IWPA, CER-IITK, and NSEFI** highlighted that existing forecasting technology in India remains inadequate due to challenges such as low spatial resolution, cloud movement uncertainty, and immature site-level tools. They submitted that imposing stricter DSM penalties under such limitations would unfairly penalise RE developers for factors beyond their control.

15. **MNRE** and **Athena** recommended that the IMD be engaged to provide region-wise weather forecasting data with defined error margins, which should form the technical baseline for DSM regulation. Others **(HFE, NGEL, IWPA, Serentica)** suggested deferring the implementation of the X-factor and the tightening of deviation bands until forecasting systems and Automatic Weather Stations under CEA's plan are fully deployed. Some stakeholders suggested that a portion of DSM penalties be allocated to fund forecasting R&D and AWS deployment, empowering REMCs to enhance coordination and publish forecast performance data, and treating sudden weather variations as Force Majeure.

16. Suggestions were also made to allow relaxations during abnormal climatic events and direct Grid India to conduct pilot projects under the new regime. Some stakeholders (**KPI, Sprng Energy**) suggested appointing a national agency for centralised forecasting, while others (Mr **Shanti Prasad)** called for state-level open-source forecasting software through the Forum of Regulators.

17. DISCOMs like **APDISCOM** submitted that RE developers are not committing enough to improve forecasting, leaving utilities to bear unrecoverable deviation costs. **TNDPCL** and **PCKL** stated that forecasting accuracy has already improved, and stricter accountability is justified. **Juniper, KPI, NSEFI, and Tata Power** urged to adopt balanced international

practices, noting that perfect forecasting is unrealistic and a purely penalty-based regime could hinder India's 500 GW RE goal.

18. On the issue of tightening of the tolerance band, **IndiGrid and Manikaran** recommended keeping the existing +/-10% band for solar projects for at least the next 3–5 years until forecasting systems become more robust. **Manikaran** further submitted that reducing the solar band to +/-5% could result in revenue losses due to the natural intermittency of solar generation and therefore suggested a moderate reduction only to +/-7.5%.

19. **InWEA** suggested a data-driven approach through a 6-month pilot to assess actual forecasting compliance if improvement exceeds 10%, the Commission may move ahead with a +/-5% band; if improvement is between 5–10%, a +/-12% band could be adopted; and if it is below 5%, the band should revert to +/-15%, ensuring any tightening is justified by real performance data. **WBSETCL**, on the other hand, proposed reducing the volume limit for conventional generators to 5% or 50 MW, whichever is lower, from 1 April 2026.

20. **Juniper, Serentica and Tata Power** submitted that the proposed deviation formula through the X factor was not envisaged during the bidding of existing and commissioned projects and should therefore be treated as a Change-in-Law event. They requested the Commission to devise a mechanism to compensate affected projects for the resulting revenue loss. Several stakeholders, including **Gentari, KPI, Tata Power, Torrent, Greenko, and NSEFI**, recommended that such losses should be allowed as a pass-through in the tariff. **Sekura and CER-IITK** suggested that sudden and unforeseen weather changes be treated as Force Majeure and not be subject to penalties.

21. Some Stakeholders (**ACME, Continuum Group, Gentari, KPI, Sembcorp, Sekura, Evren, Greenko, NSEFI, IndiGrid**) suggested applying narrowed tolerance bands and X-factor trajectory only prospectively for new projects; retrospective application will create regulatory uncertainty.

Issues related to Aggregation and QCA

22. Stakeholders supported aggregation and QCA-based mechanisms to enhance forecasting accuracy. Several stakeholders (**NTPC, NGEL, Serentica, Tata Power, AGEL, Evren, Greenko, NSEFI, Juniper, InWEA, etc**) recommended introducing regulatory provisions to enable company-wide or regional aggregation under a single RLDC through authorised

aggregators or QCAs. Studies done by **Prayas Energy Group** indicated that aggregation at the pooling-station level could reduce penalties by 30–65%, especially under X=100 conditions.

23. However, **Continuum** submitted that aggregation may not be beneficial where multiple generators at a pooling station share similar wind or solar patterns, limiting benefits. Others, including **Gentari, Tata Power, IWPA, and HFE,** stressed the need for a formal institutional framework to oversee QCA operations, suggesting that Grid India or a central body should regulate QCA performance, roles, and accountability. **Jindal Power** sought clarity on whether aggregation is mandatory and requested that each pooling substation be assigned a single QCA. **NSEFI** submitted that NLDC should submit a procedure for aggregation of pooling stations for the purpose of combined scheduling and deviation settlement for wind, solar or renewable hybrid generating stations that are regional entities.

24. **Prayas Energy Group** also submitted that as WS sellers are progressively aligned with General Sellers, pooling of large RE stations (≥1000 MW) under a ±10% or 100 MW cap requires reconsideration to ensure equitable treatment.

Revenue Loss and Impact of 'X' on Projects

25. Stakeholders expressed concerns about the steep revenue losses and financial risks arising from the proposed introduction of the X-factor and tightening of tolerance bands in the DSM framework. Several entities (**WIPPA, AGEL, NSEFI, NGEL, SAEL, Serentica, Evren, Greenko, Ayana, Juniper**) submitted that the proposed implementation from 1st April 2026 could increase revenue losses by 6-8 times, significantly undermining the economic viability of renewable projects already burdened by other charges such as RTDA/RTA and congestion charges. Studies by **Avaada** showed that when X reduces from 100 to 0, revenue losses can rise up to 61.5% without aggregation, while forecasting accuracy declines sharply as tolerance bands shrink from +/-10% to +/-5%, leading to increase under- and over-injection events and grid instability. Even with aggregation, revenue loss remains high (around 40.9%) under the proposed formula. **HFE** submitted that the study compares DSM losses only as a percentage of PPA tariffs, ignoring the absolute cost base, debt service commitments, and differences in tariff maturity. Projects with low tariffs are hit disproportionately harder (in percentage terms) than legacy projects with higher tariffs, even for the same quantum of

deviation. Such treatment discourages competitive bidding and creates an implicit bias in favour of older assets.

26. Other stakeholders (**MRPL, IWPA, Manikaran, NSEFI, Renew, ITC, Athena**) submitted that as X moves toward zero, project revenues could turn negative, rendering plants unable to meet debt obligations and risking the creation of NPAs. **NSEFI** submitted that Projects are being developed with an IRR of 14–15% (under Section 63 PPAs) and 17–18% (for C&I PPAs), and that the DSM loss assumptions in these PPAs range between 0.75% for Solar/Hybrid and 1.5% for Wind. However, if revenue losses reach 11% (Solar/Hybrid) and 48% (Wind), the corresponding IRR erosion would be around 5.5% and 24%, respectively, resulting in IRRs that fall below the cost of capital or even turn negative. **NSEFI and Renew** submitted that the forecasting improvements alone cannot offset the inherent intermittency in renewable generation, with deviations highly concentrated in only a few days each month. **Prayas Energy Group** observed that pooling and aggregation can partly mitigate penalties, but benefits decline rapidly as the value of 'X' falls below 60%. **ITC** urged the Commission to retain the current DSM tolerance band for deviations and prayed that if the Commission proceeds with the proposed amendment, it may consider only for incentives and not for DSM computation.

Shifting Revision of Schedule to a lesser Time-block

27. Stakeholders (**Avaada, NGEL, Sembcorp, Sprng, Tata Power, Torrent, WIPPA, Mr Shanti Prasad**) requested that intraday schedule revisions from the 3rd or 4th time block be permitted instead of the currently proposed 7th or 8th, to better align generation with actual weather and grid conditions. Developers such as **MRPL, SAEL, Tata Power, Ayana, and NSEFI** expressed concern that the 8-time-block window is detrimental for wind and solar (WS) generators, as it restricts their ability to reschedule in response to sudden weather shifts, especially where on-ground radar or weather stations are unavailable.

28. Further, **InWEA** recommended allowing wind generators to revise their schedule within a 15-minute window from a weather event, subject to telemetry or satellite validation.

29. **Greenko** emphasised the need to permit real-time revisions to minimise DSM penalties and enhance responsiveness to rapid weather fluctuations. Juniper suggested corresponding

amendments in the Grid Code and Power Market Regulations to reduce the gate closure period to no more than three time blocks ahead of delivery, aligning with international best practices.

30. **Serentica** emphasised a market-based mechanism for managing real-time imbalances, which will align with the operational characteristics of RE to reduce punitive impacts. **Evren** and **NSEFI** suggested enabling ex-post settlement of deviations through market mechanisms, as practised in advanced electricity markets.

31. **Juniper, Evren** and **NSEFI** proposed allowing RE generators to buy back power in the Real-Time Market (RTM) to manage deviations, and submitted that the current 4-block gate closure (delivery in 6th) is too rigid. They suggested a phased reduction to 2 blocks or less, which would improve responsiveness and deviation management.

32. **IEX** requested to approve G-RTM, which will help RE participants to manage their variations, as there is a need for an avenue to provide real-time dispatch of RE power to reduce the impact of forecasting errors or fulfil the obligations of RE Sellers.

33. **Evren and NSEFI** suggested enabling ex-post settlement of deviations through market mechanisms, similar to advanced electricity markets.

Regulation Challenged in the Hon'ble High Court of Delhi

34. Stakeholders such as **WIPPA, Jindal, NSEFI, ReNew and Avaada** highlighted that the DSM Regulations, 2024 have been challenged before the Hon'ble High Court of Delhi by SPDA (Writ Petition (C) No 14783 of 2024), WIPPA (Writ Petition (C) No 5481 of 2025) and IWPA (Writ Petition (C) No. 5487 of 2025) and the Hon'ble High Court, vide Order dated 29.04.2025, has directed that no coercive steps, pursuant to the impugned 2024 DSM Regulations, shall be taken against the petitioners until the next hearing. In view of the above interim relief, the said draft proposal should be kept in abeyance till the Hon'ble Delhi High Court passes its final order in the said Writ Petitions.

Alternate Trajectory/ Timeline for implementation of Value of 'X'

35. Stakeholders such as **ACME, Continuum Group, Gentari, KPI, Sembcorp, Sekura, Evren, Greenko, NSEFI, and IndiGrid** submitted that the narrowed revenue-neutral tolerance bands and X-factor trajectory should apply only to projects prospectively, not

retrospectively. These newer projects, yet to be commissioned, will inherently have technological advantages over existing ones. The applicability of the X-Factor on the Existing Projects will result in ‘regulatory uncertainty'.

36. **MRPL** suggested to retain the value of X as 100% till there are tangible advancements in weather forecasting due to the efforts being undertaken by various agencies in the Country and to allow the stabilisation period of 2 years at least, with the narrowing of the bands from April 26 itself, as it is a quantum shift in the forecasting accuracy demand, with the same weather forecasting infrastructure as 3 years back.

37. **Prayas Energy Group** recommended the differentiated and phased approach such that till FY 2026-28 the value of ‘X’ could be 40–50% for solar and 60–70% for wind and from FY 2027-28 onwards the complete transition with value of ‘X’ equal to ‘Zero’ be considered by aligning with TNERC’s approach and CERC’s proposed treatment for new WS projects.

38. **Manikaran** suggested observing the performance of forecasting accuracy over a 5-year period, where the value of X is maintained at 100% and then gradually reduced to X by 10% every two years, so that it gives sufficient time to increase the weather forecasting and wind/ solar power forecasting.

39. **IndiGrid** suggested that the “X” value for the existing projects should be retained at 100% at least for another 10 years, considering that the DSM Bands have already been made very stringent.

40. **NSEFI** recommended to defer implementation until at least FY 2031 for “X” factor and amend the CERC DSM Regulation 2024 for further relaxation for not imposing band reduction effective from 01st April 2026 and also suggested that X band should be kept 100% for at least first 2-3 years and then based on the experience gained till then, a revised trajectory may be suggested for X.

41. Stakeholders such as **Tata Power and NSEFI** suggested that the value of “X” could be more appropriately linked to the metric of ‘percentage of time within the permissible band’ and should be achieved progressively over the next 5 years. These X values must differ across energy sources.

42. **WIPPA** suggested that for the existing projects (WS Sellers), (commissioned or under-construction or projects where the bid submission date is prior to the coming into effect of this order), "X" should be 100%.

43. **Continuum Group** submitted that all existing Wind and Solar (WS) Projects should continue to be treated as per the provisions provided in the 2024 DSM regulation, without any change in the formula for calculation of deviation percentage and tightening of bands. **Avaada, Torrent, and Ayana** submitted to eliminate the X factor from the deviation (%age) formula, and to consider only the Available Capacity (AvC) in the denominator for RE plants.

44. **Continuum Group** suggested that for Projects (WS Sellers) which will be commissioned after 01.04.2032 onward, the value of X should be as follows:

FY in which Wind, Solar and Wind-Solar Hybrid Project Commissioned	Value of "X"
01.04.2032 to 31.03.2033	100%
01.04.2033 to 31.03.2034	75%
01.04.2034 to 31.03.2035	25%
01.04.2035 onwards	0%

45. **HFE** suggested that the X-factor should follow a phase-wise reduction even for new projects, bid out after 01.04.2026. For both legacy and future projects, the X factor should follow a uniform trajectory: 100% from FY 2026–27, decreasing by 10% every year, reaching 0% from FY 2036-37 onwards. **HFE** also recommended principles of the yearly review of the 'X' factor.

46. **Gentari and InWEA** submitted that the proposed changes should be deferred by at least 5 years. **Juniper** suggested that the implementation of the proposed "X factor" should be deferred until 2030, while maintaining the deviation band at the same level for the WS seller.

47. **IWPA and Athena** submitted that CERC should restore the 2014 DSM framework until the forecasting program proposed by NCMRWF/IMD is implemented, tested, and validated.

48. **InWEA** recommended to extend the transition to 7-10 years instead of the proposed 5 years. (100%-95%-85%-70%-50%-30%-10% (7th Year, Year 2032).

49. **MNRE** suggested deferring the proposal till a consensus is achieved among the stakeholders.

50. **KPTCL** suggested removing the gradual X-reduction approach and directly adopting the scheduled generation denominator from April 2027 for existing RE Generators. To treat all RE projects (existing from 01.04.2027 and new from 01.04.2026) at par with general sellers under DSM, not 2031.

51. **APDISCOM** proposed the following timeline for the implementation of X:

Timeline with effect from	For QCA Formed	For QCA not formed
01.04.2026 to 31.03.2027	20%	0%
01.04.2027 to 31.03.2028	0%	
01.04.2028 to 31.03.2029		
01.04.2029 to 31.03.2030		
01.04.2030 to 31.03.2031		
onwards		

52. **MSEDCL** proposed the following timeline for the implementation of X:

With Effect From (w.e.f.)	Value of "X"
01.04.2026 to 31.03.2027	80%
01.04.2027 to 31.03.2028	40%
01.04.2028 to 31.03.2029	30%
01.04.2029 onwards	0%

53. **UPPCL** proposed that the 5-year trajectory may be compressed to 3 years:

With Effect From (w.e.f.)	Value of "X"
2026-27	100%
2027-28	50%
2028-29	0%

54. **TNPDCL** submitted that the gradual reduction of "X" over a period of 5 years, combined with QCA benefits, reduces deviation charges payable by RE generators, creating deficits in the DSM pool used to fund ancillary services. This cost is shifted to DISCOMs and ultimately to consumers. Further, TNERC has already stipulated a formula for calculating the deviation of WS generators as a percentage of scheduled generation, which is being implemented from 01.04.2024. Hence, a stricter, faster trajectory to X = 0% from FY 2026-27 onwards for existing WS sellers is both technically feasible and essential for equitable treatment, consumer protection, and grid security.

55. **AIDA** submitted that the proposed trajectory for reduction of 'X' factor for 5 (five) years (w.e.f. 01.04.2026 to 31.03.2031) may be reduced to 3 (three) years (w. e. f. 01.04.2026 to 31.3.2029)

56. **MSEDCL** submitted that from 01.04.2029 onwards, deviation of WS Sellers should be linked to frequency-based DSM rates, as applicable to general sellers.

57. **WBSETCL** proposed the following:

Timeline	**Value of "X" (for QCA**
01.04.2026 to 31.03.2027	100%
01.04.2027 to 31.03.2028	75%
01.04.2028 to 31.03.2029	50%
01.04.2029 to 31.03.2030	25%
01.04.2030 onwards	0%

58. **TGSLDC** recommended to consider 'X' as zero within 3 years instead of 01.04.2031 onwards as proposed, as the impact of deviation is very high with the existing formula and also recommended that different timelines should be there for the implementation of zero value for X for solar and wind separately.

59. **SRPC** proposed the following trajectory:

With Effect From (w.e.f.)	Value of "X"
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	5%

60. **SRPC** also commented that beyond 31.03.2031, if X is kept at zero during the changeovers, especially solar, the schedules may become very small, and errors will become very high; therefore, they suggested keeping X at 5%, else the minimum limit of the denominator has to be specified.

61. Stakeholders like **ACME and Prayas Energy Group** submitted that the X factor must be different for wind and solar projects.

62. **Mr. Shanti Prasad** submitted that there is a mismatch in units considered in the formula of (X% of Available Capacity) + (100-X) % of Scheduled Generation, and also in the terms of the numerator and denominator. It would be appropriate to specify the numerator in the formula in MW as a schedule.

Analysis and Decision:

63. The Commission has carefully examined the submissions made by all the stakeholders on the determination of the value of "X" for the computation of the deviation (in %) for WS Sellers from 01.04.2026 onwards under the provisions of the DSM Regulations, 2024. It is observed that the stakeholders have mixed views on the proposed reduction of the "X" from 01.04.2026. While some have opposed it, others have requested an immediate switch to a schedule-based deviation formula for the WS seller. Some stakeholders have submitted that the study in the proposal was limited to only 16 projects over 41 weeks and did not adequately represent regional, seasonal or long-term forecasting realities. Some stakeholders contended that forecasting accuracy in India is not improving sufficiently due to technological constraints, such as low spatial resolution and weather uncertainty, and that stricter penalties would unfairly burden RE generators for factors beyond their control. Several stakeholders sought a phased, prospective implementation of the Proposal and suggested that retrospective implementation could constitute a change in law for existing projects. Divergent views were expressed on the appropriate trajectory of reduction of "X", with many renewable generators suggesting retention of X at 100% for 2-10 years, followed by gradual reduction, and some proposing differentiated treatment for wind and solar. In contrast, multiple DISCOMs and SLDCs supported faster alignment, with some submissions recommending that X reach 0% within 3-5 years and some others even suggesting immediate alignment from FY 2026-27.

64. On the contention that the dataset was limited in size, the Commission notes that the projects analysed covered adequate operational history across multiple time blocks. The objective of the exercise was to evaluate the implications of varying values of 'X' at different levels of forecasting accuracy for wind and solar power projects. This ensured that the study did not focus only on the best-performing generators but reflected diverse operational realities

across technologies and regions. The dataset of 16 renewable energy (RE) regional generating plants, including solar, wind, and hybrid projects, across the Northern, Western, and Southern regions, and with forecasting accuracy ranging from poor to best, in the Commission's view, is sufficient to reasonably assess how reduction of the value of X and tightening of tolerance bands would influence deviation and financial exposure. It was observed from the comments received that a similar trend was also reflected in the independent study undertaken by Prayas Energy Group, based on detailed 15-minute DSM data for FY 2023-24 and FY 2024-25 covering over 70% of ISTS-connected solar and wind capacity in the Western and Southern regions. In fact, based on the study, Prayas has recommended a complete transition with the value of 'X' equal to 'Zero' from FY 2027-28.

65. The Commission further recalls that, in order to enable the RE forecasting, scheduling and balancing framework and to address the design issues affecting its implementation, it issued the Framework for Forecasting, Scheduling & Imbalance Handling for Renewable Energy (RE) Generating Stations based on wind and solar at the Inter-State level way back in 2015. So, the forecasting and scheduling obligations for wind and solar generators are not newly introduced requirements. These obligations have been in force since the 2015 framework and have formed an integral part of the regulatory architecture governing renewable energy at the inter-State level. The objective of the said framework was to bring discipline and enable forecasting for wind and solar generators, which are weather-dependent. The regulatory framework helps align market forces with regulatory requirements. In this context, the Commission is of the view that renewable generators have had sufficient transition time since 2015 to improve forecasting, and the regulatory framework must now reflect the experience attained in forecasting and scheduling practices. The present calibration of "X" does not introduce a new compliance burden.

66. The Commission also takes note of the comments received from the Distribution Licensees such as TNPDCL that, since 2017, REMCs have been established and are operational, QCAs and forecasting tools have significantly improved RE scheduling accuracy and the continuation of a prolonged concession period extending until 2031 is not warranted, as the sector has already transitioned beyond the initial implementation phase of the forecasting framework.

67. With regard to aggregation, the Commission clarifies that the Grid Code has enabled aggregation at the pooling station for WS Sellers. Detailed provisions for aggregation at a pooling station are already in the code. Aggregation also enables better averaging of weather data, reduces forecast error variance, and helps wind- and solar-based projects reduce the commercial impact of deviations. The simulation study presented in the proposal does suggest the benefits of aggregation, and developers should make the best use of these provisions to reduce errors and their consequent DSM impact.

68. The Commission also notes that, as per the IEGC 2023, RLDCs are also mandated to forecast generation from Wind, Solar and Hybrid generating stations that are regional entities. Renewable Energy Management Centres (REMCs) have been established in the country as part of the Green Energy Corridor Scheme to address challenges such as variability and uncertainty in renewable generation. The scope of work for REMCs includes forecasting RE generation at very short intervals, real-time tracking of RE generation, and geospatial visualisation. It has been informed that the forecasting tool at REMCs uses inputs from three different RE forecasting service providers (FSPs), along with weather data from weather service providers. REMCs are also equipped with their own internal forecasting engine, which further receives additional information from real-time SCADA data and static providers to produce optimised generation forecasts. The REMCs are enabled to provide RE forecasts at the pooling station level, the State and National levels, as well as on a 15-minute, intraday, and week-ahead basis. Forecasting by REMCs is critical from a grid management perspective and for assessing balancing needs, whereas the objective of forecasting by generators is primarily to minimise deviations from the schedule. The Commission is of the view that the REMCs can take the lead in facilitating further improved forecasting techniques. RE developers have the option to schedule their RE power based on the forecast provided by their respective REMCs or on their own forecasting through the Qualified Coordinated Agency (QCA). However, the commercial impact of deviation from the forecast in either case would have to be borne by the RE generator.

69. The Commission has also considered the submissions regarding the reduction of the time block for schedule revision and the gate closure period. While such suggestions aim to provide greater flexibility in responding to sudden weather changes, the Commission notes that the gate-closure mechanism is intrinsically linked to system security, dispatch coordination, and power market operations. Any modification would have system-wide implications on real-time balancing, reserve deployment and market settlement processes. Such changes, therefore,

require comprehensive technical evaluation in consultation with system operators and market participants, and the Commission is actively engaged in discussion with Grid-India on this aspect.

70. The Commission has taken note of the submissions that certain provisions of the DSM Regulations, 2024, have been challenged before the Hon'ble Delhi High Court and that, vide interim order dated 20.11.2024, the Hon'ble High Court directed that no coercive action be taken against the petitioners until the next date of hearing. On the issue of keeping the proposal in abeyance in view of the said interim order, the Commission is of the view that the said order does not bar the statutory obligation of the Commission to exercise its legislative function and cannot be construed as an order staying the implementation of the said Regulations. The Commission is also cognizant of the Writ Petitions filed in the Hon'ble High Court of Delhi challenging the said proposal and the provisions in the CERC (DSM) Regulations, 2024. As informed by the Commission's Counsel appearing before the Hon'ble High Court in such matters, the Hon'ble High Court has clarified that it has not restrained the Commission from exercising its legislative function, subject to the clarification that the Hon'ble High Court's direction on no coercive action be adhered to. The Commission observes that regulatory powers under the Electricity Act, 2003, are exercised in the larger public interest to ensure grid security and stability. The objective of the DSM Regulations is to ensure, through a commercial mechanism, that users of the grid adhere to their schedules for the drawl and injection of electricity in the interest of the grid security and stability. The stability of the grid is a shared responsibility of all its constituents.

71. The Commission also recalls that in 2015 it had reviewed the % deviation definition and normalised the formula to Available Capacity (AvC), ensuring that deviation assessment corresponds to actual physical grid impact and remains valid across seasons. Under the DSM Regulations, deviation for wind and solar has since been computed using Available Capacity as the denominator, thereby recognising resource variability. Even under the present proposal, X is retained at 100% for FY 2026-27, resulting in no effective change in deviation computation during that year. Renewable generators will continue to benefit from the Available Capacity-based calculation in the first year of transition for their deviation.

72. The Commission's primary objective in introducing and gradually reducing the value of "X" is to ensure that the grid does not become unstable as renewable energy penetration

increases. India's power system has evolved rapidly, and renewable energy now constitutes a significant share of installed capacity. When wind and solar capacity were relatively small, deviations from schedule did not materially threaten system balance. However, as the scale of renewable injection grows, even moderate forecasting errors can translate into large absolute deviations, which, in turn, affect frequency, reserve deployment and ancillary service requirements. The Commission, therefore, considers it necessary to progressively strengthen scheduling discipline. Grid stability remains the central consideration. Large unscheduled over-injections or under-injections require balancing through reserves or ancillary services, impose costs on the system and potentially affect frequency stability. If such costs are not internalised by the entities causing deviations, they are ultimately borne by consumers.

73. The Commission notes that the DSM Regulations, 2024, clearly provide that the value of "X" will be stipulated by the Commission through separate order(s) and shall be computed for the period from 01.04.2026. Therefore, the implementation cannot be considered sudden. The effective date was specified in advance in the Regulations, giving stakeholders sufficient time to prepare and align their forecasting and operational practices.

74. In the draft proposal, the Commission provided that for FY 2026-27 till FY 2031 onwards, the value of "X" was reduced by 20% in the subsequent years and gradually declined to 0% (from 2031 onwards). However, after examining the submissions, the Commission considers that a calibrated reduction would help moderate the immediate revenue impact while still moving towards the desirable schedule-based deviation formula. This approach ensures that the transition is gradual and balanced.

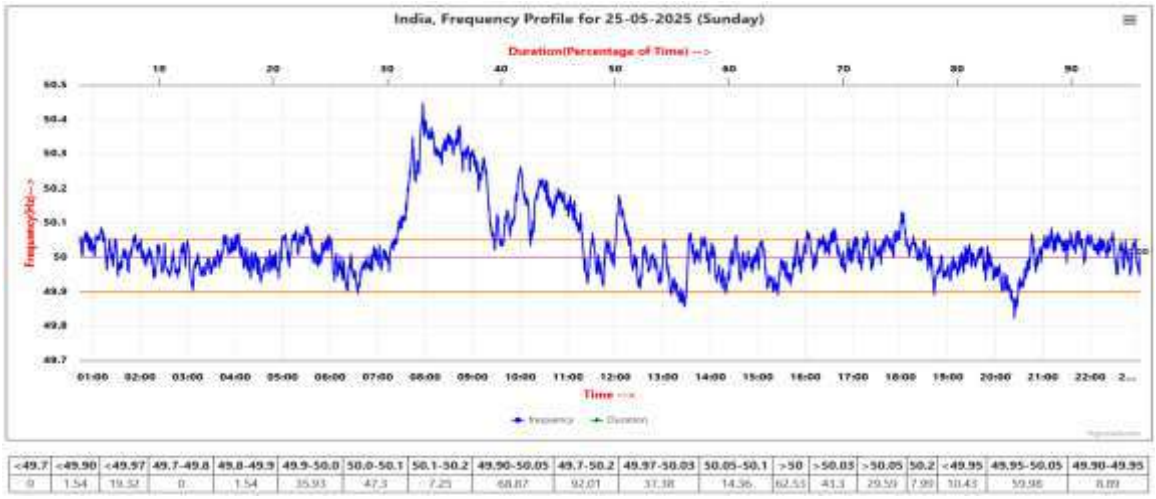
75. The determination of "X" is, therefore, not punitive in character but a calibrated regulatory tool designed to balance renewable integration. The Commission cannot overlook that grid stability operates on the principle of collective responsibility. Individual deviations, even if seemingly minor, when aggregated across the system, can materially affect grid parameters. Grid stability is the backbone of the electricity sector, and every regulatory intervention must ultimately be tested against its ability to preserve system security and public interest.

76. It is further submitted that it's now more than a decade since the special dispensation was introduced. Wind and solar technologies have now matured, and their penetration has increased substantially. As highlighted by the System Operator (Grid-India) during the public hearing on

the said proposal, the country reached its highest-ever share of renewable energy in the electricity generation mix, at 51.5% on 29 July 2025. With an increase in intermittent power sources like Wind and Solar, grid operation has become more challenging, requiring significant growth in reserves to manage system imbalances and keep frequency within its tolerance band. The additional cost of such reserves and ancillary services is borne by the discoms and, in turn, by the consumers.

77. It would be pertinent to mention that high-frequency events have been observed very frequently recently. According to the system operator, high-frequency events have increased significantly across the grid. For instance, on 25th May 2025 (Sunday), sustained high-frequency operation was observed, especially during solar hours, due to low demand and bad weather, coupled with low availability of down reserves. In such a situation, any over-injection into the system, including from solar projects whose deviations are decoupled from system frequency, adversely affects grid operations and system security. On the day of 25th May 2026, the System frequency remained above (> 50.05) IEGC band for around 30% of the time, and during solar hours, it remained extremely high continuously for around two hours. The frequency profile of 25th May 2025 is shown below:

Figure: Frequency profile of 25th May 2025

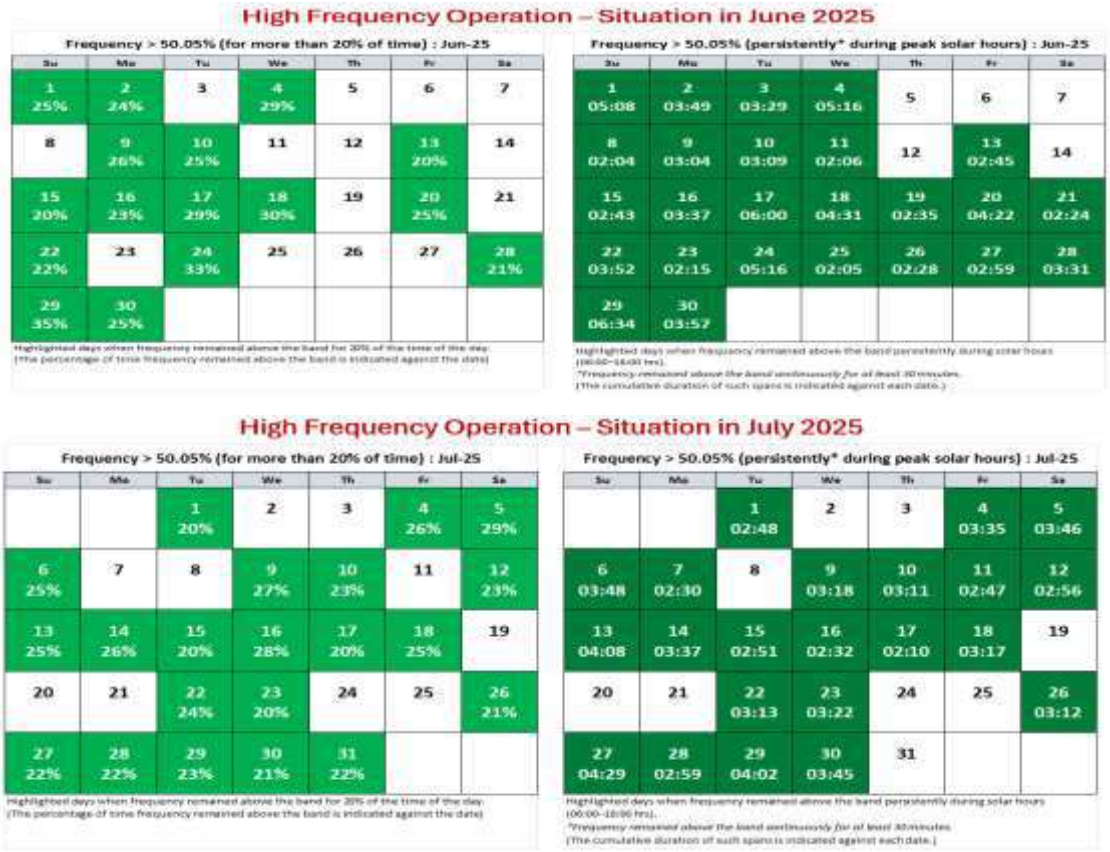


<49.7	<49.90	<49.97	49.7-49.8	49.8-49.9	49.9-50.0	50.0-50.1	50.1-50.2	49.90-50.05	49.7-50.2	49.97-50.03	50.05-50.1	>50	>50.03	>50.05	50.2	<49.95	49.95-50.05	49.90-49.95
0	1.54	19.32	0	1.54	35.93	47.3	7.25	68.87	92.01	37.38	14.36	62.55	43.3	29.59	7.99	30.43	59.86	8.89

Source: Grid India

78. Further, the number of days where high frequency (i.e., above 50.05 Hz) for more than 20% of the time and during peak solar hours was observed is provided below by the System operator:

Figure: High Frequency situations in June, July 2025



Source: Grid India

79. The submission by Karnataka SLDC further underscores the operational significance of deviation behaviour. The Commission observes that Karnataka SLDC has placed data for FY 2024-25 and indicated substantial deviations from the schedule. In the case of wind generation, deviations exceeding 250 MW from the scheduled output occurred more than 60% of the time. For solar generation, deviations exceeding 250 MW from the schedule occurred in about 37% of instances. These figures demonstrated the magnitude of the mismatch between scheduled and actual generation and the resulting burden on system balancing. However, when deviations are measured relative to Available Capacity (AvC), the percentage decreases significantly. For wind, deviations exceeding 250 MW relative to AvC occurred about 26% of the time, and for solar, the corresponding figure was only about 2.6%. This difference, as highlighted indicates that the choice of denominator materially affects deviation assessment and commercial consequences.

80. Tamil Nadu Electricity Regulatory Commission (TNERC) has also notified (Forecasting, Scheduling and Deviation Settlement for Wind and Solar Generation) Regulations, 2023, and

already stipulated a formula for the calculation of deviation of WS generators as a percentage of the scheduled generation, and the same is under implementation from 01.04.2024. This demonstrates that schedule-based accountability for calculating % deviations is not a new concept, but is implemented at the State level to enhance grid security.

81. Further, the draft National Electricity Policy issued by the Ministry of Power (MoP) on 20.01.2026, seeking public comments, proposes that by 2030 or earlier, the Central and State Commissions must ensure parity in scheduling and deviation between RE and conventional sources to ensure grid stability.

82. The Commission noted the suggestions of the stakeholders to adopt a differential approach for Wind and Solar-based Power Projects. The simulation conducted by Grid-India in the Proposal also revealed that wind-based projects are more sensitive to changes in X than solar-based projects. The Prayas energy group has also recommended a similar approach in its analysis. Over time, it has been established that Solar-based Projects have greater generation predictability than wind-based projects. In view of the differential predictability in forecasting of wind and solar-based power projects, and the fact that volume limits for wind and solar-based power projects are also different in the DSM Regulations, 2024, the Commission has accepted the suggestions of the stakeholders to have a differential approach between Wind and Solar while deciding the value of X.

83. Further, the Commission has also noted the benefits of aggregation at the pooling station. The simulation carried out by Grid India in the proposal reveals that aggregating multiple generators at a pooling station helps smooth the variability of individual wind or solar projects, as deviations from individual projects cancel out within the pool. However, considering the fact that aggregation at pooling stations has not yet been opted for by many Wind and Solar-based regional entities, the Commission has decided to have a phased approach in deciding the trajectory of the value of X. It is decided that in the initial period, the reduction shall be relatively small so that RE developers would get sufficient time to move towards aggregation wherever possible. In view of the above, the Commission has adopted a phased approach to specify the trajectory of the value of X for Solar and Wind-based Power Projects. Accordingly, the Commission decides to calibrate the reduction in the value of X in the initial years and to maintain the value of X as 100% for the first year of implementation, i.e., till 31.03.2027. The

Commission believes that this differential approach would provide sufficient time to the wind and solar generators to align with the regulatory framework.

84. The Commission, therefore, finds that strengthening deviation norms will incentivise improved forecasting discipline and reduce avoidable operational stress on the grid. In view of the analysis and balancing of stakeholder concerns with the need for system security, the Commission determines the **value of "X" for the WS Sellers, including such generating stations aggregated at a pooling station, through QCA, as follows:**

a) For a generating station based on solar or a hybrid of wind–solar resources:-

With Effect From (w.e.f.)	Value of "X"
01.04.2026 to 31.03.2027	**100%**
01.04.2027 to 31.03.2028	**90%**
01.04.2028 to 31.03.2029	**75%**
01.04.2029 to 31.03.2030	**55%**
01.04.2030 to 31.03.2031	**30%**
01.04.2031onwards	**0%**

b) For a generating station based on wind resources

With Effect From (w.e.f.)	Value of "X"
01.04.2026 to 31.03.2027	**100%**
01.04.2027 to 31.03.2028	**95%**
01.04.2028 to 31.03.2029	**85%**
01.04.2029 to 31.03.2030	**65%**
01.04.2030 to 31.03.2031	**35%**
01.04.2031onwards	**0%**

85. Further, the Commission directs NLDC to prepare a procedure in consultation with RPCs to address the issue of computation of Deviation in percentage (i.e. D_{ws}%) beyond 31.03.2031 for the specific time blocks where the schedule is very small.

86. Furthermore, the enforcement of directions contained in this order is subject to the outcome of the Writ Petitions, challenging the said proposal and the provisions in the CERC (DSM) Regulations, 2024, pending before the Hon'ble High Court of Delhi, and no coercive

action shall be taken on the directions contained in this order till continuance of the interim orders to this effect passed by the Hon'ble High Court.

Additional directions contained in the Commission's Proposal

87. The Commission, apart from inviting comments from the stakeholders on the proposed trajectory for the reduction of "X", also directed the Commission's Staff to initiate the process of amendment to the DSM Regulations on the following:

(a) *All existing Wind and Solar (WS) Projects shall be 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-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.*

Comments Received

88. On the proposal to amend the DSM Regulations, 2024, stakeholders (**AGEL, NGEL, SAEL, Sembcorp, Serentica, Tata Power, Sekura, Evren, WIPPA, NSEFI, IndiGrid, Athena, InWEA**) objected to the proposed alignment of RE projects with the General Seller framework under the DSM Regulations, 2024, and submitted that the operational behaviour and control mechanisms for RE plants are distinct from those of thermal technologies. The impact of deviation charges on the revenue streams of thermal generators and VRE generators is vastly different.

89. **KPI** submitted that the Commission should specify that the DSM Proposal, 2025, will not be applicable to all those projects whose connectivity has been obtained prior to the implementation of the proposals proposed in the DSM Proposal, 2025.

90. **InWEA** highlighted that a wind project bid at Rs. 2.80/kWh under the existing DSM regime would face 2.8% DSM loss (resulting in Rs. 2.72/kWh effective tariff), whereas under the proposed mechanism, losses could rise to 20%, requiring tariffs around Rs. 3.30/kWh.

91. **SRPC** agreed with the suggestion that all existing Wind and Solar (WS) Projects should be treated at par with General Sellers from 01.04.2031 onwards, and all new WS projects, with tendering or bid submission dates on or after 01.04.2026, should be treated at par with General Sellers. Other stakeholders, such as Ayana and ACME, AGEL, and Sekura, submitted that immediate linkage could undermine investment confidence, affect bankability, and increase tariffs.

92. Stakeholders (**Gentari, NGEL, SAEL, AGEL, IWPA**) raised objections to the proposed "no payment for over-injection when the system frequency is at or above 50.05 Hz" provision. They submitted that it contradicts the must-run status of RE projects and results in unjustified revenue losses. **SAEL** suggested that if no curtailment instruction is issued by the grid authority, over-injection should continue to be settled under the existing DSM provisions, whereas the "no-payment" clause should apply only when curtailment instructions are ignored.

93. **MSEDCL** highlighted the need for a clear curtailment protocol to manage grid stability and avoid financial implications for DISCOMs that cannot reduce thermal generation below technical minimum levels.

94. **HFE** opposed the proposed frequency threshold for zero payment, recommending it be either withdrawn or restricted to frequencies above 50.20 Hz and supported by grid disturbance data. **Sembcorp, Tata Power, WIPPA, and NSEFI** further proposed reciprocal relief that if the Commission decides to retain the clause with no payment for overgeneration in case of high grid frequency, there should not be any DSM charges/ penalty payable by the wind and solar generators for under generation in case of high grid frequency. The Commission may consider extending compensation to Wind and Solar (WS) sellers for under-injection at frequencies above 50.05 Hz, in parity with the provisions applicable to general sellers.

95. **IndiGrid** recommended that the clause be deferred until SLDCs/ RLDCs establish real-time visibility and automated curtailment systems for RE. **Greenko** called for a transparent methodology to quantify the per-unit financial impact attributable to the revised DSM charges and allow developers to seek recovery through appropriate channels, and suggested that SERCs should process such claims.

96. On the other hand, **KPTCL, TNPDCL and AIDA supported** stricter frequency discipline. They proposed penalties for repeated over-injections, lowering the threshold to 50.02 Hz (AIDA), and even implementing a graded penalty structure to ensure RE projects operate with the same discipline as conventional generators before 2031.

97. Data-based submission from **Prayas Energy Group** indicated that high-frequency (at or above 50.05 Hz) conditions occurred about 9.5% of the time in FY 2025, but energy affected was under 1% of total generation, implying negligible revenue impact.

98. **Prayas Energy Group** submitted that in case of different timelines for existing and new WS projects, existing projects will have a deviation arrangement for WS sellers, while new projects will have a deviation arrangement for General Sellers. This will lead to complexity in how aggregation can be allowed and accounted for at a pooling station with both existing and new projects. Alternatively, the CERC may not allow for the pooling of existing and new WS projects.

99. **WBSETCL** suggested distributing net deficits of deviation and ancillary pool accounts among all pool participants.

100. **Sekura** emphasised focusing on strengthening ancillary services and flexibility rather than penalising individual RE projects, while others proposed creating a separate deviation pool for RE imbalances.

101. **IWPA** recommended computing DSM charges as a percentage of project revenue.

102. **Mr. Shanti Prasad** suggested integrating the schedules and actuals of WS and co-located BESS/PSP for DSM, and FOR to study the techno-economic feasibility for smoothing fluctuations.

103. **CER, IITK** proposed insurance products to hedge financial impacts from deviations, including a group insurance mechanism.

104. **SRPC** suggested defining AvC for Pump Storage Projects (PSPs) operating simultaneously in pump and generation mode. Also suggested AvC for the pump and simultaneous pump-generation operation, using weighted-average Day-Ahead Market prices for IPPs without long-term contracts. It was also suggested that the weighted-average long-term PPA for QCA aggregation could be used instead of block-wise computations to simplify deviation charge calculations. For IPPs/RE sellers, **SRPC** recommended that, if no long-term

contract exists, the weighted-average Day-Ahead Market price across all power exchanges may be considered.

105. Stakeholders such as **Avaada, Indi-Grid, Serentica, Sprng Energy, Greenko, NSEFI, Juniper, and IndiGrid** suggested incorporating Battery Energy Storage Systems (BESS) with RE projects to enhance grid stability and manage deviations under the DSM framework. **Avaada** also recommended mandatory BESS installation covering 30–40% of plant capacity before amending current regulations, while **MNRE** proposed mandating storage in upcoming projects after stakeholder consultation. By 01.04.2031, BESS technology is expected to mature, potentially reducing costs and making it more viable for future projects. Continuum Group submitted that the Commission may consider issuing different norms for the WSH Project with Storage and providing some relaxation for this project, as it will be beneficial for grid stability.

Analysis and Decision:

106. The Commission has noted the stakeholders' submissions. It is clarified that the present exercise is confined to the determination of the 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 DSM Regulations, 2024. All other issues raised by stakeholders, including those related to alignment with the General Seller framework or any modification of the DSM framework, fall outside the scope of this Order. Such matters would require amendment to the DSM Regulations, 2024 and can only be undertaken through a separate regulatory process with due public consultation.

Sd/-	**Sd/-**	**Sd/-**	**Sd/-**
Ravinder Singh Dhillon	**Harish Dudani**	**Ramesh Babu. V**	**Jishnu Barua**
Member	**Member**	**Member**	**Chairperson**

Appendix-I

List of Stakeholders who commented on the proposal on the Determination of value of "X" for computation of the deviation (in %) for WS Sellers under DSM Regulations, 2024.

S. No	Name of the Organisation
1	ACME
2	Adani Green Energy Limited (AGEL)
3	Athena Renewables
4	Avaada Energy Private Ltd.
5	Ayaana
6	Evren (ABC Cleantech Pvt.Ltd)
7	Continuum Green Energy Limited
8	Greenko Energies Private Limited
9	Gentari Renewables India Management Pvt.Ltd.
10	Hero Future Energies
11	Jindal India Renewable Energy
12	Juniper Green Energy
13	KPI Green Energy Limited
14	Megasolis Renewable Private Limited (MRPL-SEIT)
15	NTPC Green Energy Limited
16	NTPC Limited
17	SAEL
18	Sekura
19	Sembcorp
20	Serentica
21	Sprng Energy Private Limited
22	Torrent Power Limited
23	ITC
24	Tata Power
25	Renew
26	All India DISCOM Association (AIDA)
27	Indian Wind Energy Association
28	IWPA
29	National Solar Energy Federation of India (NSEFI)
30	WIPPA
31	Andhra Pradesh DISCOM (APDISCOM)
32	Maharashtra State Electricity Distribution Company Ltd. (MSEDCL)

33	Power Company of Karnataka Limited (PCKL)
34	Tamil Nadu Distribution Corporation Ltd.(TNDCL)
35	UP Power Corporation Limited (UPPCL)
36	Karnataka Power Transmission Company Limited (KPTCL)
37	Telangana SLDC (TGSLDC)
38	West Bengal State Electricity Transmission Company Ltd. (WBSETCL)
39	SRPC
40	Manikaran Analytics Limited (QCA)
41	IndiGrid Limited
42	MNRE
43	CER-IIT Kanpur
44	Prayas
45	Indian Energy Exchange (IEX)
46	Mr. Shanti Prasad

Appendix-II

List of the Stakeholders who presented (PPT as well as Oral Submission) during Public Hearing on the proposal on the Determination of value of "X" for computation of the deviation (in %) for WS Sellers under DSM Regulations, 2024 on 03.12.2025:

S. No	Organisation Name
1	GRID Controller of India Limited
2	All India Discoms Association
3	Tamil Nadu Generation And Distribution Corporation
4	Andhra Pradesh Power Corporation Committee (APPCC)
5	Prayas Energy Group
6	Wind Independent Power Producers Association (WIPPA)
7	Indian Wind Power Association (IWPA)
8	Serentica Renewables India Private Limited
9	Gentari Renewables India Private Limited
10	NTPC Green Energy Limited
11	Tata Power Renewable Energy Ltd
12	Adani Green Energy Limited
13	ReNew Power Private Limited
14	IndiGrid Solar Private Limited
15	Sustainable Projects Developers Association
16	Sustainable Energy Infra Trust
17	KPI Green Energy Limited
18	Manikaran Power Limited
19	Juniper Green Energy Private Limited
20	Athena Renewables
21	Avaada
22	Gelestra Energy