serentica

To,
Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Chanderlok Building 36, Janpath Rd,
New Delhi, Delhi 110001

Subject: Comments on Draft CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 by Serentica Renewables India Private Limited.

Dear Sir,

This is with reference to the above subject where Hon'ble Central Electricity Regulatory Commission (CERC) has invited comments and suggestions on Draft Central Electricity Regulatory Commission (DSM) Regulations, 2024. Our comments on the same has been annexed as Annexure-1.

We request the Hon'ble CERC to take our views on record.

Thanking You

Yours Sincerely,

Kunal Lalit Kaistha,
Head Regulatory Affairs,
Serentica Renewables India Private Limited,
Gurugram, 122008, Haryana

serentica

Comments on Draft CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024

<table>
<tr><th>#</th><th>Proposed Amendment</th><th>Suggested language</th><th>Remarks and Rationale</th></tr>
<tr><td>1.</td><td>8. Charges for Deviation
…
(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 such generating stations aggregated at a pooling station through QCA shall be without any linkage to grid frequency, as under:
<table><tr><td>Deviation by way of over injection
(Receivable by the Seller)</td><td>Deviation by way of under injection
(Payable by the Seller)</td></tr><tr><td>(i) for VLws (1) @ contract rate;
(ii) for VLws (2) @ 90% of contract rate
(iii) for VLws (3) @ 50% of contract
rate,
(iv) beyond VLws (3) @ Zero;</td><td>v) for VLws (1) @ contract rate;
(vi) for VLws (2) @ 110% of contract rate;
(vii) for VLws @ 150% of contract rate;
(viii) beyond VLws (3) @ 200% of contract rate.</td></tr></table>
Note: Volume Limits for WS Seller:
<table><tr><td>WS Seller</td><td>Volume Limit</td></tr></table></td><td>8. Charges for Deviation
…
(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 such generating stations aggregated at a pooling station through QCA shall be without any linkage to grid frequency, as under:
<table><tr><td>Deviation by way of over injection
(Receivable by the Seller)</td><td>Deviation by way of under injection
(Payable by the Seller)</td></tr><tr><td>(i) for VLws (1) @ contract rate;
(ii) for VLws (2) @ 90% of contract rate
(iii) for VLws (3) @ 50% of contract
rate,
(iv) beyond VLws (3) @ Zero;</td><td>v) for VLws (1) @ contract rate;
(vi) for VLws (2) @ 110% of contract rate;
(vii) for VLws @ 150% of contract rate;
(viii) beyond VLws (3) @ 200% of contract rate.</td></tr></table>
Note: Volume Limits for WS Seller:
<table><tr><td>WS Seller</td><td>Volume Limit</td></tr></table></td><td>The previous revision in DSM framework came out in Feb-2023, which means it has just been 14 months from the last revision. The industry has barely adjusted itself to the new DSM regulations, and now again such significant set of changes in the DSM framework are proposed again within a short timeframe is throwing major challenges and the industry is still figuring out mitigation. It is suggested that any new changes, like the instant regulations, be brought into effect with gap of 3 years at least.

Further, as you are aware, generation from Wind and Solar is weather dependent and never fully controllable as weather cannot be 100% accurately predicted, which means that positive/negative errors are considered equally probable. Even with robust forecasting tools, the forecast would be only near to injection but never exactly equal injection due to Errors that may be on positive (over injection) or negative (under injection) side. As an example, in wind sites, neither gusts of wind nor sudden drop in wind can be predicted causing over injection and under injection respectively.</td></tr>
</table>

#	Proposed Amendment		Suggested language		Remarks and Rationale
	A generating station based on solar or a hybrid of wind–solar resources or aggregation at a pooling station	VL_{WS} (1) = Deviation up to 5% D_{WS} VL_{WS} (2) = Deviation beyond 5% D_{WS} and up to 10% D_{WS} VL_{WS} (3) = Deviation beyond 10% D_{WS} and up to 20% D_{WS}	A generating station based on solar or a hybrid of wind–solar resources or aggregation at a pooling station	VL_{WS} (1) = Deviation up to ~~5%~~ **10%** D_{WS} VL_{WS} (2) = Deviation beyond ~~5%~~ **10%** D_{WS} and up to ~~10%~~ **15%** D_{WS} VL_{WS} (3) = Deviation beyond ~~10%~~ **15%** D_{WS} and up to 20% D_{WS}	**IMPACT** Simulation was done on a ISTS substation having wind projects and another substation having solar projects to assess impact of present draft regulation on increase in individual deviation impact and deviation impact on aggregate basis from 2022 regulations. In both individual as well as aggregate basis the deviation impact increases. The deviation impact on individual basis significantly rises from 90 % to 125% and on aggregate basis the rise is 3% to 17%. Below is the snapshot of the impact:
	A generating station based on wind resource	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} (3) = Deviation beyond 15% D_{WS} and up to 25% D_{WS}	A generating station based on wind resource	VL_{WS} (1) = Deviation up to ~~10%~~ **15%** D_{WS} VL_{WS} (2) = Deviation beyond ~~10%~~ **15%** D_{WS} and up to ~~15%~~ **20%** D_{WS} VL_{WS} (3) = Deviation beyond ~~15%~~ **20%** D_{WS} and up to 25% D_{WS}	

		A	B	(B-A)/A	C	(C-A)/A
	Solar MW	CERC 2023 Individual	CERC 2024 draft Individual	Increase over CERC 2023 Regulation (Individual)	CERC 2024 draft Aggregated	Increase over CERC 2023 Regulation (Aggregated)
IPP1	250	3.03	5.81	92%	3.6	15%
IPP2	300	3.9	7.25	86%	4.4	11%
IPP3	250	2.7	5.35	98%	3.7	27%
Aggg Size	800	3.21			3.88	17%
		Individual Avg			Aggregation Avg	

Table 1: Sample study on Solar Projects connected to ISTS Bhadla 1 S/s

#	Proposed Amendment	Suggested language	Remarks and Rationale

		A	B	(B-A)/A	C	(C-A)/A
	Wind MW	CERC 2023 Individual	CERC 2024 draft Individual	Increase over CERC 2023 Regulation (Individual)	CERC 2024 draft (Aggregated)	Increase over CERC 2023 Regulation (Aggregated)
IPP1	250	5.3	9.9	89%	5.6	6%
IPP2	245	4.0	9.0	125%	4.1	2%
IPP3	200	4.8	9.2	92%	4.75	-1%
Agg Size	695	4.69			4.82	3%
		Individual Avg			Aggregation Avg	

Table 2: Sample study on Wind Projects connected to ISTS Tuticorin 2 S/s

As the impact on deviation is significant even on aggregation basis too, we request that existing band as in 2022 regulation may continue and after atleast an year these bands be reviewed basis empirical results.

Further to the above, you may also note that forecasting as well as Scheduling have continuously improved since the 2015 DSM regulations, and now the majority of Error for WS Sellers is in acceptable deviation band of ±15%. Since the time that DSM Regulations were introduced, the Error level improved from earlier around 60% Error in ±15% range to present more than 90% Error in ±15% range. Lesser Errors have helped in improved grid management, despite the persisting challenges in more accurate weather forecasting. In line with the same, it is reiterated that instead of 5% Deviation for Solar or Hybrid, the Commission should consider revising it to 10%, as that would help solar/hybrid

#	Proposed Amendment	Suggested language	Remarks and Rationale
			generators to better adapt to this change without paying excessive penalty. Similarly, the Deviation for Wind should be kept unchanged at 15%, instead of 10%.
2.	**Aggregation of Schedules** The respective RLDC shall allow aggregation of schedule at an ISTS substation for all renewable energy generators connected to it irrespective of single or multiple QCAs or no QCA.	There is no clarity in the draft rules whether aggregation of schedules will be allowed in multiple or no QCA scenarios. The concept of Aggregation of schedule was introduced in the IEGC, 2023. The Annexure 6 to the IEGC, 2023 does not mandate a RE developer to have a QCA. To quote: *"1.(b) The responsibility to provide forecast and other data and to coordinate with RLDC under this Procedure shall be that of Qualified Coordinating Agency on behalf of all generating stations it is representing.* ***Provided that where Qualified Coordinating Agency is not identified, individual renewable energy generating station or lead generator, as the case may be, shall be responsible for the same."*** Basis the IEGC the NLDC had proposed a draft procedure for aggregation where it considered only single QCA per ISTS substation for aggregation due to administrative reason. As the grid code does not mandate QCA for every generator, there can be scenario where out of say 7 developers connected to an ISTS substation only 5 appoint a QCA and remaining 2 do not. The five that appoint QCA may or may not have common QCA resulting in multiple QCAs. Despite all these possible scenarios, the aggregation can always be facilitated by RLDC as all developers have to provide schedule to RLDC only. It is requested that the Hon'ble Commission may mandate aggregation irrespective of QCA in an ISTS substation. A procedure in this direction should be worked out by NLDC and industry associations shall cooperate with feedback to support this.	
3.	**8. Charges for Deviation** … (4) Charges for Deviation, in respect of a WS Seller …	**8. Charges for Deviation** … (4) Charges for Deviation, in respect of a WS Seller …d	The depooling of deviation charges should not be left to the individual sellers and the QCA, as 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

#	Proposed Amendment	Suggested language	Remarks and Rationale
	(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 **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** ~~mutually agreed upon between the QCA and such individual WS seller(s)~~.	is paid from deviation pool and one under injecting pays back at the price mentioned in its agreement/ PPA. 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. 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.
4.	**8. Charges for Deviation** (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 such generating stations aggregated at a pooling station through QCA shall be without any linkage to grid frequency, as under: **…** (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;	**8. Charges for Deviation** (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 such generating stations aggregated at a pooling station through QCA shall be without any linkage to grid frequency, as under: **…** (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**	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. Such cost of transferring energy or transfer price is captured in captive energy delivery agreement and should be considered for calculating deviation charges.

#	Proposed Amendment	Suggested language	Remarks and Rationale
		captive user shall be considered for the purpose of deviation;	
5.	**8. Charges for Deviation** ... (5) 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	**8. Charges for Deviation** ... (5) 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. **At the time of drawl of power by ESS the deviation charges shall be at par with Buyer <u>other than</u> RE Rich or Super RE Rich State.**	It is appreciated that the Hon'ble Commissioned has included standalone ESS in the DSM framework now. However, only the treatment of deviation in terms of ESS as a seller, or injecting entity has been addressed There will be scenarios where ESS would be behaving as a drawee entity as well, as the charging power would need to be scheduled/ procured from the grid. The same may be clarified so that there is no room for ambiguity in interpretation. We suggest that it be linked to Buyer other than RE Rich or Super RE Rich State.
6.	**8. Charges for Deviation** ... (6) 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; (ii) Deviation corresponding to WS component shall be charged at the same	**8. Charges for Deviation** ... (6) Charges for Deviation, in respect of an ESS co-located with **general seller or** WS Seller(s) connected at the same interconnection point, shall be as follows: (i) Such seller shall provide a separate schedule for **other generation component, or the** WS and ESS components, **as applicable** through the	The draft regulations appear to address ESS co-located with WS Seller. However, there are scenarios possible where the ESS is co-located with a General Seller as well. The MoP scheme dated 12.04.2022 for flexibility in Generation and Scheduling of Thermal/ Hydro power stations also provided for co-location of RE and ESS with Thermal/ Hydro generating stations as an option. Therefore, suitable amendment in the regulations is suggested.

#	Proposed Amendment	Suggested language	Remarks and Rationale
	rates as applicable for WS Seller being a generating station based on solar or hybrid of wind-solar resource in accordance with clause (4) of this regulation; and (iii) Deviation corresponding to the ESS component shall be charged at the same rates as applicable for a standalone ESS in accordance with clause (5) of this regulation.	Lead generator or QCA at the interconnection point; (ii) Deviation corresponding to **the respective generation** ~~WS~~ component shall be charged at the same rates as applicable **for said generation component** ~~WS Seller being a generating station based on solar or hybrid of wind-solar resource in accordance with clause (4) of this regulation~~; and (iii) Deviation corresponding to the ESS component shall be charged at the same rates as applicable for a standalone ESS in accordance with clause (5) of this regulation.	Also, if the ESS is treated as entity behind a lead generator, then charging power will also need to be treated with accordingly. This may be clarified as well.
7.	**10. Schedule of Payment of charges for deviation** (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.	**10. Schedule of Payment of charges for deviation** (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.	A proviso is suggested so that late payment surcharge liability only comes to the entity which has defaulted and not others, in the cases where multiple generating stations are aggregating at a pooling station through QCA.

#	Proposed Amendment	Suggested language	Remarks and Rationale
		Provided that, in case of generating stations aggregated at a pooling station through QCA, the applicability of late payment surcharge shall only be on individual generators that have defaulted in the timely payment of deviation charges. This would be suitably incorporated in the methodology for depooling of deviation charges for WS sellers under regulation 8.(4)(c).	
8.	**7. Normal Rate of Charges for 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].	-	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. Accordingly, CERC should define an agency or platform where daily block-wise ancillary service charges will be published in detail. This data should be made available in advance in a manner accessible to all the stakeholders.