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**Part VI—Section 2**

**Notifications of interest to a section of the public  
issued by Heads of Departments, etc.**

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**NOTIFICATIONS BY HEADS OF DEPARTMENTS, ETC.**

TAMIL NADU ELECTRICITY REGULATORY COMMISSION CHENNAI.

**TAMIL NADU ELECTRICITY REGULATORY COMMISSION (FORECASTING, SCHEDULING AND DEVIATION SETTLEMENT AND RELATED MATTERS FOR WIND AND SOLAR GENERATION) REGULATIONS, 2019**

*(Notification No. TNERC/F&S Wind & Solar/21-1 dt. 01.03.2019)*

No.VI (2)/32/2019

In exercise of the powers conferred by Sections 86(1) and 181(2)(zp) read with Sections 32 and 33 of the Electricity Act, 2003(Central Act 36 of 2003) and all other powers enabling it in this behalf, the Tamil Nadu Electricity Regulatory Commission hereby makes the following Regulations, the draft of the same having been previously published, as required under sub-section (3) of the said Section 181.

REGULATIONS

**1. Short Title, Commencement and Extent**

1.1 These Regulations may be called the “Tamil Nadu Electricity Regulatory Commission (Forecasting, Scheduling and Deviation Settlement and related matters for Wind and Solar Generation) Regulations, 2019”.

1.2 These Regulations except provisions relating to commercial arrangements and the provisions regarding Deviation charges and penalty shall come into force from the date of publication in the *Tamil Nadu Government Gazette*:

Provided that the provisions relating to Commercial Arrangements and the provisions regarding Deviation Charges and penalty, shall come into force six months after the commencement of these Regulations.

**2. Definitions**

2.1 In these Regulations, unless the context otherwise requires,

- (a) “**Absolute Error**” means the difference between the actual generation injected and the scheduled generation of Wind or Solar Energy Generators in relation to their Available Capacity (AvC) in each time block, and may be computed in percentage terms by applying the following formula:

$$\text{Absolute Error (\%)} = 100 \times \frac{[\text{Actual Generation} - \text{Scheduled Generation}]}{\text{AvC}}$$

- (b) “**Act**” means the Electricity Act, 2003 (36 of 2003), as amended from time to time;
- (c) “**Actual Drawal**” in a time block means the electricity drawn by a Procurer, as measured by the interface meters;
- (d) “**Actual Injection/Generation**” in a time block means the electricity generated and injected into the Grid by a Generator, as measured by the interface meters;
- (e) “**Available Capacity**” (or “**AvC**”) of Wind or Solar Energy Generators means the cumulative capacity rating of the Wind turbines or Solar inverters that are capable of generating power in a given time block;
- (f) “**Central Commission**” means the Central Electricity Regulatory Commission constituted under sub-section (1) of Section 76 of the Act,2003;
- (g) “**Collective transactions**” shall have the same meaning as in the Indian Electricity Grid Code specified by the Central Electricity Regulatory Commission;
- (h) “**Commission**” means the Tamil Nadu Electricity Regulatory Commission constituted under sub-section(1) of Section 82 of the Act,2003;
- (i) “**De-Pooling**” means the disaggregation and apportionment of the deviations and the applicable charges among the Generators at a Pooling Sub-Station;
- (j) “**Deviation**” in a time block means the difference between the actual injection of energy and scheduled generation;
- (k) “**Forecasting**” means the projection of likely future electricity generation based on scientific analysis of meteorological data and other relevant parameters;

- (l) **“Gaming”** in relation to these regulations, shall mean an intentional mis-declaration of available capacity or schedule by any generator in order to make an undue commercial gain through Charges for Deviation.
- (m) **“Grid Code”** means the State Grid Code specified by the Commission under Section 86(1) (h) of the Act;
- (n) **“Indian Electricity Grid Code” (or “IEGC”)** means the Grid Code specified by the Central Electricity Regulatory Commission under Section 79(1)(h) of the Act;
- (o) **“Interface Meter”** means interface meters as defined by the Central Electricity Authority under the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time;
- (p) **“Inter-connection point”** means the interface point of a generation facility with the transmission or distribution system, in relation to a Wind or Solar Energy facility, and shall mean the line isolator on the incoming feeder on the Low Voltage (LV) side of the Pooling sub-station, for the purposes of these Regulations;
- (q) **“Pooling Sub-Station”** means a sub-station consisting of a step-up transformer and associated switchgear to the Low Voltage (LV) side of which several Wind or Solar Energy Generators are connected:
- Provided that, where a Generating Unit is connected through a common or an individual feeder terminating at a Sub-Station of a Distribution Licensee, or the State Transmission Utility, such Sub-Station shall be treated as the Pooling Sub-Station for such Wind or Solar Energy Generator for the purposes of these Regulations;
- (r) **“Procurer”** means a person, including a Distribution Licensee, Trading Licensee or an Open Access consumer, procuring electricity through a transaction scheduled in accordance with the Regulations governing Open Access;
- (s) **“Qualified Co-ordinating Agency” (or “QCA”)** means the agency appointed by the Wind or Solar Energy Generators connected to a Pooling Sub-Station, or by an individual Generator connected directly to a sub-station, to perform the functions and discharge the obligations specified in these Regulations;
- (t) **“Scheduled Generation”** for a time block or other time period, means the Schedule of generation in MW or MWh ex-bus provided by the State Load Despatch Centre;
- (u) **“Scheduled Drawal”** for a time block or other time period means the Schedule of despatch in MW or MWh ex-bus provided by the State Load Despatch Centre;
- (v) **“State Deviation Pool Account (Wind and Solar)”** means the State Account for receipts and payments on account of deviations by Wind and Solar Energy Generators;
- (w) **“State Deviation Pool Account (DSM)”** means the State Account maintained by the State Load Despatch Centre for receipts and payments on account of deviations by buyers and sellers;
- (x) **“State Entity”** means such person who is in the SLDC control area and whose metering and energy accounting is done at the State level;
- (y) **“State Load Despatch Centre” (or “SLDC”)** means the Load Despatch Centre of Tamil Nadu established under Section 31(1) of the Act and responsible for coordinating the scheduling of the State Entities in accordance with the provisions of the State Grid Code;
- (z) **“Time block”** means a period of 15 minutes or any such shorter duration as may be notified by Central Commission and State Commission for which specified electrical parameters and quantities are recorded by a Special Energy Meter, with the first time block starting at 00.00 hrs., or such other period as the Commission may stipulate.

Words or expressions used and not defined in these Regulations shall have the meaning assigned to them in the Act, or the Rules or other Regulations framed thereunder.

## PART A

### GENERAL

#### 3. Objective

- 3.1. 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.

- 3.2. 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.
- 3.3. 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.

#### 4. Applicability

- 4.1 These Regulations shall apply to all Wind and Solar Energy Generators (excluding Rooftop PV Solar power projects) in Tamil Nadu connected to the Intra-State Transmission System or Distribution System, including those connected through Pooling sub-stations, and using the power generated for self-consumption or sale within or outside the State.
- 4.2 The Commission shall review these Regulations including formulation for Absolute Error, Accuracy Band and Deviation charge thereof after two years, or earlier if it considers necessary.

### PART B

#### TECHNICAL ARRANGEMENTS: FORECASTING AND SCHEDULING CODE

#### 5. Forecasting and Scheduling Code

- 5.1. This Forecasting and Scheduling Code specifies the methodology for Day-Ahead scheduling of Wind and Solar Energy Generators connected to the intra-State Transmission Network (Transmission and Distribution system), its revisions on a one and a half hourly basis, and the treatment of their deviations from such Schedules. Wind and Solar generators, either by themselves or represented by Qualified Coordinating Agencies shall comply with the requirements of forecasting and scheduling code as stipulated under these Regulations.
- 5.2. The Wind and Solar Energy Generators at each Pooling sub-station shall appoint a QCA.  
 Provided that an individual Generator connected to a sub-station that is designated as a Pooling sub-station as defined in 2(q) of this regulation may opt to function as a QCA on its own or appoint a separate entity as its QCA.  
 Provided that the wind/solar generators of the Pooling sub-station(s) having aggregate capacity upto 25 MW may aggregate their forecast, schedule with the QCA of the nearest Pooling sub-station.  
 Provided further that, such wind/solar generators shall obtain concurrence of SLDC. The decision of SLDC in this regard shall be binding on the wind/solar generators.
- 5.3. The QCA(s) shall be treated as State Entity.
- 5.4. Every QCA shall be registered with the SLDC in accordance with the Detailed Procedure prescribed in pursuance of Regulation 5(22).
- 5.5. Notwithstanding the appointment of a QCA, the onus of complying with the relevant provisions of these Regulations shall remain that of the concerned Generators, and the commercial and other arrangements between the Generators and their QCA shall be governed by their inter-se agreements or terms of engagement.
- 5.6. The QCA shall be appointed by the Generators for the purposes specified in these Regulations, including but not limited to the following,
  - (a) Meter reading and data collection and its communication, and co-ordination with the Distribution Licensees, the SLDC and other agencies;
  - (b) De-pooling of Deviation Charges within the constituent Generators of the Pooling sub-station and settlement of payments/receivables.
  - (c) Settlement of the Deviation Charges specified in these Regulations with the SLDC on behalf of the Generators.
- 5.7. The QCA shall be the Nodal Agency between the SLDC and its Generators for the purposes of these Regulations.
- 5.8. 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.

- 5.9. The QCA shall provide real-time data relating to the power generation parameters and weather-related data, as may be required to the SLDC.
- 5.10. Meters shall be installed for energy accounting in accordance with the relevant provisions of the Central Electricity Authority (CEA) Regulations and its amendments, governing metering, along with telemetry/ communication and Data Acquisition Systems for the transfer of information to the SLDC by the QCA.
- 5.11. The QCA shall furnish to the SLDC aggregated forecasts relating to its Wind Energy Generators and Solar Energy Generators connected to intra-State system and contracts undertaken for sale of power 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.
- 5.12. The SLDC shall also undertake forecasting of the Wind and Solar energy generation expected to be injected into the intra-State Transmission network at each location, by engaging forecasting agencies if required, so as to enable it to better plan for the balancing resources required for secure Grid operation.
- 5.13. The QCA shall aggregate the Schedules of all Wind Generators and Solar generators connected to a Pooling sub-station separately, and communicate to the SLDC.
- 5.14. A QCA may undertake forecasting and scheduling for multiple pooling substations. However, scheduling, energy accounting and deviation monitoring for each pooling sub-station of wind and solar power generation shall be undertaken separately.
- 5.15. No Wind or Solar energy generation shall be despatched by the SLDC without schedule by the QCA on behalf of the Generators in accordance with the provisions of these Regulations.
- 5.16. The QCA may adopt the forecast of the SLDC for preparing its Schedule or provide SLDC with a Schedule based on its own forecast, which shall be the reference Schedule for the purposes of deviation determination and settlement:  
Provided that, if the QCA opts to adopt the forecast of the SLDC, the consequences of any error in such forecast which results in deviations from scheduling shall be borne by the concerned Generators through their QCA.
- 5.17. The SLDC shall recover such charges as may be approved by the Commission for providing its forecasting services to the QCA and the amount so recovered shall be treated as 'other income' in the Aggregate Revenue Requirement of the SLDC for the determination of its Fees and Charges.
- 5.18. The QCA shall provide to the SLDC a Day-Ahead and a Week-Ahead Schedule for each Pooling sub-station to enable it to assess the Availability of energy and the margin available in the State Grid.
- 5.19. 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.
- 5.20. (a) The QCA may revise the Schedule of Generators connected to the Intra-State Transmission Network (excluding collective transactions) by giving advance notice to the SLDC.  
(b) Such revisions shall be effective from the 4<sup>th</sup> time block following the time block in which notice was given.  
(c) There may be one revision for each time slot of one and half hours starting from 00.00 hours of a particular day, subject to a maximum of 16 revisions during the day.
- 5.21 The plan for data telemetry, formats of forecast submission and other modalities and requirements shall be stipulated in the Detailed Procedure to be submitted by the SLDC within three months, which the Commission shall endeavour to approve within a month thereafter.  
Provided that, SLDC shall undertake stakeholder consultation by uploading the Draft procedure on SLDC's website before submission of procedure to the Commission for approval.
- 5.22 The Detailed Procedure mentioned in sub – regulation (21) shall contain the following:**
- (a) The procedure and requirements, including the payment of fees and penalties, for the registration and de-registration of QCAs by the SLDC.
- (b) The information and data, and the formats, required by the SLDC from the QCAs and to be provided by the SLDC to them.

- (c) The mode and protocol of communication for exchange of information and data between the QCAs and the SLDC.
  - (d) 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.
  - (e) The mechanism for monitoring compliance of the Forecasting and Scheduling Code by the QCAs.
  - (f) The default conditions in the State Pool Settlement by QCAs and their treatment.
- 5.23 The commercial impact of deviations from Schedules based on the forecasts shall be borne by the Generators through their QCAs.
- 5.24 The State entities shall operate their equipments and loads in a manner that is consistent with the provisions of the Indian Electricity Grid Code and the Tamil Nadu Electricity Grid Code.

#### 5.25 Treatment to Gaming

- (a) Any intentional mis-declaration of Available Capacity to the SLDC by the QCA for its own undue commercial gain or that of a Generator shall be considered as gaming and shall constitute a breach of these Regulations.
- (b) Upon identification of gaming by SLDC, the QCA shall be liable to pay a penalty of three times the Deviation Charges that would have been applicable had the Available Capacity been correctly declared.
- (c) The amount of penalty shall be payable by the QCA to the State Deviation Settlement Mechanism (DSM) Pool, through the SLDC.
- (d) The SLDC may, after giving due notice, as stipulated in the Detailed Procedure, cancel the registration of the QCA upon repeated events of mis-declaration.

### 6. Principles of appointment of QCA

- 6.1. The Generators connected to each Pooling sub-station shall appoint a person as QCA from among themselves or any other entity as a QCA.
- 6.2. The QCA shall be appointed with the approval of majority of the Generators at a Pooling sub-station, in terms of their combined installed capacity, and on appointment with majority, the QCA shall perform all functions assigned in these Regulations for all generators connected to the Pooling sub-station.
- 6.3. The Generators shall satisfy themselves that the QCA is technically and financially competent to undertake on their behalf the functions and discharge the obligations specified in these Regulations.
- 6.4. The terms of engagement of the QCA shall include provisions on the following aspects:
  - (a) The respective roles and responsibilities of the QCA and Generators;
  - (b) The metering, billing and energy accounting arrangements;
  - (c) The modalities for recovery of Deviation Charges from the Generators and their settlement, including the principles for de-pooling;
  - (d) The payment security mechanism and related provisions;
  - (e) The events of default and their mitigation.

## PART C

### COMMERCIAL ARRANGEMENTS

#### 7. Deviation Settlement for Intra-State Transactions

- 7.1 The sale of power within Tamil Nadu by Wind and Solar Energy Generators connected to the Intra-State Transmission Network shall be settled by the Procurers on the basis of their actual generation, and the Deviation Settlement shall be undertaken as specified in these Regulations.

A Generator who deviates from its given Schedule shall be liable to pay a Deviation Charge under the provisions of these Regulations.

7.2 In respect of sale or self-consumption of power within Tamil Nadu, if the actual injected generation of wind or solar power at a Pooling sub-station, differs from the scheduled generation, the Deviation Charge for the excess or shortfall shall be payable by the QCA to the "State Deviation Pool Account (Wind and Solar)", through the SLDC, as specified in Table 1 below:

**Table 1: Deviation Charge for under- or over-injection, for sale or self-consumption of power within Tamil Nadu**

S.No.	Absolute Error in %age terms in 15-minute time block	Deviation Charge payable to State Deviation Pool Account(Wind and Solar)
1	< = 10%	None
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 upto 20% + Rs. 0.50 per unit for the balance energy beyond 20% and upto 30%
4	>30%	At Rs. 0.25 per unit for the shortfall or excess beyond 10% and upto 20% + Rs. 0.50 per unit for the shortfall or excess beyond 20% and up to 30% + Rs. 1.00 per unit for the balance energy beyond 30%

7.3. The SLDC and the QCA shall maintain records and accounts of the time block-wise Schedules, the actual generation injected and the deviations, for every Pooling sub-station and the individual Generators separately.

7.4. The QCA shall undertake de-pooling of the energy deviations and the Deviation Charges against each Generator at the Pooling sub-station as specified in Regulation 14.

7.5. The QCA shall undertake the settlement of the Deviation Charges with the SLDC on behalf of the concerned Generators.

The total deviation charges remitted on account of deviations by a wind/solar generator(s) through QCA into State Deviation Pool Account (Wind and Solar) in a financial year shall be capped at the Ceiling Rate of 5 paise per unit or such other rate as may be stipulated by the Commission through separate Order, multiplied by the total annual generation at the respective Pooling sub-station(s). Any excess amount of deviation charges remitted beyond the capped amount as per deviation account statement over the financial year shall be refunded or credited to the account of the concerned QCA and refunded to the RE-generator(s) through the respective QCA in the subsequent settlement period(s) at the end of the financial year without interest.

## 8. Deviation Settlement for Inter-State Transactions

8.1 The sale of power outside Tamil Nadu by Wind and Solar Energy Generators connected to the Intra-State Transmission system or Distribution system shall be settled by the Procurers on the basis of their scheduled generation.

8.2 Inter-State transactions at a Pooling sub-station shall be permitted only if the concerned Generator is connected through a separate feeder.

8.3 Generator intending to enter inter-state transaction shall submit, through the QCA, a separate Schedule for its energy generation, in accordance with these Regulations, to the SLDC and the concerned Regional Load Despatch Centre (RLDC).

- 8.4 The SLDC shall prepare the deviation settlement account for such Generator on the basis of measurement of the deviation in the energy injected.
- 8.5 The Deviation Charges for under-injection by Generators connected to the Intra-State Transmission Network and selling power outside Tamil Nadu shall be as specified in the **Annexure** to these Regulations, the accounting for which shall be done by the SLDC.

**9. Deviation Settlement for Inter- and Intra- State transactions: other provisions**

- 9.1 Deviations in respect of Inter-State and Intra-State transactions for each source of RE *i.e.* wind and solar Generation shall be accounted for separately at each Pooling Sub-Station.
- 9.2 The SLDC shall provide separate energy and Deviation Accounts for Inter-State and Intra-State transactions in respect of wind and solar Generation to the QCA, who shall settle the Deviation Charges with the concerned Generators.

**PART D**

**IMPLEMENTATION ARRANGEMENTS**

**10 Metering**

- 10.1 Every Pooling Sub Station shall have a Special Energy Meter (SEM) capable of recording the energy in time blocks as specified in the CEA Regulations governing metering. The meters shall be time synchronised through command instruction from the centralised Automated Meter Reading system.
- 10.2 The QCA shall furnish weekly meter readings to the SLDC by 00.00 hours on the Thursday for the seven day period ending on the previous Sunday mid night, in addition to the data provided to the Supervisory Control and Data Acquisition (SCADA) Centre, for the purpose of energy accounting under these Regulations.

**11 Communication of QCA with SLDC**

- 11.1 The Detailed Procedure prescribed by the SLDC shall set out the protocol for communication and exchange of information between the QCA and the SLDC, including but not limited to the following aspects:
- a) Communication of the Day-Ahead, Week-Ahead Schedule and intra-Day schedule and any revisions to the SLDC.
  - b) Communication of the time block-wise availability and actual generation data at the Pooling Sub-Station.
  - c) Communication of Grid constraints and curtailments by the SLDC to the QCA.
- 11.2 The SLDC shall equip itself with the necessary Information Technology (IT)-enabled communication platform and software for communication between it and the QCA.
- 11.3 The QCA shall provide the IT-enabled communication software log-in details to enable the SLDC to access live data of all Schedules and deviations and facilitate the timely billing and payment of Deviation Charges. The QCA shall use automatic meter reading facilities for transfer, analysis and processing interface meter data of the generators.
- 11.4 The IT-enabled communication platform and software should enable the SLDC and QCA to exchange information, including but not limited to the following:
- i. Generator outages and their reasons;
  - ii. Deviation Charges payable/receivable by the QCA;
  - iii. Site characteristics and details of the Wind Turbines, Solar Inverters, etc.;
  - iv. Schedules and generation handled by the QCA.

**12 Deviation Accounting**

- 12.1 The methodology for deviation settlement for the State shall be as follows:



- a) The SLDC shall compute the Absolute Error, i.e. the difference between the scheduled and the actual energy injected, in respect of each Pooling Sub-Station and shall accordingly determine the amounts payable/receivable on account of the Deviation Charge in accordance with Regulations 7 and 8.
- b) The Deviation Charges payable or receivable for the State as a whole at the State periphery shall be computed by the SLDC.
- c) The SLDC shall also compute the impact of the deviation of the Wind and Solar Energy Generation and its contribution to the Deviation Charge at the State periphery and maintain State Deviation Pool Account (Wind and Solar) separately for the same.

### 12.2 Settlement of Deviation Charges

- a) The SLDC shall compute the deviations from the Schedule, determine the Deviation Charges payable/receivable and bill the QCA accordingly.

12.3 The charges collected in the State Deviation Pool (wind and solar) shall be utilised to offset the shortfall in the State Deviation Pool Account (DSM).

### 13 Payment Mechanism for Deviation Settlement and Payment security

13.1 Every QCA shall pay the total amount of Deviation Charges pertaining to the Pooling Sub station to the SLDC, and collect it from the concerned Generators in proportion to their actual generation:

Provided that the onus of ensuring the payment of the Deviation Charges to the SLDC by the QCA shall remain that of the concerned Generators.

13.2 The Deviation Charges shall be paid within ten days from the date of issue of statement of accounts and billing by the SLDC. If payments of the above charges are delayed by more than 2 days *i.e.* beyond 12 days from the date of issue of statement, a simple interest of 0.06% for each day of delay shall be levied. This is without prejudice to any action that may be taken under Section 142 of the Act in addition to any action under Section 56 of the Act and other relevant Regulations.

13.3 The wind/solar energy generator/QCA shall provide payment security through an irrevocable letter of credit(LC) in favour of SLDC on a percent of cost of average monthly generation at feed in tariff for a period of three months. When there is no feed in tariff, the prevailing adopted tariff discovered in bidding in the State and if no bid tariff exists for the year, the tariff obtained in the last of the bidding conducted by State may be taken in place of feed in tariff. The details of the payment security payable shall be covered in the detailed procedure of SLDC to be formulated as per regulation 5.22.

13.4 Notwithstanding levy of interest specified in 13.2 of this regulation, for delay in payment of deviation charges, in case of failure to pay the deviation charges into the State Deviation Pool (wind and solar), the SLDC shall be entitled to encash the LC of the concerned constituent to the extent of default and the concerned constituent shall recoup the LC amount within 3 days.

13.5 All payments to the QCAs/generators entitled to receive any amount on account of charges for deviation shall be made within 2 working days of receipt of payments in the State Deviation Pool Account (wind and solar).

Provided that –

- i. in case of delay in the Payment of Deviation Charges and interest thereon if any, beyond 12 days from the date of issue of the statement of charges for deviations, the QCAs/ generators who have to receive payments for est thereon, shall be paid from the balance available in the State Deviation Pool Account (Wind and Solar). In case the balance available is not sufficient to meet the payments to the QCAs, the payment shall be made on pro rata basis from the balance available.
- ii. The liability to pay interest for the delay in payments to the State Deviation Pool Account (Wind and Solar) shall remain till interest is not paid, irrespective of the fact that QCAs/generators who have to receive payments, have been paid from the State Deviation Pool Account (Wind and Solar) in part or full.

### 14 De-Pooling of Deviation Charges

The QCA shall de-pool the Deviation Charges against each Generator in proportion to the actual generation by the generators.

**15 Intimation of Curtailment**

- 15.1 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 for any consequent deviations if the SLDC fails to do so.
- 15.2 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 for curtailing the generation at site and amending the Schedule accordingly, failing which the SLDC shall revise the Schedule as required.

**16 Energy Accounting**

- 16.1 The energy accounting shall be undertaken on the basis of the data recorded by the SEM referred to in Regulation 10.1.
- 16.2 All accounts relating to deviations within pooling sub station shall be prepared by the QCA on a weekly basis based on inputs from the SLDC, and be accessible to the SLDC through an IT-enabled system and software.
- 16.3 The SLDC shall furnish the processed data on a weekly basis by Thursday mid-night for the seven-day period ending on the previous Sunday mid-night to the concerned QCA in the prescribed format for the preparation of weekly accounts of energy from the Pooling Sub-Station.
- 16.4 Any discrepancy communicated by the QCA within 15 days shall be corrected forthwith by the SLDC after verification.
- 16.5 The SLDC/Distribution licensee as mutually agreed shall prepare the statement of accounting of energy in each time block for the wind and solar energy generators and the procurers on monthly basis for the purpose of billing. The billing centre of the distribution licensee shall be responsible for energy accounting, raising and settlement of bills with the procurers.
- 16.6 A detailed energy accounting procedure shall be prepared by SLDC and submitted for approval to the Commission after undertaking stakeholder consultation in accordance to regulation 5.22.

**PART E****MISCELLANEOUS****17 Power to amend**

The Commission may, at any time vary, modify or amend any provision of these Regulations.

**18 Power to remove difficulties**

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

**19 Power to relax**

The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected by grant of relaxation, may relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.

**20 Power to Issue Directions**

Subject to the provisions of the Act, 2003 and this Regulation, the Commission may, from time to time, issue orders and directions in regard to the implementation of the Regulation and procedure to be followed and various matters which the Commission has been empowered by this Regulation to specify or direct, as may be considered necessary in furtherance of the objective and purpose of this Regulation.

**S. CHINNARAJALU,**  
Secretary,  
Tamil Nadu Electricity Regulatory Commission .

## ANNEXURE

**Framework for Deviation Charges for under- or over-injection by Wind and Solar Generators connected to the Intra-State Transmission network and selling or consuming power outside Tamil Nadu**

1. The Deviation Charges in respect of Wind and Solar Energy Generators connected to the Intra-State Transmission Network and selling or consuming power outside Tamil Nadu shall be as follows:

a) If the actual generation is lower than scheduled, the Deviation Charges for the shortfall shall be payable by the QCA to the State Deviation Pool Account (Wind and Solar) as given in Table A below:

**Table A: Deviation Charges in case of under-injection**

Sl. No.	%age Absolute Error in 15-minute time block	Deviation Charges payable to State Deviation Pool Account (Wind and Solar)
1	< =10%	At the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the shortfall in energy for Absolute Error upto 10%
2	>10% but <= 20%	At the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the shortfall in energy for Absolute Error upto 10% + 110% of the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the balance energy beyond 10% and upto 20%.
3	>20% but <=30%	At the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the shortfall in energy for Absolute Error upto 10% + 110% of the highest marginal cost of power or frequency linked deviation charge of the corresponding time block whichever is higher for the balance energy beyond 10%, and upto 20% + 120% of the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the balance energy beyond 20% and upto 30%
4	> 30%	At the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the shortfall in energy for Absolute Error upto 10% + 110% of the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the balance energy beyond 10% and upto 20% + 120% of the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for balance energy beyond 20% and upto 30% + 130% of the highest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is higher for the balance energy beyond 30%.

b) If the actual generation is more than the scheduled generation, the Deviation Charges for the excess generation shall be receivable by the QCA from the State Deviation Pool Account (Wind and Solar) as given in Table B below:

**Table B: Deviation Charges in case of over-injection**

Sl. No.	%age Absolute Error in 15-minute time block	<i>Deviation Charges receivable from State Deviation Pool Account (Wind and Solar)</i>
1	< =10%	At the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the shortfall in energy for Absolute Error upto 10%.
2	>10% but <= 20%	At the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the shortfall in energy for Absolute Error upto 10% + 90% of the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the balance energy beyond 10% and upto 20%.
3	>20% but <=30%	At the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the shortfall in energy for Absolute Error upto 10% + 90% of the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the balance energy beyond 10%, and upto 20% + 80% of the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the balance energy beyond 20% and upto 30%.
4	> 30%	At the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the shortfall in energy for Absolute Error upto 10% + 90% of the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the balance energy beyond 10% and upto 20% + 80% of the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the balance energy beyond 20% and upto 30% + 70% of the lowest marginal cost of power for the day or frequency linked deviation charge of the corresponding time block whichever is lower for the balance energy beyond 30%

(By the Order of the Tamil Nadu Electricity Regulatory Commission)

Chennai-600 008,  
1st March 2019,

**S. CHINNARAJALU,**  
Secretary,  
Tamil Nadu Electricity Regulatory Commission.