

No. CE/RE/MSEDCL/F&S Comments/ **No 30826**

Date: **67 NOV 2019**

To
The chief Engineer (MSLDC),
Maharashtra State Load Despatch Center,
Thane-BElapur Road, P.O. Airoli,
Navi Mumbai-400708

Sub: MSEDCL's comments on Draft Procedure for for implementation of MERC
(Forecasting, Scheduling and Deviation Settlement for Solar and Wind Generation)
Regulations,

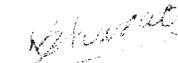
Respected Sir,

With reference to the above subject, please find enclosed herewith the MSEDCL
MSEDCL's comments on Draft Procedure for for implementation of MERC (Forecasting,
Scheduling and Deviation Settlement for Solar and Wind Generation) Regulations,

Submitted for the kind consideration.

Thanking you,

Yours faithfully,


Chief Engineer (Renewable Energy)

Copy s. w. r. to:

1. The Director (Commercial), MSEDCL, Mumbai.

MSEDCL comments/suggestion on revised Draft procedure for implementation of MERC forecasting & scheduling regulations, 2018

Clause in new draft	Original clause/new	Revised Procedure	MSEDCL Comments	Remark
3.3	New	<p>The QCA shall verify the total installed capacity of the Pooling Substation based on the installation of individual WTG/Solar Modules at the time of submission of QCA Registration Application to MSLDC.</p> <p>Provided that in case of any discrepancies in the total installed capacity after QCA registration at MSLDC, the same shall be communicated along with supporting data such as certification from MSEDCL Circle Office, Commissioning certificates issued by MSEDCL, PPA copies, MEDA Infrastructure clearances, etc, which shall be scrutinized by MSLDC and confirmation shall be issued accordingly.</p>	<p><i>“ Provided that in case of any discrepancies in the total installed capacity after QCA registration at MSLDC, the same shall be checked with Registry of all RE generators based on connectivity and synchronization permissions granted by DISCOMs/MSETCL. The MSLDC may also take information of PPA from DISCOM with which RE generator has PPA or its OA consumer has a PPA, Commissioning certificates issued by concerned DISCOM, MEDA Infrastructure clearances, etc, Based on these, the confirmation of connected capacity shall be done by MSLDC.”</i></p>	<p>Hon’ble commission has directed at para 28(e) of the Regulations. Accordingly changes are proposed in second para, as RE generator connected at pooling substation may have tie up with other than MSEDCL i.e other DISCOM, OA consumers etc.,</p>
3.10	old	<p>3.10. QCA in coordination with Generator shall provide real time data for power generation parameters (at Pooling Sub-Station level) and real time generation data (turbine and inverter level) and weather data wherever available as per Annexure – III.</p>	<p>QCA shall share such data with the respective discom.</p>	<p>The data shall be share with contracted DISCOM either through web portal or SCADA, as this will be required for DISCOM to check error of RE generation which is affecting its deviation & thereby commercial implication thereof.</p>
3.11	old	<p>For wind plants, at the turbine</p>	<p>For wind plants, at the turbine</p>	<p>As the actual power generation at 15-min time block level is available with generator, same has to be</p>

		level: Average wind speed, Average power generation at 15-min time block level.	level: Average wind speed, Actual power generation at 15-min time block level.	provided.
4.5	old	4.5. All the generators shall save and store the block-wise generator injection data or any other data desired by MSLDC and make available the same to their respective QCA so that it could be sent to MSLDC within (7) days from the date of demand from MSLDC	-	The any other data (desired by MSLDC) which generator needs to maintain must be specified. It will not be possible for any generator to provide data which is not specified in procedure afterward. Further time period of storing data needs to be mentioned. It is proposed that Generator shall store data for last two years.
6.1		All the Distribution Licensees shall timely ensure the registration of Generators contracted by them and by the Consumers availing Open Access under their control area.	To be deleted	<p>The Hon'ble commission in case no 222 of 2019 has directed that MSLDC/ Distribution Licensee to issue Notices to those RE Generators who have not appointed QCA (as one among themselves or through third party) and not registered its QCA with MSLDC to seek compliance of the provisions of F&S Regulations within one month from date of issuance of this Order and submit report of pending compliances (if any) to the Commission. Accordingly MSEDCL has issued notice to concern generators.</p> <p>Hon'ble commission has nowhere in its order directed that DISCOM shall ensure timely registration of generators contracted by them or by their OA consumer.</p> <p>Hence it is requested to delete said provision which is neither directives of Hon'ble commission in case of removal of difficulties nor part of RE F&S regulation.</p> <p>Further It shall be binding on all the Generators in the concerned Pooling Sub-Station to register. If generators fail to comply the provisions of the Regulations & Procedure, MSLDC shall intimate the DISCOM for disconnection of the respective Generator from the Grid and stop payment of the energy charges.</p>

6.2		Distribution Licensee shall submit the details of all the generators connected to the Pooling Sub-stations under their ownership.	Distribution Licensee shall submit the details of all the generators connected to the Pooling Sub-stations under their ownership in format 5.	It is proposed in absence of the specific format.
6.3		As Distribution Licensees are issuing permission for Commissioning of each WTG/Solar Module connected to any Pooling Sub-Station under their control area irrespective of ownership, the details of generators connected to all the Pooling Sub-Stations shall be provided by Distribution Licensees. The details shall be as per Format – 5 within 15 days from the publication of the said procedure.	The details of RE generators connected at substation owned by Distribution company will only be liable to provide by DISCOM. In respect of other pooling station either own by MSETCL or RE generators, <i>MSLDC, shall be checked with Registry of all RE generators based on connectivity and synchronization permissions granted by MSETCL.</i>	In cases like SECI Projects where PTC is not issued by MSEDCL, the licensee will not be in position to submit the same.
6.4		Submit Pooling Sub-Station-wise Power Purchase details as per Format – 6 on monthly basis by 27th of every month for modelling in the Scheduling Software developed by MSLDC. In case of non-submission of the updated details, the details available at MSLDC/submitted earlier shall be considered for modelling and Scheduling shall be carried out accordingly. In such case, there shall be errors in the calculation of available sources for respective Discom and which shall be its sole responsibility.	-	There shall be provision in software for temporary shifting of generation from one feeder to another in the event of breakdown, faults or any other reason. The same will reduce the error.
6.5		Ensure availability of ABT metering	Ensure availability of ABT	The responsibility for installation of the ABT meter shall

		<p>arrangement at Common Interconnection Point for each Pooling Sub-Station owned by them.</p> <p>Provided that in case ABT meters are not installed at Common Inter-connection point, the same shall be installed on priority.</p>	<p>metering arrangement at Common Interconnection Point for each Pooling Sub-Station owned by them.</p> <p>Provided that in case ABT meters are not installed at Common Inter-connection point, the same shall be installed on priority. Discom may disconnect the generator in non-compliance of formalities for installation of ABT meter.</p>	<p>be with the generator.</p> <p>The DISCOM shall be permitted to disconnect the generators not complying with formalities for installation of ABT meter.</p>
6.6		<p>6.6. Use Automatic meter reading (AMR) technologies for transfer, analysis and processing of interface meter data to MSLDC in line with Metering /AMR protocol and Metering/AMR standards finalised by STU in accordance with provisions of Metering Code and CEA Metering Regulations, as amended from time to time, for the Pooling Sub-Stations under their control area.</p>	-	<p>The revision of metering code is under regulatory process. Hence after finalization of said metering code, if existing meter specification are different than new meter specification (which is yet to be finalized) , then it will be take time for meter replacement . Hence it is suggested that existing meter capable of recording 15 minute energy shall be continued, provided meters are capable of providing reading through AMR to MSLDC. The meter not compatible with AMR shall be replaced with meter specification fianalised by STU.</p> <p>Further AMR technology is used for automatic transfer of encrypted data to remote meter data acquisition system (MDAS). The analysis & processing of data is not possible through AMR and is done by software after decrypting meter data from MDAS.</p>

		Distribution Licensee in co-ordination with QCA shall download monthly (four (4) weekly) meter data of all the Pooling Sub-Stations under their control area and share the encrypted file for each week to QCA for uploading on the Web-Portal of MSLDC.		
6.9		Distribution Licensee shall co-ordinate with MSLDC Control Room for real time operations in case of any tripping/outage (planned/forced)/overloading of evacuation infrastructure resulting in to curtailment/backing down of generation and implement the instructions of MSLDC.	To be deleted In case MSLDC shift in charge want to backdown RE generation, then he should contact QCA , who will take decision of basis of backdown quantum and will accordingly decide which turbine or inverter to be disconnected. In case he decide to switch off particular feeder, then he will inform same to concern pooling station for necessary action through telephonic message & email. The noting of such instructions shall be done both at MSLDC end as well as Nodal Officer/Control Room of respective Transmission/Distribution Licensee and QCA with whom communication made for curtailment/backdown.	This shall be also the responsibility of QCA. In case any curtailment required to be done for secure grid operation, MSLDC Shift In charge shall inform same only to Nodal Officer/Control Room of respective Transmission/Distribution Licensee alongwith details of feeders to be switched off. The backing down of RE generation not possible unless some feeders (in case of multiple feeders at pooling station) are switched off. The Nodal Officer/Control Room of respective Transmission/Distribution Licensee will not be in position to take decision on which feeders are to be switched off. Hence there will be commercial complication.

8.17		<p>8.17. It shall be binding on all the Generators in the concerned Pooling Sub-Station to enter in to an agreement with the QCA and pay share of Corpus amount/registration fee, QCA's Forecasting & Scheduling Charges, Deviation Charges, along with technical details of the Generation & commercial details as per Clause No. 3.20, to MSLDC through QCA for modelling in Forecasting & Scheduling Software of MSLDC.</p> <p>If generators fail to comply the provisions of the Regulations & Procedure, MSLDC shall intimate the Discoms for disconnection of the respective Generator from the Grid and stop payment of the energy charges.</p>	<p>To be modified by adding Transmission licensees also.</p>	<p>Since most of generators are connected at EHV pooling substation, the disconnection due to non compliance of provision of regulation shall be initiated by MSETCL or transmission licensee. In case it is connected with substation owned by Distribution licensee, Disconnection will be initiated by DISCOM.</p>
8.23		<p>8.23. It shall be binding on all the Generators in the concerned Pooling Sub-Station to enter in to an agreement with the QCA and pay share of Corpus amount/registration fee, QCA's Forecasting & Scheduling Charges, Deviation Charges.</p> <p>If generators fail to comply the provisions of the Regulations & Procedure, MSLDC shall intimate the Discom for disconnection of the respective Generator from the Grid and stop payment of the energy charges.</p>	<p>To be modified by adding Transmission licensees also.</p>	<p>Since most of generators are connected at EHV pooling substation, the disconnection due to non compliance of provision of regulation shall be initiated by MSETCL or transmission licensee. In case it is connected with substation owned by Distribution licensee, Disconnection will be initiated by DISCOM.</p>
11.3		11.3. At some of the Pooling Sub-	Period of interim arrangement as	Period of interim arrangement as proposed in draft shall

		<p>Stations old WTGs' of capacity 250 kW have been installed wherein real time data visibility is not possible. For accurate forecasting real time visibility is must. In this respect, QCAs may on their own install separate RTUs at such Pooling SubStations for real time data visibility required for Forecasting. Provided further that, till installation of separate RTU by the Generators or QCA, real time data on PSS level may be provided by MSLDC/STU as an interim arrangement, for such type of Pooling Sub-stations. The list of such Pooling Sub-Stations shall be submitted by the QCA to MSLDC within 15 days from the date of publication of the said procedure so as to develop required protocol for sharing real time data to QCA</p>	<p>proposed in draft shall be defined</p>	<p>be defined beyond which it shall be made mandatory to provide separate SCADA. It is proposed that till 31st December 2019 said interim arrangement shall be allowed as thereafter actual commercial settlement is proposed to be start by Hon'ble commission.</p>
12.8		<p>QCA to upload separate Pooling Sub-Station wise and 15 min time block wise day ahead Forecast & Available Capacity (AvC) by 10:00 Hrs</p>	<p>QCA to upload separate Pooling Sub-Station wise and 15 min time block wise day ahead Forecast & Available Capacity (AvC) by 09:00 Hrs</p>	<p>As per proposed Scheduling code, By 1000 hrs, buyer has to submit its anticipated drawl schedule for next day, on 15-minute time block basis considering schedule from bilateral power and IPP requisitions they have contracted on short term and long term basis respectively for the next day and considering expected generation from all embedded generators connected to its distribution network. Since DISCOM also have bilateral contract with RE generators , the availability of RE generators also needs to be available to DISCOM prior to 10 Hrs. In case of ISGS, availability is available on WRLDC website by 08:00 Hrs. Hence it is requested that the availability of Re generator shall also be available at least till 09:00 Hrs.</p>

				Accordingly timeline for uploading schedule for QCA shall be revised.
13.5		13.5. All the Planned/Forced Outages resulting in the backing down/curtailment of Wind & Solar Generation shall be submitted to MSLDC through Web-based portal as per the procedure uploaded on MSLDC Website. No outages shall be availed without approval from MSLDC. Also, no planned outages shall be considered if not submitted at least (2) days prior to the date of Outage	Discom shall be exempted.	The planned outage of 33 KV feeders on which distribution substation as well as RE generator is connected shall be exempted from this provision, as this will unnecessarily increase time for approval & may result in delay in availing planned outage. It is practice in DISCOM to publish all planned outages in local newspaper. However the information of such planned outages can be taken from respective DISCOM and provision for uploading such information shall be done in web portal.
13.6		13.6. In case of tripping of any Transmission element/Evacuation Infrastructure/Generating Plant resulting in to curtailment/backing down of generation, it shall be the responsibility of concerned Transmission Licensee/Distribution Licensee/Generator (for their respective Pooling Sub-Stations) through their QCA or separately to intimate the same immediately to MSLDC Shift In-charge telephonically and through e-mail for required modifications in the Schedules along with tentative time for restoration.	This shall be the responsibility of QCA only.	Being QCA has to revise schedule, in case of tripping of line/evacuation system, intimation single point responsibility shall be kept only with QCA. This is to avoid intimation from multiple sources .
13.9		13.9. The Transmission Licensee, Distribution Licensee, Generator and QCAs shall follow the instructions issued by the MSLDC Shift Incharge and implement the curtailments. The instructions from	To be added: <i>Provided that in case any curtailment required to be done for secure grid operation, MSLDC Shift Incharge shall inform same</i>	To be added such provisos for better clarity.

		<p>MSLDC Shift In-charge shall be communicated to the Nodal Officer/Control Room of respective Transmission/Distribution Licensee, Generator & QCA for implementation telephonically (being real time operations), which shall be confirmed through mail later on within a day's time. MSLDC, Transmission/Distribution Licensee, Generator and QCA shall maintain log book for recording such instructions and actions taken thereof for implementation of such instructions. The log-book shall be made available for verification up on request from MSLDC.</p>	<p><i>only to Nodal Officer/Control Room of respective Transmission/Distribution Licensee alongwith details of feeders to be switched off. The backing down of RE generation not possible unless some feeders are switched off.</i></p> <p><i>Provided also that In case MSLDC shift in charge want to backdown RE generation, then he should contact QCA , who will take decision of basis of backdown quantum and will accordingly decide which turbine or inverter to be disconnected.</i></p> <p><i>Provided further that the noting of such instructions shall be done both at MSLDC end as well as Nodal Officer/Control Room of respective Transmission / Distribution Licensee and QCA with whom communication made for curtailment/backdown.</i></p>	
14.3		<p>14.3. Monthly (Four (4) weekly) meter data shall be submitted by the QCA on web-portal on every Tuesday by 24:00 Hrs of the 5th week.</p>	-	<p>Every month has no 5 weeks and also no complete month data will be available for said billing month. Moreover DSM billing will be delayed. Hence it is proposed that Meter data shall be submitted on first Tuesday of every month till AMR installation.</p>
15.1		<p>15.1. The energy accounting shall be undertaken on the basis of the data recorded by the Special Energy Meters (SEM) provided at</p>	<p>15.1. The energy accounting shall be undertaken on the basis of the data recorded by the Special Energy Meters (SEM) provided at</p>	<p>As Wind/Solar generator are connected at pooling station at 33KV level, meter reading of SEM installed at 33KV level shall be taken as QCA also required to submit</p>

		HV feeders/LV side of Power Transformers at STU/Distribution Licensee's Pooling Sub-Stations capable of recording the energy in 15-minute time blocks. The SEMs shall be under the control of STU & Distribution Licensee for EHV & 33 kV Pooling Sub-Stations respectively.	HV feeders/LV side of Power Transformers at STU/Distribution Licensee's Pooling Sub-Stations capable of recording the energy in 15-minute time blocks. The SEMs shall be under the control of STU & Distribution Licensee for EHV & 33 kV Pooling Sub-Stations respectively.	schedule at 33 KV level and not at LV of power transformer. Hence sentence shall be accordingly be corrected. The various cases indicating point of Forecast and Scheduling is already given at clause 12.9. The metering at said point shall be defined by MSLDC, as it is responsibility of MSLDC to Maintain State Deviation Settlement Account for Wind and Solar Generations
15.2	new	15.2. MSLDC shall process the monthly (four (4) weekly) meter data provided by all the QCAs and furnish the weekly deviation accounts to all the QCAs by every Thursday midnight (24:00 Hrs) of 5th Week. Provided that after operationalization of AMR facility, the deviation accounting shall be carried out on weekly basis on every Thursday midnight (24:00 Hrs) for the preceding week.	-	As per Intra DSM, commercial mechanism is proposed to be started from 1 st April 2020, where DSM bills are to be generated on weekly basis. Hence it is proposed that timeline shall be fixed for AMR operationalization.
15.3		In case of hybrid Pooling Sub-Stations i.e. combination of Wind & Solar Generation through common or separate interconnection facility, the QCA shall submit separate AvC and buyer-wise & Contract-wise Schedules for Wind & Solar Generation. The deviations shall be calculated for total aggregated capacity of Wind & Solar Generation for each time block. However, the AvC & Schedule for Solar Generation	Instead of calculating deviation aggregately In case hybrid polling station with separate Wind & solar feeders separate deviation shall be computed for Wind & solar even though QCA is same. This is avoid benefit of available capacity in computing % error. Further procedure is silent on verification of mis-declaration of available capacity by QCA. It is proposed that QCA shall submit turbine /invertor level	

		during night hours i.e. 18:30 Hrs. to 06:00 Hrs. shall be considered as 'ZERO' as it is a well known fact that solar plants do not generate power during night hours.	generation data either Hourly or daily MUS basis to show availability of turbine/invertor.	
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