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Renewable Energy

Discussion Material: 9SM Public Hearing

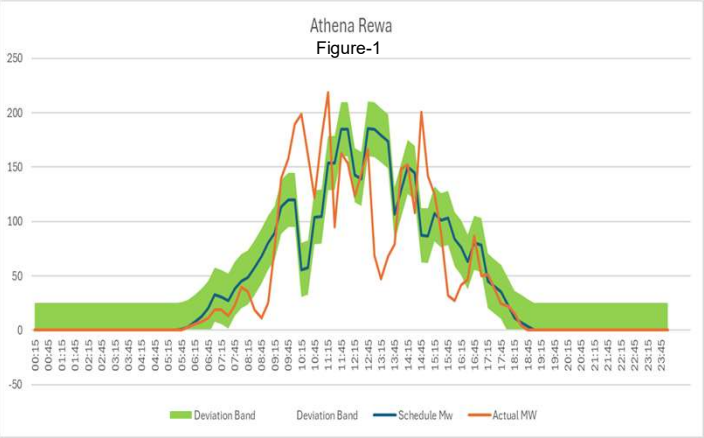
3rd Dec-2025

DSM

1 **~90% of total DSM penalty is contributed during 8% of instances.**

Deviation Bands	Deviation Instances (No's)		Deviated Energy (kWh)	DSM Penalty (Rs.)	
50% to 70%	0.3%	8%	1.9%	8.3%	87%
40% to 50%	0.6%		3.3%	13.1%	
30% to 40%	1.9%		8.6%	29.4%	
20% to 30%	4.8%		15.3%	35.9%	
15% to 20%	5.5%	92%	12.3%	11.2%	13%
10% to 15%	12.0%		19.2%	2.0%	
5% to 10%	27.0%		25.4%	0.0%	
% to 5%	47.9%		14.0%	0.0%	
Total:	**100.0%**		**100.0%**	**100.0%**	

2 **Illustration of such 8% instances**



3 **Challenges:** Technological limitations of weather forecasting agencies in –

- Accurately predicting (within permissible deviation bands) hyper-local cloud formation and movements causing GHI fluctuations.
- Making accurate predictions 2 hours in advance time required by the Regulator.

4 **Observation from Grid-India assessment report supporting 9SM:**

1. The DSM penalty projections are grossly underestimated due to following:
(a) The impact assessment has been done without bulk of monsoon period data (Article 8) for solar.
(b) It seems, the DSM penalty estimates for X-Factor projections has been done based on current deviation bands and not as per the proposed reduced deviation bands.

2. Report mentioned that the forecasting maturity is achieved however it is not supported by any report from any of the credible agency neither was it demonstrated, if scenarios as per Fig. 1 have been addressed.

5 **Submissions and Recommendations:**

- **X-Factor (9SM) and band squeezing to +/- 5% for Solar shall be deferred till such time the weather forecasting subject matter expert's (SME) like IMD or NCMRWF certifies and also demonstrate that the technological maturity is achieved to address situations like Figure-1 with forecast before gate closure time of 2 Hrs.**
- **DSM commercial settlement and technological advancement should be commensurate with each other.**
- IPPs have domain expertise in power generation and not in weather forecasting. Hence, IPPs can support ,co-operate and collaborate with the regulators and Govt. weather forecasting agencies to improve the weather forecast accuracy. Example; the Core Committee constituted by Chairperson CEA has active representation from RE Developers Association.
- In our humble opinion, it is unfair to punish RE Developers for lack of technical maturity in weather forecasting.

Thank You!