

**Date: 03.06.2024**

The Secretary  
Central Electricity Regulatory Commission  
6th, 7th & 8th Floors, Tower B, World Trade Centre,  
Nauroji Nagar, New Delhi- 110029

**Sub: Submission of comments and suggestions on the proposed Draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024**

**Ref:** Draft Notification ref. No. L-1/260/2021/CERC Dated: 30.04.2022

Dear Sir,

On behalf of 'Adani Green Energy Ltd (AGEL), we hereby submit our comments & suggestion on the Draft Deviation Settlement Mechanism and Related Matters) Regulations, 2024 enclosed as **Annexure-A**, for kind consideration while finalizing the aforesaid regulation.

Thanking you,

Yours faithfully,  
**For & Behalf of Adani Green Energy Limited**



Ravi Sinha  
Sr. Manager- Regulatory Affairs

**Encl.** As above.

## **ANNEXURE-A**

### **AGEL Comments on the Draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024.**

- 1) Government of India is committed to achieve 500 GW Non-Fossil based electricity generation capacity by 2030 as announced in COP 26. In line with this commitment various Policies, Rules & Regulations, orders etc were introduced to promote energy generation through RE resources.
- 2) However, the proposed Draft Regulation is averse to the interest of RE generators as it penalises the RE generators with punitive charges in case of Under Injection where the impact is observed to be twice that of the impact under existing Regulation 2022, as per the comparison of DSM impact mentioned at Annexure-B. It is further submitted that in case of Over Injection, the RE generators has to incur total revenue loss which is against the principle of natural justice. In such case, whereas the injected power has been consumed and paid by consumer/Discoms, but no revenue been allowed to be realised by Generators. This has resulted in creating additional loss of revenue/burden on RE Generators for the reasons beyond their control.
- 3) Under the present draft regulation, commission has proposed more stringent Deviation Bands compared to existing 2022 Regulation and 2014 Regulation. It will have adverse commercial impact on RE generators as the proposed deviation band vis a vis required forecasting accuracy shall not be achievable in practical scenarios. In this regard, it is pertinent to highlight that RE generation is totally dependent on weather conditions which are very dynamic and intermittent in nature. Weather prediction tools & technologies are still under development phase and same are not matured enough nor capable of predicting within the accuracy band proposed in regulation.

Following are the major limitations of the available weather prediction tools:

- a) In any weather model, frequency of availability of weather forecast data are at 6 Hrs. i.e. 4 times a day which means every 6 Hrs weather data is revised.
- b) These data are available in the interval/block of 1.5 hrs, while weather can change drastically during this period, thereby causing inaccuracies in weather prediction and will affect the generation leading to heavy DSM penalties or loss of revenue being imposed on RE generators.
- c) Current Weather forecast models can only offer spatial resolution up to 10-14km<sup>2</sup> whereas the area of solar parks/Project is much lesser. Thus, quality of weather data/prediction is reduced when same is considered at Plant level. This is why these data are neither appropriate nor proper to be considered for forecasting of weather vis a vis estimation of generation at Solar Park/project level in order to arrive at desired accuracy.
- d) There is no method of predicting the direction of movement of clouds, as at times wind causes the diversion/deviation of clouds from the predicted path at local level.
- e) There is no accurate method of predicting the density and composition of the clouds which fluctuates the generation.



- f) There are inadequate number of automatic weather stations and radars which are not aligned with RE intense zones.
- 4) Further, it appears from the draft regulation that it has brought such proposal having more stringent and narrowed tolerance limit of deviation for Renewable Generating stations with a view to penalize the generators (on account of deviation from its given schedule) under the garb of grid security. In this regard it is submitted that narrowing down the deviation band limits are not at all in the benefit of RE generators because of the various reason as listed below:
- a) There are limitations on revision of schedule of power within a time block generation of solar/wind power being inherently unpredictable, and thus the deviation charge become inevitable which amount to punishment.
  - b) Forecasting & Scheduling can be made accurate to some extent by revising the schedule closest to the generation time block, but there are restrictions with respect to revising the generation schedules which forces the generators to deviate from the schedules and RE generators end up paying deviation charges.
  - c) There are unreliable weather data and due to unavailability of localized weather forecasting models, it is highly inaccurate to predict specific variations within a defined band.
  - d) No forecasting can be precise enough in case of Renewable Energy project including Solar/Wind/Hybrid which are dependent upon uncontrollable and uncertain environmental conditions.
  - e) As same is dependent upon uncontrollable and uncertain weather and inaccurate forecasting due to which desired accuracy of generation vis a vis scheduling is near to impossible.
- 5) Moreover, Hon'ble CERC has not given enough reasoning behind narrowing down the deviation band limit which ought to be based on the scientific study on weather forecasting in India and its accuracy, survey, and actual RE deviation data.

**Comparison of Deviation bands in earlier DSM Regulation and proposed Draft are as below:**



**Table-I: Comparison of DSM impact**

Type	DSM Regulation 2014	DSM Regulation 2022	Suo Moto order dated 06.02.2023	Draft DSM Regulation 2024
<b>Under Injection (Payable)</b>	<p><b><u>Under injection (wind/solar)</u></b></p> <ul style="list-style-type: none"> <li>• &lt;= 15% (A): At fixed rate/PPA Rate**</li> <li>• &gt;15% but&lt;= 25% (B): (A) + 110% of fixed/PPA rate** from 15% to 25%</li> <li>• &gt;25% but&lt;= 35% (C): (A) + (B) + 120% of fixed/PPA rate** from 25% to 35%</li> <li>• &gt;35% (D): (A) + (B) + (C) + 130% of fixed/PPA rate** for beyond 35%</li> </ul>	<p><b><u>Under injection (wind/solar)</u></b></p> <ul style="list-style-type: none"> <li>• 0-10%: At normal rate of charges</li> <li>• &gt;10%: 110% of normal rate of charges</li> </ul>	<p><b><u>Under injection (Solar/Hybrid)</u></b></p> <ul style="list-style-type: none"> <li>• 0-10%: Contract rate*</li> <li>• 10-15%: 110% of Contract rate*</li> <li>• &gt;15%: 150% of Contract rate*</li> </ul> <p><b><u>Under-injection (Wind)</u></b></p> <ul style="list-style-type: none"> <li>• 0-15%: Contract rate*</li> <li>• 15-20%: 110% of Contract rate*</li> <li>• &gt;20%: 150% of Contract rate*</li> </ul>	<p><b><u>Under injection (Solar/Hybrid)</u></b></p> <ul style="list-style-type: none"> <li>• 0-5%: Contract rate*</li> <li>• 5-10%: 110% of Contract rate*</li> <li>• 10-20%: 150% of Contract rate*</li> <li>• &gt;20%: 200% of Contract rate*</li> </ul> <p><b><u>Under-injection (Wind)</u></b></p> <ul style="list-style-type: none"> <li>• 0-10%: Contract rate*</li> <li>• 10-15%: 110% of Contract rate*</li> <li>• 15-25%: 150% of Contract rate*</li> <li>• &gt;25%: 200% of Contract rate*</li> </ul>
<b>Over Injection (Receivable)</b>	<p><b><u>Over injection (wind/solar)</u></b></p> <ul style="list-style-type: none"> <li>• &lt;= 15% (A): At fixed rate/PPA Rate**</li> <li>• &gt;15% but&lt;= 25% (B): (A) + 90% of fixed/PPA rate**</li> </ul>	<p><b><u>Over injection (wind/solar)</u></b></p> <ul style="list-style-type: none"> <li>• 0-5%: Contract rate</li> <li>• 5-10%: 90% of Contract rate</li> <li>• &gt;10%: Zero</li> </ul>	<p><b><u>Over-injection (solar/hybrid)</u></b></p> <ul style="list-style-type: none"> <li>• 0-10%: Contract rate*</li> <li>• 10-15%: 90% of Contract rate*</li> <li>• Beyond 15%: Zero</li> </ul>	<p><b><u>Over-injection (solar/hybrid)</u></b></p> <ul style="list-style-type: none"> <li>• 0-5%: Contract rate*</li> <li>• 5-10%: 90% of Contract rate*</li> <li>• 10-20%: 50% of Contract rate*</li> </ul>



Table-I: Comparison of DSM impact				
Type	DSM Regulation 2014	DSM Regulation 2022	Suo Moto order dated 06.02.2023	Draft DSM Regulation 2024
	<p>from 15% to 25%</p> <ul style="list-style-type: none"> <li>&gt;25% but ≤ 35% (C): (A) + (B) + 80% of fixed/PPA rate** from 25% to 35%</li> <li>&gt;35% (D): (A) + (B) + (C) + 70% of fixed/PPA rate** for beyond 35%</li> </ul>		<p><b><u>Over-injection - Wind</u></b></p> <ul style="list-style-type: none"> <li>0-15%: Contract rate*</li> <li>15-20%: 90% of contract rate*</li> <li>Beyond 20%: Zero</li> </ul>	<ul style="list-style-type: none"> <li>&gt;20%: Zero</li> </ul> <p><b><u>Over-injection - Wind</u></b></p> <ul style="list-style-type: none"> <li>0-10%: Contract rate*</li> <li>10-15%: 90% of Contract rate*</li> <li>15-25%: 50% of Contract rate*</li> <li>&gt;25%: Zero</li> </ul>

\*For DSM regulations 2022, Suo-moto order dated 6<sup>th</sup> Feb 2023 and DSM regulations 2024, in absence of contract rate, weighted average ACP of the Day Ahead Market segments of all Power Exchanges is considered for the respective time block.

\*\*For DSM regulations 2014, in absence of PPA rate, APPC rate shall be considered for DSM calculation

6) It is submitted that the existing CERC DSM Regulations, 2022 are itself onerous to the RE generators when compared 2014 regulation and have been challenged before Hon'ble Delhi High Court by various Solar and Wind developer associations (viz. NSEFI & WIPA). The Hon'ble Delhi High Court has granted an interim relief to RE generators by way of no-coercive action while implementing the 2022 DSM Regulations. Notably, the Hon'ble Commission is yet to file its counter in the said Writ Petition. Despite this position, the Hon'ble Commission has initiated the process of inviting stakeholder comments on a fresh draft of the DSM Regulations, 2024 which propose an even more stringent penalty for deviation by reducing the tolerance band from 10% to 5%. It is pertinent to note that the NSEFI (of which the AGEL is a member) has filed a fresh Writ Petition being W.P. (C) 8283/2024 wherein the Hon'ble High Court of Delhi has issued Notice to the Hon'ble Commission on 30.05.2024 and directed to file its reply within four weeks and listed the matter on 3<sup>rd</sup> July 2024. In view of the above, Hon'ble Commission is requested to keep the public consultation process on the Draft DSM Regulations, 2024 in abeyance and await the outcomes of both the Writ Petitions.



7) Without prejudice to the contentions raised in the aforesaid Writ Petitions and rights/remedies available under the law and equity, we hereby submit following comments and suggestions on the proposed draft regulations for consideration of the Hon'ble Commission:

Table: II – Comments and Suggestion				
Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
1.	Clause 6 (2) Page No 5	<p>(2) Deviation in a time block for WS sellers shall be computed as follows: Deviation-WS seller (DWS) (in MWh) = [(Actual Injection in MWh) – (Scheduled generation in MWh)].</p> <p>Deviation-WS seller (DWS) (in %) = 100 x [(Actual Injection in MWh) – (Scheduled generation in MWh)] / [(Available Capacity)].</p>	<p>(2) Deviation in a time block for WS sellers shall be computed as follows: Deviation-WS seller (DWS) (in MWh) = [(Actual Injection in MWh) – (Scheduled generation in MWh)].</p> <p>Deviation-WS seller (DWS) (in %) = 100 x [(Actual Injection in MWh) – (Scheduled generation in MWh)] / [(Available Capacity <b>in MWh</b>)].</p>	Hon'ble Commission is requested to clarify the unit for AvC.
2.	Clause 8 (4) Page No 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 such generating stations <u>aggregated at a pooling station</u> through QCA shall be without any linkage to grid frequency, as under:	(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 <b>aggregated at Regional level of pooling stations</b> <del>aggregated at a pooling station</del> through QCA shall be without any linkage to grid frequency, as under:	<p>In IEGC 2023 clause 45 (11) (b) it is mentioned that:</p> <p><i>"NLDC shall submit a procedure for <u>aggregation of pooling stations</u> for the purpose of combined scheduling and deviation settlement for wind or solar or renewable hybrid generating stations that are regional entities, within six (6) months of notification of these regulations for approval of the Commission."</i></p>



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
				<p>Hence, proposed draft regulation is in contrary with IEGC 2023 provision.</p> <p>Also, the suggestions of the "Expert Group" chaired by Shri Rakesh Nath have also proposed in its report submitted on 9<sup>th</sup> Jan 2020 as below: "In order to minimize forecasting errors of renewable generators, <u>aggregation of renewable energy has been allowed at one or more pooling stations for the purpose of deviation settlement.</u> An institutional mechanism (QCA) for the composite scheduling and common deviation settlement of renewable generating stations at one or more pooling stations has been provided. The role and functions of QCA has been specified in the Grid Code."</p> <p>The report "GREENING THE GRID - A Joint Initiative by USAID and Ministry of Power" has clearly stated in their RE Forecast Analysis that</p>



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Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
				<p>“Forecast errors of RE generation aggregated at the state level are lower than those aggregated at the substation level because of aggregation of generation profiles across larger capacities. Also, the aggregation of generation assets through interconnection improves flexibility and reduces net variability across the power system.</p> <p>Also, the report “GIZ - India Green Energy Corridors -IGEN-GEC (Large Scale Integration of Renewable Energy) Summary of findings and key recommendations” suggests “Aggregated forecasts at state level are necessary for system operation on the control zone level (SLDC/RLDC/NLDC) and for economic purposes which heavily depends on future regulations.”</p>
3.	Clause 8 (4) Page no 8	<p><b>Deviation by way of over injection</b></p> <p><b>(Receivable by the Seller)</b></p>	<p><b>Deviation by way of over injection</b></p> <p><b>(Receivable by the Seller)</b></p> <p>(i) for VLW<sub>S</sub>(1) @ contract rate</p>	<p>We request Hon’ble commission to consider deviation bands &amp; DSM rate at least as per CERC DSM regulation 2014. Forecasting accuracy proposed in draft</p>





**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
		<p>(i) for VLWS (1) @ contract rate</p> <p>(ii) for VLWS (2) @ 90% of contract rate</p> <p>(iii) for VLWS (3) @ 50% of contract rate</p> <p>(iv) beyond VLWS (3) @ Zero</p> <p><b>Deviation by way of under injection (Payable by the Seller)</b></p> <p>(v) for VLWS (1) @ contract rate;</p> <p>(vi) for VLWS (2) @ 110% of contract rate;</p> <p>(vii) for VLS3 @ 150% of contract rate;</p> <p>(viii) beyond VLWS (3) @ 200% of contract rate.</p> <p><b>WS Seller Volume Limit</b> A generating station based on solar or a hybrid of wind –solar resources or aggregation at a pooling station</p> <p>VLWS (1) = Deviation up to 5% DWS</p>	<p>(ii) for VLWS (2) @ 90% of contract rate</p> <p>(iii) for VLWS (3) @ 80% of contract rate</p> <p>(iv) beyond VLWS (3) @ 70% of contract rate</p> <p><b>Deviation by way of under injection (Payable by the Seller)</b></p> <p>(v) for VLWS (1) @ contract rate</p> <p>(vi) for VLWS (2) @ 110% of contract rate</p> <p>(vii) for VLWS (3) @ 120% of contract rate</p> <p>(viii) beyond VLWS (3) @ 130% of contract rate</p> <p><b>WS Seller Volume Limit</b> A generating station based on solar, wind or a hybrid of wind – solar resources or aggregation at a pooling station</p> <p>VLWS (1) = Deviation up to 15% DWS</p>	<p>regulation cannot be achieved in a practical scenario in account of regulation constraints like inability to revise the schedule up to 7<sup>th</sup> or 8<sup>th</sup> time block as per CERC IEGC 2023 regulation, unpredictable weather conditions, and unreliable weather data due to unavailability of localized weather forecasting models.</p> <p>Implementation of draft regulations will have adverse commercial impact and extra burden on RE generator.</p> <p>Also, in purposed draft regulation receivable amount is zero when deviation goes beyond 20% for solar and 25% for wind which is against the principle of natural justice since generators are not getting paid for power injected whereas same has been consumed and paid by consumer/Discoms.</p> <p>Also suggesting providing separate deviation bands for monsoon &amp; high wind season</p>



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
		<p>VLWS (2) = Deviation beyond 5% DWS and up to 10% DWS                      VLWS (3) = Deviation beyond 10% Dws and up to 20% DWS</p> <p>A generating station based on wind resource.</p> <p>VLWS (1) = Deviation up to 10% DWS                      VLWS (2) = Deviation beyond 10% DWS and up to 15% DWS                      VLWS (3) = Deviation beyond 15% Dws and up to 25% DWS</p>	<p>VLWS (2) = Deviation beyond 15% DWS and up to 25% DWS                      VLWS (3) = Deviation beyond 25% Dws and up to 35% DWS</p>	<p>as it is observed that weather is highly fluctuating during this period.</p> <p>We also suggest Hon'ble commission to cap DSM penalty at 3 Ps/kWh per RE generator to limit the financial burden.</p>
4.	Clause 8 (4) Page no 8	Note: In case of aggregation of WS sellers at a pooling station through QCA.		<p>➤ Draft CERC (DSM and related matters) Regulation 2024 proposes aggregation at a pooling station through QCA, which is in contradiction to CERC IEGC 2023 clause 45 (11) (b) which states aggregation of pooling stations. Hence, we recommend adhering CERC IEGC 2023 provision aggregation.</p> <p>➤ We also request the Hon'ble commission to approve NLDC <i>"Detailed Procedure for aggregation of pooling station for the purpose of combined scheduling and deviation"</i></p>



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
				<i>settlement through Qualified Co-ordinating Agency (QCA) for wind or solar or renewable hybrid generating stations that are regional entities” in line with IEGC 2023 &amp; propose draft DSM regulation 2024, which will provide a clarity on the aggregation process through QCA and remove difficulties in implementation of proposed DSM regulation.</i>
5.	Clause no 8 (4) (a) Page no 9	(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	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 <b>and QCA/Generator shall furnish the contract rates on affidavit for the purpose of Deviation charge account preparation to respective RPC supported by copy of the PPA as the case may be.</b>	For the purpose of transparency and unbiased computation of DSM charges, we request Hon'ble Commission to incorporate the same in CERC (DSM and related matters) Regulation 2024.
6.	Clause no 8 (6) (b) Page no 9	b) The DSM shall be computed based on the Net schedule, i.e., the sum of all generator schedule injecting/drawing power and net actual injection/drawl at the interconnection point		➤ Clause 8 (6) (i),(ii) & (iii) of this draft regulation mentioned to provide separate schedule and DSM shall be calculated separately for WS seller and



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
				<p>ESS if ESS is co-located with WS Seller(s).</p> <p>➤ However, clause 8 (6) (b) state that DSM shall be computed based on the Net schedule which is in contradiction with above mentioned clauses. which needs to be clarified.</p>
7.	Clause no 8 (12) Page no 12	12) Notwithstanding anything contained in Clauses (1) to (5) of this Regulation, in case of forced outage of a seller, the charges for deviation shall be @ the reference charge rate for a maximum duration of eight time blocks or until the revision of its schedule, whichever is earlier.		<p>We request the hon'ble commission that in the event of any curtailment, grid disturbance, forced outage or transmission constraint (whether planned or unplanned) in interest of grid security or any other reasons, the RLDC may revise the schedule based on the actual generation for such event period starting from the event to normalized condition or restoration of the evacuation system by allowing waiver of DSM penalty payable by generator for this event which is beyond the control of the generator.</p>
8.	Clause 10 (1) Page no 14	(1) The payment of charges for deviation shall have a high priority, and the concerned	The payment of charges for deviation shall have a high priority, and the concerned	<p>➤ We request the hon'ble commission to allow generator to pay DSM</p>



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
		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.	regional entity shall pay the due amounts within <del>7 (seven)</del> <b>12 (Twelve)</b> 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.	amount within 12 days of issue of statement because in case of depooling scenario by QCA to multiple generators, it takes additional time to depool the data, prepare DSM invoice etc.  ➤ We also suggest Hon'ble commission to mention that in case of receivable amount as per DSM statement, RLDC shall pay receivable amount to generator within 7 days of the issue of the statement of charges, failing which late payment surcharge @ 0.04% shall be payable by RLDC to generator for each day of delay, since RLDC is recovering LPS at same rate for defaulting entity.  ➤ We request the hon'ble commission to clarify the payment process to RLDC if QCA is the representative for any pooling station among all generators connected at that pooling station.



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
				<p>➤ In case of multiple generators connected at single pooling station with one QCA, following cases of non-payment of DSM charges may occur in which clarification is required:</p> <ul style="list-style-type: none"> <li>• Case 1: Three generators are connected at single pooling station where one of the generator defaults to pay the DSM charge to QCA/RLDC.</li> <li>• Case 2: When generators have paid the DSM charges to QCA on time and QCA defaults.</li> </ul>
9.	Clause 10 (2) Page no 15	(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	Any regional entity <b>or QCA</b> as the case may be 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	➤ We request the hon'ble commission to clarify the SBLC/BG submission process if QCA is as aggregator/representative for any pooling station among all generators connected at that common pooling station.



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
		in the previous financial year in favour of the concerned Regional Load Despatch Centre within a fortnight from the start of the current financial year.	previous financial year in favour of the concerned Regional Load Despatch Centre within a <del>fortnight</del> <b>one month</b> from the start of the current financial year <b>from SBLC/BG amount notification letter issue by respective RLDC.</b>	<p>➤ In case of multiple generators connected at single pooling station with one QCA, following cases of non-payment or delay in SBLC submission may occur in which clarification required:</p> <ul style="list-style-type: none"> <li>• Case 1: Three generators are connected at a single pooling station where one of the generator defaults to pay DSM amount of any week and SBLC letter is issued for pooling station level or QCA.</li> <li>• Case 2: Three generators are connected at a single pooling station via single QCA and QCA delays the submission of SBLC after receiving the amount from the generators.</li> </ul>
10.	Clause 10 (3) Page no 15	(3) In case of failure to pay into the Deviation and Ancillary Service Pool Account within 7	In case of failure to pay into the Deviation and Ancillary Service Pool Account within 7 <del>(seven)</del> <b>10</b>	



**Table: II – Comments and Suggestion**

Sr. No.	Clause no. / Page no.	Provision referred in the draft Regulations	Suggested text for amendment	Justification / Comments
		(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.	<b>(ten) days from the due date of payment of DSM charges as per statement</b> <del>the date of issue of the statement of charges for deviation,</del> the Regional Load Despatch Centre shall be entitled to encash the LC of the concerned regional entity or <b>QCA</b> as the case may be to the extent of the default and the concerned <del>regional entity</del> <b>QCA</b> shall recoup the LC amount within <del>3</del> <b>30</b> days.	
11.	<b>Additional submission</b>	<ul style="list-style-type: none"> <li>➤ We request the Hon'ble commission to finalize NLDC's '<i>Detailed Procedure for aggregation of pooling station for the purpose of combined scheduling and deviation settlement through Qualified Co-ordinating Agency (QCA) for wind or solar or renewable hybrid generating stations that are regional entities</i>' document along with the proposed amendment, as it will provide more clarification on QCA's roles &amp; responsibilities and avoid any discrepancy/conflict with the proposed Regulation.</li> <li>➤ We suggest the Hon'ble commission that the timeline needs to be fixed to resolve DSM related discrepancy raised by generator (within 30 days from the date of issue).</li> <li>➤ Also, if generator raised discrepancy/comment to RPC on published DSM statement, RPC shall withdraw DSM statement within 1 days from the date of discrepancy being raised and generator shall not be liable to pay DSM charges including any interest penalties and RLDC shall not encash SBLC.</li> </ul>		
12.	<b>Additional submission</b>	The FOR (Forum of Regulators) Model Regulations on Forecasting, Scheduling and DSM, recognized that errors of forecasting tend to reduce due to aggregation and accordingly proposed that QCAs may give combined forecasts of solar/wind developers. FOR's recommendation for 'DSM computation on aggregate basis at QCA level' has been adopted by State Electricity Regulatory Commissions like KERC and APERC under their Forecasting, Scheduling and DSM regulations, wherein it has been observed that deviations at aggregate level are at insignificant levels. Hence, DSM computation should be done on the aggregation of Pooling Stations at regional level.		





## Annexure B; Comparison of DSM impact

**Table A:**

Over Injection													
Sch. Gen. - 100kWh, Act. Gen. - 150 kWh, AvC 100kWh PPA rate - Rs. 3/kWh													
Receivable at		Solar/Hybrid						Wind					
		2014		Suo-moto 2023		Draft 2024		2014		Suo-moto 2023		Draft 2024	
		Deviation Band	Receivable (Rs.)	Deviation Band	Receivable (Rs.)	Deviation Band	Receivable (Rs.)	Deviation Band	Receivable (Rs.)	Deviation Band	Receivable (Rs.)	Deviation Band	Receivable (Rs.)
100% of tariff		0-15%	45	0-10%	30	0-5%	15	0-15%	45	0-15%	45	0-10%	30
90% of tariff		15-25%	27	10-15%	14	5-10%	14	15-25%	27	15-20%	14	10-15%	14
80% of tariff		25-35%	24	-	0	-	0	25-35%	24	-	0	-	0
70% of tariff		>35%	32	-	0	-	0	>35%	32	-	0	-	0
50% of tariff		-	0	-	0	10-20%	15	-	0	-	0	15-25%	15
0% of tariff		-	0	>15%	0	>20%	0	-	0	>20%	0	>25%	0
<b>Total DSM charges Receivable (Rs.)</b>	<b>A</b>		<b>128</b>		<b>44</b>		<b>44</b>		<b>128</b>		<b>59</b>		<b>59</b>
Scheduled Generation (kWh)	B		100		100		100		100		100		100
PPA rate (Rs./kWh)	C		3		3		3		3		3		3
PPA Billing amount on Sch. Gen. (Rs.)	D=B x C		300		300		300		300		300		300
Total Revenue incl. DSM receivable (Rs.)	E=A+D		428		344		344		428		359		359
Actual Generation (kWh)	F		150		150		150		150		150		150
Amount corresponding to Act. Gen. (Rs.)	G=C x F		450		450		450		450		450		450
Deviation (kWh)	H=F-B		50		50		50		50		50		50
Impact of DSM (+) Loss/ (-) Gain (Rs.)	I=G-E		23		107		107		23		92		92
Total loss as % of revenue	J=I/G		5%		24%		24%		5%		20%		20%
Rate at which the deviation charges paid to SPD (Rs./kWh)	K=A/H		2.55		0.87		0.87		2.55		1.17		1.17
Net rate at which SPD is effectively recovering (Rs./kWh)	L=E/F		2.85		2.29		2.29		2.85		2.39		2.39



**Table B:**

Under Injection													
Sch. Gen. - 100kWh, Act. Gen. - 50kWh, AvC - 100kWh, PPA rate - Rs. 3/kWh													
Payable at		Solar/Hybrid						Wind					
		2014		Suo-moto 2023		Draft 2024		2014		Suo-moto 2023		Draft 2024	
		Deviation Band	Payable (Rs.)	Deviation Band	Payable (Rs.)	Deviation Band	Payable (Rs.)	Deviation Band	Payable (Rs.)	Deviation Band	Payable (Rs.)	Deviation Band	Payable (Rs.)
100% of tariff		0-15%	45	0-10%	30	0-5%	15	0-15%	45	0-15%	45	0-10%	30
110% of tariff		15-25%	33	10-15%	17	5-10%	17	15-25%	33	15-20%	17	10-15%	17
120% of tariff		25-35%	36	-	0	-	0	25-35%	36	-	0	-	0
130% of tariff		>35%	59	-	0	-	0	>35%	59	-	0	-	0
150% of tariff		-	0	>15%	158	10-20%	45	-	0	>20%	135	15-25%	45
200% of tariff		-	0	-	0	>20%	180	-	0	-	0	>25%	150
<b>Total DSM charges Payable (Rs.)</b>	<b>M</b>		<b>173</b>		<b>204</b>		<b>257</b>		<b>173</b>		<b>197</b>		<b>242</b>
Scheduled Generation (kWh)	N		100		100		100		100		100		100
PPA rate (Rs./kWh)	O		3		3		3		3		3		3
PPA Billing amount on Sch. Gen. (Rs.)	P=N x O		300		300		300		300		300		300
Total Revenue including DSM payable (Rs.)	Q=P-M		128		96		44		128		104		59
Actual Generation (kWh)	R		50		50		50		50		50		50
Amount corresponding to Act. Gen. (Rs.)	S=R x O		150		150		150		150		150		150
Deviation (kWh)	T= N-R		50		50		50		50		50		50
Impact of DSM (+) Loss/ (-) Gain (Rs.)	U= S-Q		23		54		107		23		47		92
Total loss as % of revenue	V= U/S		15%		36%		71%		15%		31%		61%
Rate at which the deviation charges levied on SPD (Rs./kWh)	W=M/T		3.45		4.08		5.13		3.45		3.93		4.83
Net rate at which SPD is effectively recovering (Rs./kWh)	X= Q/R		<b>2.55</b>		<b>1.92</b>		<b>0.87</b>		<b>2.55</b>		<b>2.07</b>		<b>1.17</b>

