



## TAMIL NADU ELECTRICITY CONSUMERS' ASSOCIATION

**Regd. No.** 181-8524/1998 – **CIN.No.** U37102TZ1998GAP008524  
1st Floor, SIEMA Building, 8/4, Race Course, Coimbatore - 641 018  
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TECA:2023-24:CIR/073  
February 3, 2024

To All Members

### **CIRCULAR**

Dear members,

Sub: Comments on TNERC Notification on Forecasting, Scheduling and Deviation Settlement and related matters for Wind and Solar Generation) Regulations, 2024"

Ref: 1. Notification No. TNERC/F&S Wind, Solar & hvbrid/1/2024 Dt. 22-01-2024  
2. Our Circular No. 71 dated 01.02.2024

In continuation of our Circular No.71 dated 01.04.2024 on the above matter, we are providing below the salient features of Regulation 2024. We are also enclosing the PowerPoint Presentation as prepared by M/s. Leap Green Energy Pvt Ltd., which is already shared through WhatsApp for more understanding of the matters covered by the above Regulation 2024.

#### **General Provisions:**

- These Regulations shall apply to all Grid Connected Wind and Solar Energy Generators Systems.
- All the WEGs / SPGs of our members and others that are connected with the Intra State Transmission / Distribution System in Tamil Nadu would be covered by the Regulations 2024.
- **However, these Regulations may not apply to any Rooftop / GISS Projects irrespective of the capacity as the TNERC has already ordered to go such GISS Projects up to sanctioned demand / contracted demand.** However, the Regulation is ambiguous, in Clause 4, whether the Regulations are applicable, when the capacity of the Rooftop/GISS Project when it goes beyond 1 MW.
- These Regulations shall come into force from the date of publication of the Regulation in the Tamil Nadu Government Gazette and however, the commercial implementation of this Regulation 2024 shall commence from 01.04.2024 onwards

#### **Objectives of the Regulation:**



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- These Regulations are intended to facilitate Grid Integration of Wind and Solar Energy generated in Tamil Nadu, while maintaining Grid Stability and Security, as envisaged under the State Grid Code and the Act, through Forecasting, Scheduling and a Mechanism for the Settlement of Deviations, by such Generators.
  - In order to maintain system security, stability and reliability, the SLDC shall take into consideration, the forecasts of Wind and Solar Generation for Week-Ahead, Day-Ahead and Intra-Day Operations and Scheduling, and Longer-Term Forecasts for its planning.
  - The SLDC shall make use of the flexibility provided by Conventional Generating Units and the capacity of Inter-Grid Tie-Lines to accommodate Wind and Solar Energy Generation to the largest extent possible subject to Grid Security.

### Appointment of QCAs:

- The Wind / Solar Energy Generators, shall appoint a Qualified Co-ordinating Agency (QCA) to represent on their behalf and comply with the requirements of Forecasting and Scheduling separately. Provided that the QCA appointed by the **majority of the generators in the State** shall be engaged as a Single QCA, for all Wind and Solar Generators separately in the State for Forecasting and Scheduling activities and the terms and conditions for engagement of Single QCA shall be governed by the mutual/inter-se agreement between the respective generators and the QCA.
- In case if the Wind/Solar Generators, who do not wish to avail the services of the Single QCA of the State / QCA of the Pooling Sub-Station appointed by the majority of the concerned Generators, shall have the option to avail the services of the SLDC, for Forecasting and Scheduling Services subject to the condition that such generators will be responsible for the remaining part of works, assigned to the QCA as defined in the Regulation. **However, Multiple QCA(s) for single pooling sub-station will not be permitted**
- **Provided that the service charges for Forecasting and Scheduling Services along with applicable taxes, shall be payable to the QCA(s) / SLDC, by the Generators as the case may be.** Provided that an individual Generator alone connected to a sub-station that is designated as a Pooling Sub-station may opt to function as a QCA on its own or appoint a separate entity as its QCA.
- This Regulation mandates the appointment of QCA by the Wind and Solar Generators for Forecasting and Scheduling activities. If the Generators fail to appoint the QCA, within the time frame stipulated, in the notice to be issued by the SLDC, then the SLDC shall issue a second notice to such



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Generators for appointing QCA, within a period of 90 days. The Deviation Settlement Charges shall be collected from such Generators at 125% of the capped price, for the energy injected into the Grid from the date of commercial operation of this Regulation (from 01.04.2024). Further, if the Generator does not appoint QCA beyond 90 days, such Generator will be charged at 150% of the capped price, apart from collecting Forecasting and Scheduling Charges from his monthly bill till the Generator appoints the QCA.

- Provided that if power is injected by the Generator(s), without Scheduling after appointing the QCA, the SLDC will make Forecasting and Scheduling on behalf of the Generator(s) and the Deviation Settlement Charges will be collected from those Generator(s) at **125%** of the capped price, for such energy injected. Necessary charges for such Forecasting and Scheduling Services offered by the SLDC will be included in the Generator(s)“ monthly bill by the Distribution Licensee.
- The QCA(s) shall be treated as State Entity for the purpose of this Regulation.
- Every QCA shall be registered with the SLDC along with the authorization of the majority of respective Wind and Solar Generators. The qualifying criteria and fee for registration of the QCA with the SLDC shall be specified in the Detailed Procedure to be issued by the SLDC, which will be approved by the Commission separately within the period as specified.

### **Obligation of QCAs:**

- Aggregation of Scheduled Generation of the Generators, Meter Reading and Data Collection and its communication, and co-ordination with the Distribution Licensees, the SLDC and other Agencies.
- De-pooling of Deviation Charges within the constituent Generators as per the mutual / inter-se agreement between the respective generator(s) and the QCA and intimating the deviation charges to the SLDC, Distribution Licensee and the respective Generators.
- In the case of Single QCA for the State chosen by the Wind/Solar Generators, such Single QCA is responsible for State Level Aggregation of Scheduled Generation for captive adjustment / selling out power within Tamil Nadu and outside Tamil Nadu separately. In case of engaging multiple QCAs by the Generators, the respective QCA for each Pooling Station is responsible for providing Schedule for their Generators concerned for captive adjustment / selling out power within Tamil Nadu and outside Tamil Nadu separately.



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- The minimum term period of agreement between the QCA and the Wind/Solar Generators shall be two years. Until new arrangement is put in place, existing QCA shall continue for further period up to 1 year.
  - The SLDC in its detailed procedure shall specify the qualification and other criterions viz., Business Rules/Net Worth Requirement, Experience, etc., for the QCA.
  - The QCA shall be the Nodal Agency between the SLDC and its Generators for the purposes of these Regulations
  - The QCA shall furnish the technical specifications of the Generators, whom it represents to the SLDC, in the prescribed format, at the time of its registration or within such period thereafter as may be stipulated by the SLDC in its Detailed Procedure, and also furnish details whenever there is a change in these specifications.
  - The QCA shall provide real-time data relating to the power generation parameters and weather-related data, as maybe required to the SLDC.
  - QCA(s) shall ensure that meters with the AMR facility and uninterrupted data transmission shall be installed for energy accounting in accordance with the relevant provisions of the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 and its amendments, governing metering for the transfer of information to the SLDC by the Generators.
  - The QCA shall furnish to the SLDC forecasts, relating to its Wind Energy Generators and Solar Energy Generators, connected to Intra-State System and contracts undertaken for sale of power through Intra-State or Inter-State, as the case may be, separately, in the formats specified for each type of source and Intra/Inter State Transaction in the detailed procedure provided by SLDC.
  - The SLDC may also undertake forecasting of the Wind and Solar Energy Generation expected to be injected into the Intra-State Transmission Network at each Pooling Sub-Station, by engaging Forecasting Agencies if required, so as to enable it to plan better for balancing resources required for secured Grid Operation.
  - The QCA(s) shall provide the separate Schedules of all Wind / Solar Generators connected to the Intra-State Network / Pooling Sub-Station and communicate to the SLDC.
  - The QCA shall provide to the SLDC a Day-Ahead and a Week-Ahead Schedule to enable it to assess the availability of energy and the margin available in the State Grid. In case of State-Wide Aggregation, the QCA shall provide the forecast considering the generation measured at the



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metering points provided at the interconnection points / generating stations as the case may be.

- The Day-Ahead Schedule shall comprise of the Wind or Solar energy generation to be scheduled **in each 15-minute time block** starting from 00:00 hours of the following day, and for all 96-Time Blocks of that day and the Week-Ahead Schedule shall contain the same information for the next seven days. The QCA may however revise the Schedule of Generators connected to the Intra-State Transmission Network (excluding collective transactions) by giving advance notice to the SLDC. Such revisions shall be effective from the **6th time block** following the time block in which notice was given. There may be one revision for each time period of one and half hours starting from 00.00 hours of a particular day, subject to a maximum of 16 revisions during the day.

### **Role of SLDC in Formulating Detailed Procedure:**

- SLDC shall undertake Stakeholder Consultation, by uploading the Draft Procedure on SLDC's Website, before submission of the Procedure to the Commission, for approval and such Draft Procedure for approval shall be accompanied by the comments of the Stakeholders and response of SLDC thereto in a tabulated form.

### **Contents of the Detailed Procedure:**

- The procedure and requirements, including the payment of fees and penalties, for the registration and de-registration of QCAs by the SLDC;
- The information and data, and the formats required by the SLDC from the QCA(s) are to be provided by the SLDC to them;
- The mode and protocol of communication for the exchange of information and data between the QCAs and the SLDC;
- The guidelines for energy and deviation accounting of Wind and Solar Energy Transactions under the State Energy Accounting Framework, with illustrative examples, in accordance with the principles specified in these Regulations;
- The mechanism for monitoring compliance of the Forecasting and Scheduling by the QCAs;
- The default conditions in the State Pool Settlement by QCAs and their treatment;
- Payment security mechanism in the form of Letter of Credit in favour of SLDC by the Generator(s) / QCA(s) as the case may be with the SLDC;



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- Advance one month notice to be issued to all the generators insisting to appoint QCA before the date of commercial operation;
- Qualification and other criterions for the QCA;
- The commercial impact of deviations from Schedules based on the forecasts shall be borne by the Generators.
- The State entities shall operate their equipment and loads in a manner that is consistent with the provisions of the Indian Electricity Grid Code and the Tamil Nadu Electricity Grid Code.

### Commercial Arrangements (to be effective from 01.04.2024 onwards):

- Deviation Charge for under or over injection of wind power, for sale or self-consumption of power within Tamil Nadu is as below.

**Table-1**

| Sl. No. | Absolute error in % terms in 15-minute Time Block | Deviation charge payable to State Deviation Pool Account (Wind and Solar)   |
|---------|---|---|
| 1.      | $\leq 15\%$                                       | Nil   |
| 2.      | $>15\%$ but $\leq 20\%$                           | At Rs.0.25 per unit   |
| 3.      | $>20\%$ but $\leq 30\%$                           | At Rs.0.25 per unit for the shortfall or excess beyond 15% and up to 20% + Rs. 0.50 per unit for the balance energy beyond 20% and up to 30%  |
| 4.      | $>30\%$   | At Rs. 0.25 per unit for the shortfall or excess beyond 15% and up to 20% + Rs. 0.50 per unit for the shortfall or excess beyond 20% and up to 30% + Rs.1.25 per unit for the balance energy beyond 30% |

- Deviation Charge for under or over injection of solar power, for sale or self-consumption of power within Tamil Nadu is as below.

**Table-2**

| Sl. No. | Absolute error in % terms in 15-minute Time Block | Deviation charge payable to State Deviation Pool Account (Wind and Solar) |
|---------|---|---|
| 1.      | $\leq 10\%$                                       | Nil   |



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|    |                 |  |
|----|-----------------|--|
| 2. | >10% but <= 20% | At Rs.0.25 per unit  |
| 3. | >20% but <= 30% | At Rs.0.25 per unit for the shortfall or excess beyond 10% and up to 20%+ Rs. 0.50 per unit for the balance energy beyond 20% and up to 30%  |
| 4. | >30%            | At Rs. 0.25 per unit for the shortfall or excess beyond 10% and up to 20%+ Rs. 0.50 per unit for the shortfall or excess beyond 20% and up to 30% + Rs.1.25 per unit for the balance energy beyond 30% |

- The total deviation charges remitted on account of deviations by wind / solar generator(s) into State Deviation Pool Account (Wind and Solar) in a financial year **shall be capped at the Ceiling Rate of 3 paise per unit** multiplied by the total annual generation at the respective Pooling Sub-Station(s)/total generated units in State-Wide Aggregation. Any excess amount of deviation charges remitted beyond the capped amount as per Deviation Account Statement over the financial year shall be adjusted in the subsequent billing without interest.

### Implementation Arrangements:

- Every Pooling Sub Station / Generator shall have energy meter (main and check) capable of recording the energy in time blocks as specified in the CEA Regulations governing metering. The meters shall be time synchronized through command instruction from the Centralized Automated Meter Reading System.

### Intimation of Curtailment:

- Any curtailment imposed on the energy injection for reliable and secure Grid Operation in emergent situations shall be communicated by the SLDC to the QCA, through an IT-enabled communication, and **no Deviation Charges shall be payable on account of such curtailment**. In case of any curtailment planned and communicated by the SLDC due to line maintenance or other reasons in certain time blocks of a day, the QCA shall be responsible to intimate the respective generators for curtailing the generation at site and amending the Schedule accordingly, failing which the SLDC shall revise the Schedule as required.
- The Commission shall issue "Detailed Procedure for Management of RE Curtailment for Wind and Solar Generation" separately within 60 days from the date of issue of these Regulations.



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Salient features of the Regulation are extracted above however, members having Grid Connected Wind Energy and Solar Energy Generators can study the Regulations in full to understand their obligations and rights properly.

With Warm Regards

N. Pradeep  
President