

Tata Power- Comments on Draft DSM Regulations 2024- PART A

Sr No.	Clause. No./Title	Original Provision as in Draft	Revision Proposed	Comments/Suggestions
1.	3 (1) Definitions and Interpretation	<p>1) Renewable Rich State’ or ‘RE-rich State’ means a State whose combined installed capacity of solar and wind generating stations under the control area of the State is 1000 MW or more but less than 5000 MW.</p> <p>2) ‘Renewable Super Rich State’ or ‘RE Super-rich State’ means a State whose combined installed capacity of solar and wind generating stations under the control area of the State is 5000 MW or more.</p>	<p>Following 2 categories to be included:</p> <p>3) <u>Renewable Most Rich State-1 or RE Most Rich State-1</u> means a State whose combined installed capacity of solar and wind generating stations under the control area of the State is more than 10000 MW but less than 15000 MW.</p> <p>4) <u>Renewable Most Rich State-2 or RE Most Rich State-2</u> means a State whose combined installed capacity of solar and wind generating stations under the control area of the State is 15000 MW or more.</p>	<p>Since there are some states that have significant installed solar+wind capacity much higher than 10,000 MW viz. Gujarat (~24000 MW); Rajasthan (~26,000 MW); Tamil Nadu (~ 18000 MW); Karnataka (~14,000 MW); Maharashtra (~12,000 MW). Therefore, it makes sense to differentiate in terms of volume deviation limits in these high RE states.</p> <p>We thus, request to include 2 more categories a provided.</p>
2.	3 (1) Definitions and Interpretation	(X) ‘Reference Charge Rate’ or ‘RR’ means (i) in respect of a general seller whose tariff is determined under Section 62 or	The draft may be modified accordingly to incorporate the suggestions provided.	In case of plants operating under Section 11, the applicable tariff at which energy is being supplied by the generator is the

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		Section 63 of the Act, Rs/ kWh energy charge as..... 5)		'Benchmark Rate' determined by the MoP Committee. It is therefore requested that the same may please be qualified while defining the 'Reference Charge Rate' or 'RR'.
3.	7. Normal Rate of Charges Deviations	(1) The Normal Rate (NR) for a particular time block shall be equal to the sum of: (a) 1/3 [Weighted average ACP (in paise/kWh) of the Integrated-Day Ahead Market segments of all the Power Exchanges]; (b) 1/3 [Weighted average ACP (in paise/kWh) of the Real-Time Market segments of all the Power Exchanges]; and (c) 1/3 [Ancillary Service Charge (in paise/kWh) computed based on the total quantum of Ancillary Services deployed and the net charges payable to the Ancillary Service Providers for all the Regions].	The draft may be modified accordingly to incorporate the suggestions provided	While the revised methodology has rationalized the normal rate of charges, it is suggested that the cap of INR 12/kWh may still be maintained. This is because the cost of deployment of ancillary services may increase in some time blocks, increasing the normal rate of charges to abnormally high level. The above was acknowledged by the CERC in its order dated 26-12-2022. It is therefore requested to retain the INR 12/kWh capping.

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4.	7. Normal Rate of Charges for Deviations	<p>.....</p> <p>(c) 1/3 [Ancillary Service Charge (in paise/kWh) computed based on the total quantum of Ancillary Services deployed and the net charges payable to the Ancillary Service Providers for all the Regions].</p>		Ancillary Services Charge will have a direct impact on revenue of the generators. Hence, a detailed procedure needs to be specified for calculation of Weighted Average Ancillary Service Charge (in INR/ kWh) for each time block and such calculation of Ancillary Services Charge should be transparent and be made readily available on the related websites.
5.	8 (1) Charges for Deviation, in respect of a general seller Deviation by way of over injection (Receivable by the Seller)	(ii) When [50.00 Hz < f ≤ 50.05 Hz], for every increase in f by 0.01 Hz, charges for deviation for such seller shall be reduced by 10% of RR , so that charges for deviation become 50% of RR when $f = 50.05$ Hz	(i) When [50.00 Hz < f ≤ 50.03 Hz], charges for deviation for such seller shall be equal to RR. (ii) When [50.03 Hz < f ≤ 50.05 Hz], , charges for deviation for such seller shall be 50% of RR	During over injection scenario, in case of marginal increase in frequency (0.01 Hz above 50 Hz), the receivable to seller decreases by 10% and subsequently by 20% and 30% till 50.03 Hz. Such steep reductions in receivables for marginal variation in frequency are onerous to the seller. Infact, the existing regulations (<i>CERC interim measures dated 6th Feb'23</i>) provides 100% receivable till 50.03 Hz.

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				<ul style="list-style-type: none"> • Generators which are already operating under ancillary services and AGC, managing 0.01 Hz frequency gap would be practically impossible. A band of at least 0.03 Hz frequency gap from 50 Hz, will be appropriate so that the generator is not unduly penalized. • Generating stations have ramping limitations. Instant response to sudden frequency changes of such minor step (0.01 Hz) is technically impossible. Any delay will subject the seller to loss of RR by a proportion of 10%. • Further, often there is lag in getting information about system frequency changes, which will put the seller at risk of losing a significant amount of revenue.

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				<p>In view of the above, the following is suggested:</p> <ul style="list-style-type: none"> ○ We suggest a band of at least 0.03 Hz frequency gap from 50 Hz so that the generator is not unduly penalized. ○ Existing regulations of 100% RR receivable to seller for 50.0 <f ≤ 50.03 may be retained.
6.	<p>8 (1)</p> <p>Charges for Deviation, in respect of a general seller</p> <p>Deviation by way of over injection (Receivable by the Seller)</p>	<p>(iii) When $[49.90 \leq f < 50.00 \text{ Hz}]$, for every decrease in f by 0.01 Hz, charges for deviation for such seller shall be increased by 1.5% of RR so that charges for deviation become 115% of RR when $f = 49.90\text{Hz}$</p>	<p>When $[49.90 \leq f < 50.00 \text{ Hz}]$, for every decrease in f by 0.01 Hz, charges for deviation for such seller shall be increased by 4.5% 3% of RR so that charges for deviation become 115% 130% of RR when $f = 49.90\text{Hz}$</p>	<p>The 1.5% receivable percentage is not comparable with the payable percentages (3% and 5%) during under injection scenario, hence should be increased to atleast 3%.</p>
7.	8 (4)	<p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p>	<p>The depooling of deviation charges should not be left to the individual sellers and the QCA, as</p>

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	Charges for Deviation, in respect of a WS Seller	(c) depooling of deviation charges for WS seller(s) connected to the pooling station shall be as per the methodology mutually agreed upon between the QCA and such individual WS seller(s).	(c) depooling of deviation charges for WS seller(s) connected to the pooling station shall be as per the methodology mutually agreed upon between the QCA and such individual WS seller(s). to be prepared by Grid-India and approved by CERC, and the basis of such methodology would be the contribution to Deviation by each individual WS Seller connected to said pooling station.	<p>this would be susceptible to frequent disputes and delayed DSM payment to pool. An aggregated DSM charge at the pooling station would have to be depooled in such a manner that a WS Seller over injecting is paid from deviation pool and one under injecting pays back at the price mentioned in its agreement/ PPA.</p> <p>Leaving this to discretion of QCA and seller's bilateral arrangements opens up a pandora's box of potential litigations/ disputes, thereby derailing the concept of aggregation itself.</p> <p>Accordingly, it is requested that the methodology for depooling be pre-defined basis contribution to deviation by each WS Seller connected to pooling station, rather than relying on mutual agreement between WS Seller and QCA.</p>

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8.	8 (4) Charges for Deviation, in respect of a WS Seller.	<p>.....</p> <p>a) the contract rate for the purpose of deviation shall be equal to the weighted average of the contract rates of all individual WS seller(s) opting for aggregation at the pooling station</p>	<p>.....</p> <p>a) the contract rate for the purpose of deviation shall be equal to the weighted average of the contract rates of all individual WS seller(s) opting for aggregation at the pooling station. For WS sellers which are captive generators the transfer price for supplying captive energy to captive user shall be considered for the purpose of deviation;</p>	<p>More than 30 GW of ISTS connected captive generators are coming up across the country to supply power to captive users seeking to go green. This market is slated to further grow as export-oriented industries face carbon taxes like Carbon Border Adjustment Mechanism in Europe. Hence, huge investment in going green is happening in the country with end users paying for setting up renewable projects. As a captive project has no tariff (sale of energy not involved), the reasonable cost of transferring energy to captive user is recovered by captive generator under captive energy delivery agreement.</p> <p>Such cost of transferring energy or transfer price is captured in captive energy delivery agreement and should be considered for calculating deviation charges.</p>

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9.	8 (4) Charges for Deviation, in respect of a WS Seller	<u>Category of WS and their Volume deviation limits</u> <ul style="list-style-type: none"> ○ A generating station based on solar or a hybrid of wind – solar resources or aggregation at a pooling station ○ A generating station based on wind resource 		<p>In the draft regulations, the hybrid of wind and solar has been tagged with plain vanilla solar and hence is subject to the same deviation charges as applicable to plain vanilla solar.</p> <p>However, for hybrid cases, where the proportion of wind component is higher than solar component, subjecting it to the charges applicable to solar (which has a narrower deviation band than that of plain vanilla wind) would not be appropriate.</p> <p>Therefore, it is requested that, for hybrid cases, the applicable charges should be based on the technology which is in higher proportion. If wind is dominating, charges of wind should be applicable, and if solar is dominating, charges of solar to be applicable.</p>
10.	8 (5) Charges for Deviation, in respect	Charges for Deviation, in respect of a Standalone Energy Storage System (ESS), shall be at par with the charges for Deviation for	Clarity may be provided as per comment.	The ESS shall be scheduling/drawing power from the grid to charge itself. How will

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	of a Standalone Energy Storage System (ESS)	a general seller other than an RoR generating station or a generating station based on municipal solid waste or WS seller as specified in Clause (1) of this Regulation		be the treatment for deviation in such case Please note, as per the Sharing Regulations, an ESS cannot be a Drawee DIC. Clarity may be provided.
11.	8 (5) Charges for Deviation, in respect of a Standalone Energy Storage System (ESS)	Charges for Deviation, in respect of a Standalone Energy Storage System (ESS), shall be at par with the charges for Deviation for a general seller other than an RoR generating station or a generating station based on municipal solid waste or WS seller as specified in Clause (1) of this Regulation	-	The regulation is silent on behind-the-meter storage technology. Please clarify, how the same shall be dealt with?
12.	8 (6) Charges for Deviation, in respect of an ESS co-located with WS Seller(s)	Charges for Deviation, in respect of an ESS co-located with WS Seller(s) connected at the same interconnection point, shall be as follows: i) Such seller shall provide a separate schedule for WS and ESS components through the Lead generator or QCA at the interconnection point;.....	(I) Any over injection up to minimum of 5% of DGS or 50 MW shall be receivable as per RR and for under generation shall be payable zero up to minimum of 5% of DGS or 50MW. (II) For Deviation between [5% of DGS or 50 MW whichever is less] and [10% of DGS or 100 MW, whichever is less] and f within f band.	In the table, there seems to be typographical error in points (I) and (II). Same may be corrected as suggested.

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13.	8 (7) Charges for Deviation, in respect of a Buyer.....	New Categories to be added.	<u>Buyer (being Super RE Most Rich State-1)</u> -VLB (1) = Deviation up to 300 MW - VLB (2) = Deviation beyond 300 MW & up to 400 MW -VLB (3) = Deviation beyond 400 MW <u>Buyer (being Super RE Most Rich State-2)</u> - VLB (1) = Deviation up to 350 MW - VLB (2) = Deviation beyond 350 MW & up to 450 MW -VLB (3) = Deviation beyond 450 MW	As mentioned in comments no. 2 above, 2 new categories under 'Buyer' need to be included in the regulations. Hence, volume limits for the categories to be incorporated as suggested.
14.	9. Accounting of Charges for Deviation and Ancillary Service Pool Account 10. Schedule of Payment of charges for deviation	9(2).....After receiving the data for deviation from the Regional Load Despatch Centre, the Secretariat of the Regional Power Committee shall prepare and issue the statement of charges for deviation prepared for the previous	The draft may be modified accordingly to incorporate the suggestions provided.	It has been found that on few occasions, the statements issued by RPC are erroneous. In such cases, RPCs have to be intimated to correct and verify the same. <ul style="list-style-type: none"> It is requested that such instances may be taken into

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		<p>week to all regional entities by ensuing Tuesday....</p> <p>10 (1) The payment of charges for deviation shall have a high priority, and the concerned regional entity shall pay the due amounts within 7 (seven) days of the issue of the statement of charges for deviation by the Regional Power Committee, failing which late payment surcharge @ 0.04% shall be payable for each day of delay</p>		<p>consideration and delay due to the above <u>should not be subject to any consequences like LPS as per 10 (1).</u></p> <ul style="list-style-type: none"> It is suggested that the concerned regional entity should respond to RPC for any discrepancy <u>within 2 days</u> of receipt of the statement. Further, the RPC to send back the corrected statement <u>within 2 days from the intimation</u> of discrepancy by the regional entity.
15.	<p>10.Schedule of Payment charges deviation</p>	<p>(1) The payment of charges for deviation shall late payment surcharge @ 0.04% shall be payable for each day of delay</p> <p>(2) Any regional entity which at to open a Letter of Credit (LC) equal to 110% of their average payable weekly liability for deviations in year</p>	<p>The draft may be modified accordingly to incorporate the suggestions provided</p>	<p>QCA is coordinating agency only which has limited financial capacity in terms of revenue received from its services. Since QCA has to coordinate with respective RE Generators for recovering the payment of Deviation Charges from generators for onward submission to RLDC, the same is subject to delays, as the activity</p>

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		<p>(3) In case of failure to pay into the Deviation and Ancillary Service Pool Account within 7 (seven) days entitled to encash the LC of the</p>		<p>is dependent on how timely the RE generators pay to the QCA.</p> <p>In various state regulations, the timeline is relatively lenient. For e.g. as per '<u>the Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources</u>) Regulations, 2019' of <u>GERC</u>, it is as below:</p> <p>Clause 13.4- <i>"Payment of all charges on account of deviations beyond the permissible limit at a Pooling Station by Wind and Solar generators shall have priority over other payments and shall be paid within 10 (ten) days from the issuance of the account. In case of default in payment exceeding more than 2 days, interest of 0.04% per day for each day of delay shall be levied."</i></p>

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				Therefore, we request the delay by RE generators may please factored, and we propose to keep payment due date as 10 (ten) days from the issue of the statement of charges and LPS applicability beyond 12 days. This is in line with GERC regulation.
16.	10.Schedule of of for Payment charges deviation	(1) The payment of..... (2) Any regional entity (3) In case of failure to pay into the Deviation and Ancillary Service Pool Account within 7 (seven) days entitled to encash the LC of the concerned regional entity to the extent of the default and the concerned regional entity shall recoup the LC amount within 3 days	The draft may be modified accordingly to incorporate the suggestions provided	As mentioned in the previous comment, in a QCA framework, delay in payment by RE generators is a common occurrence. At the state level, in case of delay in payment, delayed payment charges are imposed accordingly. However, unlike the proposed regulation 10 (3), the encashment of LC at the state level does not trigger immediately after the due date and considerable time is given before LC encashment is allowed.

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				<p>For example, as per the <u>Procedure for Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2015'</u> of KERC, the following exist.</p> <p>Clause 10.1 (b)- <i>"if the QCA fails to pay deviation charges even after a lapse of 60 days from the date of issue of RE DSM bill, process to encash the BG/LC amount shall be initiated beside any other action as permissible under law "</i></p> <p>It is to be noted that encashment of LC has serious implications for the QCA, as it leads to downgrading of credit rating, for delay not directly attributable to them.</p> <p>Therefore, we request, that atleast 15 working days should be given from the date of issue of</p>

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				RE DSM bill, before LC encashment can kick in.
17.	10. Schedule of Payment charges for deviation	<p>(1) The payment of charges for deviation shall have a high priority, and the concerned regional entity shall pay the due amounts within 7 (seven) days of the issue of the statement of charges for deviation by the Regional Power Committee, failing which late payment surcharge @ 0.04% shall be payable for each day of delay</p> <p>(2) Any regional entity which at any time during the previous financial year fails to make payment of charges for deviation within the time specified in these regulations shall be required to open a Letter of Credit (LC) equal to 110% of their average payable weekly liability for deviations in the previous financial year in favour of the concerned Regional Load Despatch Centre within a</p>	The draft may be modified accordingly to incorporate the suggestions provided.	<p>There should be <u>equitable treatment for payment as well as receivable</u> of deviation charges to and from the Deviation and Ancillary Service Pool Account.</p> <p>The LPS applicable to regional entity for delay in payment should ideally be also applicable on the RPC for similar delay in receivable by the regional entity.</p>

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		<p>fortnight from the start of the current financial year</p> <p>(3) In case of failure to pay into the Deviation and Ancillary Service Pool Account within 7 (seven) days from the date of issue of the statement of charges for deviation, the Regional Load Despatch Centre shall be entitled to encash the LC of the concerned regional entity to the extent of the default and the concerned regional entity shall recoup the LC amount within 3 days.</p>		
General Comment				
1.	No DSM penalty shall be applicable on generators while they are Ramping Up or Ramping Down	As per current Tariff Regulations, thermal generators should have a minimum ramp rate of 1%. Based on this ramp rate schedules of generators are revised. For example, consider a 1000 MW generator having a ramp rate of 1%. The schedule in Time Block-1 (T-1) is 700 MW. Based on Ramp Rate of 1%, the schedule is revised to 850 MW in T-2. Technically it is not possible to ramp up the generation from 700 MW in T-1 to 850 MW in T-2 in a linear way – this will vary depending on the load, the make and the system configuration. The most a generator can do is that by the end of T-2, it achieves the schedule of 850 MW. This would apply to all time blocks when ramping up/ down is taking place. This constraint in Ramp operations has been recognized in the Ramp Up/Ramp Down Operating Procedure published by POSOCO.		

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		Based on the above, it is suggested that <u>no DSM charges shall be payable</u> for time blocks when Ramp Up/Ramp Down operation is in progress. The actual generation should be deemed to be the schedule during the time block.																	
2.	Inequitable application of Disparity or in charges b/w sellers and buyers	<p>The DSM Regulations are designed to ensure that grid users adhere to their scheduled drawal and injection of electricity, maintaining the security and stability of the grid. To achieve this objective, it is essential that both buyers and sellers are treated equally through commercial mechanism. It has been observed that charges for deviations are not consistent between general sellers and buyers within the same frequency band and deviation limits. Instances are illustrated in the table below.</p> <table border="1" data-bbox="566 643 2087 1137"> <thead> <tr> <th colspan="3" data-bbox="566 643 2087 715">For Deviation Up to [10% DGS/DBUY or 100 MW, whichever is less] and f within and outside f band</th> </tr> <tr> <th data-bbox="566 715 855 786">Frequency</th> <th data-bbox="855 715 1431 786">Seller (Over Injection)</th> <th data-bbox="1431 715 2087 786">Buyer (Under Drawl)</th> </tr> </thead> <tbody> <tr> <td data-bbox="566 786 855 858">f = 50.00 Hz</td> <td data-bbox="855 786 1431 858">100% RR</td> <td data-bbox="1431 786 2087 858">85% NR</td> </tr> <tr> <td data-bbox="566 858 855 1058">49.90 ≤ f < 50.00 Hz</td> <td data-bbox="855 858 1431 1058">For every decrease in frequency by 0.01 Hz, charges for deviation for the seller increase by 1.5% of RR, reaching 115% of RR at 49.90 Hz</td> <td data-bbox="1431 858 2087 1058">For every increase in frequency by 0.01 Hz, charges for deviation for the buyer increase by 1% of NR, reaching 95% of NR at 49.90 Hz</td> </tr> <tr> <td data-bbox="566 1058 855 1137">f < 49.90 Hz</td> <td data-bbox="855 1058 1431 1137">115 % of RR</td> <td data-bbox="1431 1058 2087 1137">95% of NR</td> </tr> </tbody> </table> <p>Therefore, submission is that buyers should have the same commercial impact as sellers in above mentioned instances and there should be no disparity as both will result in equal imbalance in the Grid.</p>			For Deviation Up to [10% DGS/DBUY or 100 MW, whichever is less] and f within and outside f band			Frequency	Seller (Over Injection)	Buyer (Under Drawl)	f = 50.00 Hz	100% RR	85% NR	49.90 ≤ f < 50.00 Hz	For every decrease in frequency by 0.01 Hz, charges for deviation for the seller increase by 1.5% of RR, reaching 115% of RR at 49.90 Hz	For every increase in frequency by 0.01 Hz, charges for deviation for the buyer increase by 1% of NR, reaching 95% of NR at 49.90 Hz	f < 49.90 Hz	115 % of RR	95% of NR
For Deviation Up to [10% DGS/DBUY or 100 MW, whichever is less] and f within and outside f band																			
Frequency	Seller (Over Injection)	Buyer (Under Drawl)																	
f = 50.00 Hz	100% RR	85% NR																	
49.90 ≤ f < 50.00 Hz	For every decrease in frequency by 0.01 Hz, charges for deviation for the seller increase by 1.5% of RR, reaching 115% of RR at 49.90 Hz	For every increase in frequency by 0.01 Hz, charges for deviation for the buyer increase by 1% of NR, reaching 95% of NR at 49.90 Hz																	
f < 49.90 Hz	115 % of RR	95% of NR																	

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3.	Differential application charges of	<p>Deviation charges have been specified based on the volume deviation thresholds. For instances, for deviation volume upto 100 MW, applicable charges are there (say X). Similarly, for deviation beyond 100 MW, a different set of deviation charges have been given.</p>	<p>In the above scenario, if the deviation volume is say 120 MW, will the 100 MW volume be subject to deviation charges applicable for <100 MW deviation and 20 MW volume be subject to deviation charges applicable for >100 MW deviation? Or the entire 120 MW be subject to deviation charges applicable for <100 MW deviation?</p>	<p>Please clarify.</p>

Tata Power- Comments on Draft DSM Regulations 2024- PART B (Detailed comments on WS Category)

Clause 8.4 (Charges for Deviation, in respect of a WS Seller being a generating station based on wind or solar or hybrid of wind – solar resources, including the generating stations aggregated at a pooling station through QCA shall be without any linkage to Grid frequency, as under:

Proposed Amendment:

Solar/hybrid (Wind-solar)/aggregation at a Pooling station

Band	Deviation by the way of over injection (Receivable by the seller)	Deviation by the way of Under injection (Payable by the Seller)
0- 5%	Contract Rate	Contract Rate
5-10%	90% of the Contract Rate	110% of the Contract Rate
10-20%	50% of the Contract Rate	150% of the Contract Rate
Above 20%	Zero	200% of the Contract Rate

Suggestion: We suggest that Solar/Hybrid and QCA aggregation at the pooling station shall have separate bands as proposed –

Solar/hybrid:

Band	Deviation by the way of over injection (Receivable by the seller)	Deviation by the way of Under injection (Payable by the Seller)
0- 10%	Contract Rate	Contract Rate
10-15%	90% of the Contract Rate	110% of the Contract Rate
15-20%	70% of the Contract Rate	130% of the Contract Rate
Above 20%	50% of the Contract Rate	150% of the Contract Rate

In case of QCA Aggregation at Pooling station:

Band	Deviation by the way of over injection (Receivable by the seller)	Deviation by the way of Under injection (Payable by the Seller)
0- 8%	Contract Rate	Contract Rate
8-15%	90% of the Contract Rate	110% of the Contract Rate
15-20%	60% of the Contract Rate	140% of the Contract Rate
Above 20%	30% of the Contract Rate	170% of the Contract Rate

Analysis for the above recommendation are as follows:

I. Solar/Hybrid Generating station -

- The permissible band proposed for General seller is 10%, Run of River Hydro projects is 10%, MSW project is 20%, Wind projects is 10%. Therefore, for maintaining uniformity among all the sources we request a permissible band of 10% for Solar and Hybrid generating stations also.
- Solar projects are exposed to weather risks such as intermittent clouds, Rain, Fog, Dust Storms, Wind Speed etc., making the prediction to 5% band for all the time blocks through out the year is almost impossible. A brief analysis on the accuracies across the regions is shown below:

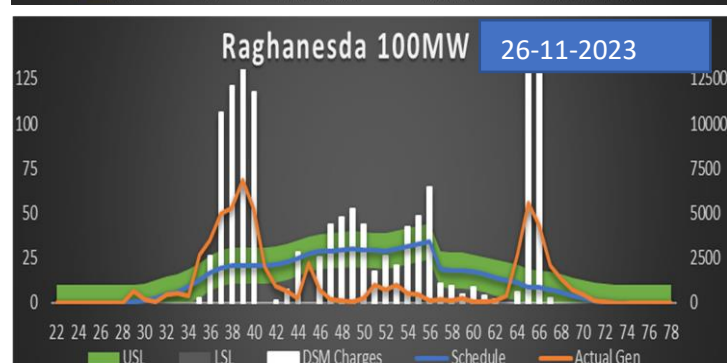
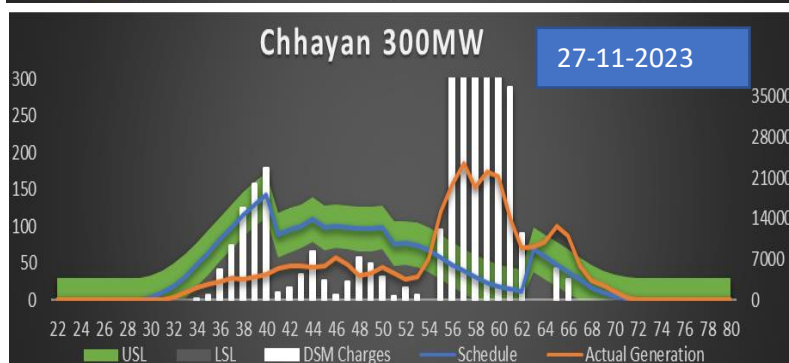
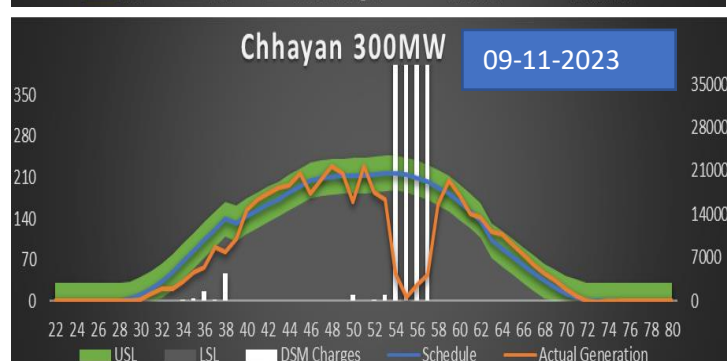
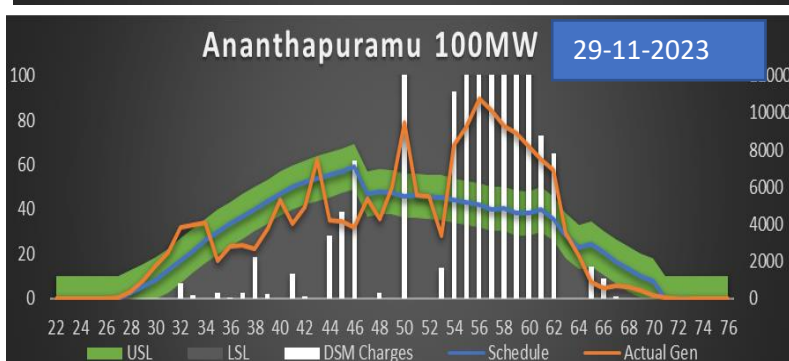
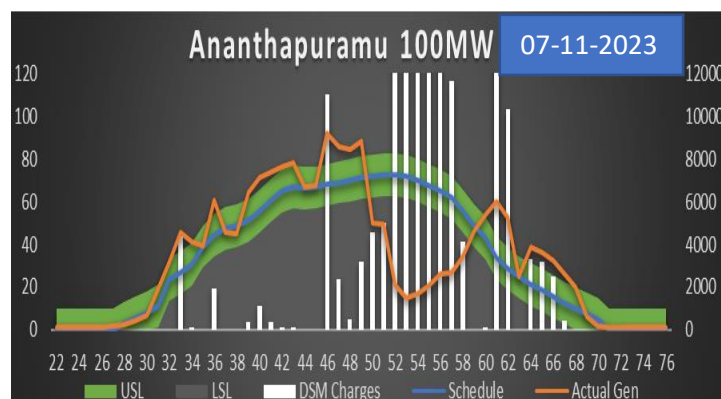
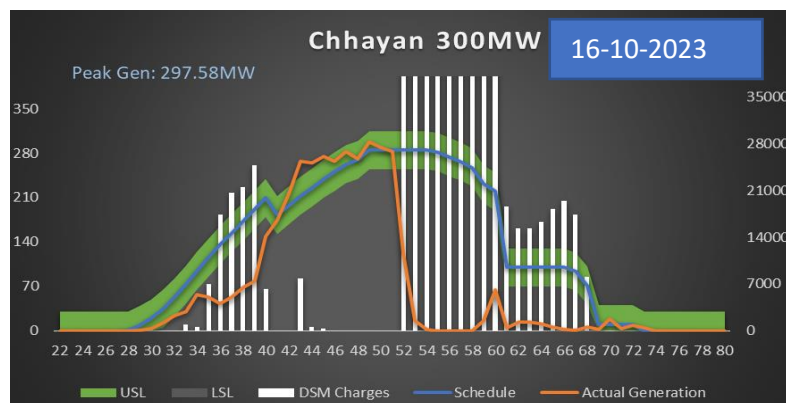
a) % of the timeslots in the band for FY24 across the regions

Bifurcation of Time blocks in the respective bands								
Deviation Band	Ananthapuramu (SR - AP)		Pavagada (SR - Kar)		Raghanesda (WR-GJ)		Bhadla1 (NR-RJ)	
	%	Cum (%)	%	Cum (%)	%	Cum (%)	%	Cum (%)
1%	12.33%	12.33%	11.71%	11.71%	15.96%	15.96%	15.68%	15.68%
5%	38.73%	51.06%	36.59%	48.30%	43.77%	59.73%	46.93%	62.61%
8%	18.87%	69.93%	21.15%	69.45%	17.14%	76.87%	16.17%	78.78%
10%	8.07%	78.00%	8.80%	78.25%	6.03%	82.90%	5.93%	84.71%
12%	4.84%	82.84%	5.31%	83.56%	3.91%	86.81%	3.30%	88.01%
15%	4.87%	87.71%	5.67%	89.23%	3.80%	90.61%	3.21%	91.22%
20%	5.26%	92.97%	5.42%	94.65%	3.51%	94.12%	2.73%	93.95%
Beyond 20%	7.04%	100.01%	5.36%	100.01%	5.88%	100.00%	6.05%	100.00%

b) Applicable DSM charges (in % of revenue) as per the proposed amendment –

Deviation Band	Ananthapuramu SR- AP		Pavagada SR-Kar		Raghanesda WR-Guj		Bhadla NR-Raj	
	% of Revenue	% of DSM Charges	% of Revenue	% of DSM Charges	% of Revenue	% of DSM Charges	% of Revenue	% of DSM Charges
1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8%	0.1%	1.8%	0.1%	2.6%	0.0%	1.8%	0.0%	1.5%
10%	0.1%	2.3%	0.1%	3.0%	0.0%	1.8%	0.0%	1.8%
12%	0.1%	3.4%	0.1%	4.5%	0.1%	2.9%	0.1%	2.3%
15%	0.2%	7.8%	0.2%	10.8%	0.1%	6.3%	0.1%	5.3%
20%	0.5%	15.8%	0.4%	19.1%	0.3%	11.2%	0.2%	8.7%
Beyond 20%	2.0%	68.9%	1.4%	60.0%	1.7%	76.0%	1.9%	80.4%
Total	2.96%	100.00%	2.27%	100.00%	2.29%	100.00%	2.37%	100.00%

a) Some of the Situations where the deviations have gone beyond 20% band –



- On analysis it was found that 50% to 60% of the time blocks are within the band of 5% and 78% to 85% of the blocks are within 10%. Hence, the proposed 5% band will risk 40% to 50% of the time blocks on an annual basis for payment of DSM charges. Therefore, we request to provide 10% band for Solar.
- Although 5% to 7% of the time blocks goes beyond 20% band, the charges accountable for these blocks are in the range of 60% to 80% of the total DSM charges. Most of the cases are un-avoidable & not in the control of the generators due to weather uncertainties. Some of the typical cases are shown above. Hence, providing zero beyond 20% band in either case (under injection & over injection) is not advisable, therefore we request to provide 50% of the revenue for the cases beyond 20% band.
- The proposed middle band of 10% to 20% for 50% penalty is large and most of the deviation occurs in this band across the regions, hence we request to kindly break this band into 2 as 10% to 15% and 15% to 20% with the penal charges of 10% and 30%.

Bifurcation of time blocks in respective bands								
Deviation Band	Ananthapuramu (SR-AP)		Pavagada (SR-KA)		Raghanesda (WR-GJ)		Bhadla (NR-RJ)	
	%	Cum (%)	%	Cum (%)	%	Cum (%)	%	Cum (%)
5%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8%	0.03%	1.88%	0.06%	3.53%	0.04%	2.19%	0.03%	3.05%
10%	0.03%	1.99%	0.05%	3.39%	0.03%	1.96%	0.03%	2.53%
12%	0.04%	2.64%	0.09%	5.50%	0.06%	3.93%	0.05%	4.11%
15%	0.09%	5.54%	0.20%	12.11%	0.16%	9.83%	0.10%	8.72%
20%	0.16%	9.39%	0.31%	19.22%	0.32%	19.47%	0.20%	17.65%
Beyond 20%	1.30%	78.56%	0.91%	56.25%	1.03%	62.61%	0.71%	63.93%

- Upto 5% band, only 53% to 72% of time blocks are in this range, however with the increase in band to 8%, 75% to 85% of the time blocks at aggregated at the park level falls in this range. Hence, we request to increase the band to 8% from the proposed 5%.
- Although the percentage of time blocks beyond 20% band are in the range of 2.65% to 3.85%, however the DSM charges revenue accounted at the park level for the time blocks is in the range of 56% to 78%, therefore we request to provide 30% of the contract rate on the either side.

c) Comparison of DSM charges accountable at park level across the regions under different regimes are shown below for FY24:

DSM Charges (% of revenue) accountable under different regimes						
Region	Project	Capacity (MW)	Prior to Existing Regulations	Existing Regulations	Proposed Amendment	As per Suggested
SR	Anantapuramu	1400	0.14%	0.71%	1.66%	0.78%
SR	Pavagada	2050	0.13%	0.69%	1.61%	0.76%
WR	Raghanesda	600	0.16%	0.94%	1.65%	0.82%
NR	Bhadla	3130	0.11%	0.49%	1.11%	0.56%

- From above analysis, the net contribute on account of DSM is approx 0.6 to 0.8% of the generated revenue as per the suggested mechanism.
- Hence, the proposed middle band of 10% to 20% for 50% penalty is large and high, therefore, we request to kindly break this band into 2 as 8% to 15% and 15% to 20% with the penal charges of 10% and 40%.