

TANTRANSCO

Draft Procedure for Deviation Settlement of State Entities and Energy Accounting of the State

In accordance with
The Tamil Nadu Electricity Regulatory Commission (Deviation
Settlement Mechanism and related matters) Regulations, 2019

Prepared by
Tamilnadu State Load Despatch Centre

27 May, 2019

[Note: These Procedures for Implementation of Deviation Settlement Mechanism in Tamilnadu have been formulated in pursuance of TNERC (Deviation Settlement Regulations and related matter) Regulations, 2019 and the same shall be finalised upon regulatory process and approval by TNERC]

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Note: Stakeholders are requested to furnish their Suggestions / Comments to the Email.id tnsldcdsm@gmail.com on or before 11.06.2019.

Draft Procedure for Implementation of TNERC Deviation Settlement Mechanism and related matters Regulations 2019.

1. Background:

- 1.1. The procedure is evolved in accordance with Regulation 6.5.1 of TNERC Deviation Settlement Mechanism and related matters Regulations 2019 (herein after referred to as "Regulations") and its various other provisions.
- 1.2. All applicants shall abide by the provisions of these Regulations as amended from time to time and the procedures laid down hereunder.
- 1.3. The objective of these regulations is to maintain grid discipline and grid security as envisaged under the Grid Code through the commercial mechanism for Deviation Settlement through drawal and injection of electricity by the users of the grid.
- 1.4. This procedure shall be read in conjunction of with TNERC Deviation Settlement Mechanism and related matters Regulations 2019, Indian Electricity Grid Code (IEGC), Tamilnadu Electricity Grid Code (TNEGC), prevailing CERC and TNERC Regulations and orders.

1.5. Deviation Charges:

- ❖ For Generating Station/Seller

$$\text{Deviation} = \text{Actual injection (AI)} - \text{Scheduled injection (SI)}$$

- ❖ For Beneficiary/ Buyer

$$\text{Deviation} = \text{Scheduled drawal (AD)} - \text{Actual drawal (SD)}$$

Deviation charges shall be paid at the deviation rate (Area Clearing Price) linked to frequency.

1.6. Deviation sign with respect to pool account:

- ❖ The amount payable to pool account towards deviation charges, additional deviation charges etc will be mentioned with –ve sign.
 - ❖ The amount receivable from pool account towards deviation charges will be mentioned with +ve sign.
- 1.7. Definitions for buyers, sellers and other terms shall be as per the provisions of regulation 2 of these regulations.

2. Applicability of procedure:

- a. This procedure shall be applicable to sellers, all the private generators including open access generating stations, Generating stations of Distribution licensees but excluding Wind and Solar Generating Station(s) connected to Intra-state Transmission system or Distribution system.
- b. This procedure shall be applicable to Buyers, full open access consumers, partial open access consumers connected to the Intra-State Transmission system or Distribution system.
- c. This procedure shall be applicable to all the open access transactions under STOA, MTOA and LTOA including inter state open access transactions.
- d. 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.

15. Pool Members of DSM pool account.

1. TANGEDCO as a DISCOM
2. State owned Generating stations (Thermal, Hydro and Gas)
3. IPPs.
4. All the private Generators including CPP, Co-Gen and Biomass (herein after referred to as "Private Generators") who are availing open access and supplying power to TANGEDCO through power purchase agreements under LTOA, MTOA & STOA except wind and solar generating stations.
5. Deemed distribution licensee if any.

4. Scheduling

- ❖ Scheduling activities will be done with software in line with Indian Electricity Grid Code and Tamilnadu Electricity Grid Code. The time line for scheduling activities will be as per TNEGC 2005 and subsequent amendments thereon.

- ❖ State Entities such as all the private generators, IPPs, shall enter into Connection Agreement/Open Access Agreement with TANTRANSCO.
- ❖ TANGEDCO shall enter into Transmission Service Agreement (TSA) with TANTRANSCO.
- ❖ The State Entities such as all the Private generators, SGS, IPPs shall inform the SLDC of all the contracts entered by them for exchange of energy . If any changes in their contracts during the month, it shall be intimated to SLDC then and there.
- ❖ Forum of Regulators (FOR) has recommended for establishment of Distribution System Operators (DSOs) in each State which would interact with the State LDCs. (SLDCs) to keep the system secure.
- ❖ Scheduling of all the intrastate entities such as the Private Generators, IPPS, SGS and TANGEDCO and open access consumers will be done by SLDC as per prevailing Indian Electricity Grid code (IEGC), Tamilnadu Electricity Grid Code & subsequent amendments thereof and TNERC Grid connectivity and Intrastate Open Access Regulations 2014.
- ❖ If Declaration is not given by intra state entities as per the instructions of SLDC , the defaulters list will be communicated to Hon'ble TNERC to penalize them as per section 142 of Electricity Act 2003.
- ❖ If the station wise ex-power plant MW declaration capability is not furnished by any of the generator within the time frame fixed by SLDC, the DC furnished by the generator in the previous day will be taken and the generator concerned shall be responsible for the commercial implications.

4.1 Declaration Capability (Form A):

4.1.1 State owned Generating Stations.

All the State owned Generating stations (SGS) such as Thermal, Hydro and Gas stations shall furnish the station wise ex-power plant MW declaration capability foreseen for each time block of the next day to SLDC **in Form A** as per TNEGC.

4.1.2 Intra State Private Generators

All the Intra State Private Generators shall furnish the transaction wise (ie power supply to TANGEDCO through PPA, TANGEDCO through

Tender, Third party sale, Captive wheeling, interstate sale etc) declaration capability in MW based on the open access approval for each time block of the next day to SLDC which shall not exceed the open access approved quantum **in Form A** as per TNEGC.

Provided that for intrastate STOA transactions

- a. STOA approvals shall be given as DC by the generators.
- b. For the planned shutdown/outage of the generator, the revised open access approval shall be obtained from SLDC.

If the generator is in shutdown/ not running, the DC for the open access transactions shall be given as zero by the generator provided the revised STOA approvals shall be obtained from SLDC.

4.1.3. Independent Power Projects. (IPPs):

All the IPPs shall furnish the station wise ex-power plant MW declaration capability foreseen for each time block of the next day to SLDC **in Form A** as per TNEGC.

4.2. Entitlement (Form B):

4.2.1. Region wise entitlement for each time block for the next day will be issued to TANGEDCO (Planning wing until formation of DSOs) By SLDC **in Form B** as per TNEGC, based on the existing power purchase agreements, Open access agreements and declaration given by SGS, IPPs and Private generators.

4.2.2. The total open access quantum of HT consumers for each time block for the next day will be prepared at SLDC in Form B as per TNEGC, based on the open access approvals, declaration given by Private Generators and taking into account of interstate open access transactions by the HT consumers.

4.3. Requisition by intrastate entity in Form C.

4.3.1. TANGEDCO (Planning wing until formation of DSO) shall furnish their requisition for each time block for the next day in Form C to SLDC as per IEGC.

4.3.2. Form B will be taken as Form C for the open access consumers.

4.4. Despatch Schedule and Drawl Schedule in Form D.

4.4.1. Despatch Schedule to Generators in Form D:

- ❖ Merit order Despatch schedule for each time block for the next day will be issued to SGS by SLDC in Form D as per TNEGC, based on the declaration given by SGS and Requisition given by TANGEDCO.
- ❖ Despatch schedule for each time block for the next day will be issued to Private Generators by SLDC in Form D as per TNEGC, Based on the declaration given by the Private Generators, Requisition given by TANGEDCO and open access approvals.

Provided that STOA approvals will be taken as dispatch schedule for STOA transactions.

4.4.2. Drawl Schedule to TANGEDCO and Open Access consumers in Form D:

- ❖ Drawl schedule for the Buyers/ TANGEDCO/ Open Access Consumers / Deemed Distribution licensee will be prepared after incorporating the transmission/ Distribution losses as per prevailing TNERC Tariff orders until the estimation of actual average weekly intrastate transmission losses.
- ❖ Region wise Drawl schedule for each time block for the next day will be issued to TANGEDCO by SLDC in Form D as per TNEGC, based on the declaration given by SGS and Requisition given by TANGEDCO provided deviation will be calculated for TANGEDCO as a whole.
- ❖ Drawl schedule for each time block for the next day will be issued to open access consumers by SLDC in Form D as per TNEGC, based on the declaration given by the Private Generators, Open access approvals and Interstate open access schedules.

Provided that STOA approvals will be taken as drawl schedule for STOA transactions.

4.5 Revisions in Schedule.

Revisions in schedule for the sellers, SGS, Private generators, buyers /Discoms/ TANGEDCO/ Deemed Distribution Licensee during the day of the operation shall be as per the provisions of TNEGC and IEGC, all the TNERC

Regulations/Orders and provisions of these Regulations. Sellers, Generators, Buyers/Discoms/TANGEDCO shall abide by the provisions of IEGC/TNEGC.

Provided that for STOA transactions

- a. No revisions are allowed in the schedule.
- b. After getting revised open access approval from SLDC, Downward revision is only eligible as per TNERC Grid connectivity and Intra state open access regulations 2014 and subsequent amendments if any.
- c. For the forced outage of the generating unit/plant during the day of operation, the generator shall immediately intimate the outage of the unit along with the requisition for revision of the schedule and estimated time of restoration of the unit to SLDC. The schedule of DISCOM, sellers, buyers of power from this generating plant/unit shall be revised accordingly from 4th Time block counting the time block in which intimation is given by the generator.
- d. Once the generation is restored, the restoration of generating unit shall be intimated to SLDC by the generator. The original schedule shall become effective from the 4th time block counting the time block in which intimation is given by the generator. However the transmission charges as per original schedule shall be paid by the open access customer for the above period.

The revisions in the schedule for LTOA/MTOA transactions shall be as per TNEGC/IEGC/ TNERC Grid Connectivity and Intrastate Open Access Regulations 2014 and subsequent amendments if any.

Revisions in the schedule for Hydro stations will be as per the provisions of IEGC and TNEGC.

4.5.1 Revision of declared capability by generator(s) and requisition by buyers / distribution licensees for the remaining period of the day will also be permitted with advance notice. Revised schedules/declared capability in such cases shall become effective from the 4th time block, counting the time block in which the request for revision has been received in SLDC to be the first one.

4.5.2. If, at any point of time, SLDC observes that there is need for revision of the schedules in the interest of better system operation, it may do so on its

own and in such cases, the revised schedules shall become effective from the 4th time block, counting the time block in which the revised schedule is issued by SLDC to be the first one.

4.5.3. In the event of any contingency, SLDC will revise the schedules on the basis of revised declared capability by the generators. The revised schedules will become effective from the 4th time block, counting the time block in which the revision is advised by the generator to be the first one. The revised declared capability will also become effective from the 4th time block.

4.5.4. Generation schedules and drawal schedules issued/revised by SLDC shall become effective from designated time block irrespective of communication success.

4.5.5. In the event of bottleneck in evacuation of power due to any constraint, outage, failure or limitation in the transmission system, associated switchyard and substations owned by STU (as certified by SLDC) necessitating reduction in generation, SLDC will revise the schedules which will become effective from the 4th time block, counting the time block in which the bottleneck in evacuation of power has taken place to be the first one. Also, during the first, second and third time blocks of such an event, the scheduled generation of the station will be deemed to have been revised to be equal to actual generation and also the scheduled drawals of the beneficiaries / distribution licensees will be deemed to have been revised to be equal to their actual drawals.

4.5.6. In case of any grid disturbance, scheduled generation of all the generating stations and scheduled drawal of all the open access customers / distribution licensees shall be deemed to have been revised to be equal to their actual generation/drawal for all the time blocks affected by the Grid Disturbance.

4.5.7. Certification of Grid Disturbance and its duration shall be done by SLDC. In case any impermissible constraints are foreseen, the SLDC shall moderate the schedules to the required extent, under intimation to the concerned users. Any changes in the scheduled quantum of power which are too fast or involve unacceptably large steps, may be converted into suitable ramps by the SLDC.

On completion of the operating day, by 24.00 hours, the schedule finally implemented during the day (taking into account all before-the-fact changes) in despatch schedule of generating stations and drawal schedule of the buyers/TANGEDCO shall be issued by SLDC. This schedule shall be the datum for commercial accounting. The average ex-bus capability for each of the generating stations shall also be worked out based on all before-the-fact advice to SLDC.

The SLDC shall properly document all the above information i.e. station-wise foreseen ex-power plant capabilities advised by the generating stations, the drawal schedule indented by the buyers/TANGEDCO / distribution licensees, all schedules issued by the SLDC and all revisions / updating of the above.

4.5.8. The final schedules issued by SLDC shall be open to all the intrastate entities for any checking/verification for a period of 5 days. In case any mistake/omission is detected the SLDC shall forthwith make a complete check and rectify the same.

5. Metering and Meter data collection:

5.1. Interface Energy Meters shall be installed at Generator end, evacuation feeders, Open access consumer end, TANGEDCO boundaries, Distribution licensee boundaries shall be installed as per CEA Metering Regulations, 2006 & amendments thereof and TNERC Grid connectivity and Intrastate Open Access Regulations 2014 and subsequent amendments thereon if any.

5.2. Interface Energy Meters with unique serial numbers and as per standard specification, would have to be placed in accordance with CEA Metering Regulations to facilitate boundary metering, accounting and settlement for Generators, TANGEDCO, Distribution licensees and open access consumers.

5.3 Automated meter reading (AMR) system shall be used for communicating interface meter data at SLDC. Internal Clock of the interface meter shall be time synchronized with GPS with counter check from the AMR server at SLDC. If not done by the software necessary time drift correction shall be made in the meter by the concerned entity at site. If time drift could not be corrected, the meter shall be replaced.

5.4. Generators, TANGEDCO, Distribution licensees shall provide data telemetry to SLDC and shall ensure the correctness of the real-time data and undertake the corrective actions, if required.

5.5. MRT wing of Switchyard of State Owned Thermal, Hydro, Gas power stations, MRT wing of SE/EDCs for private generators, Operation wing for TANTRANSCO/TANGEDCO boundary meters shall be responsible for bringing the 15min block wise Load Survey AMR data to SLDC server in co-ordination with P&C wing .

5.6. 15 min block wise Load Survey Data of the above intrastate entities shall be uploaded in AMR server at SLDC on Monday of Every week.

5.7. If AMR Load survey data is not established or AMR data is not received , the load survey data from ABT meters may be downloaded by the concerned wing on every Monday and uploaded in web portal created by SLDC or sent through Email on or before Thursday of the week.

5.8. Validation of ABT meter data will be done at SLDC.

5.9. SLDC will hand over the processed meter data and implemented schedule to State Power Committee(SPC) for preparing Deviation Energy and charges statement.

5.10. Check meter readings shall be considered when Main Meters are found to be defective or stopped Provided that, if difference exists between the readings of main and check meters, viz. main meter reading exceeds twice the percentage error applicable to relevant class, both meters shall be tested and the defective meter shall be immediately replaced and reading of other will be considered.

5.11. If during test or calibration, both the main meter and the check meter are found to have errors beyond permissible limits, the bill shall be revised for the previous 3 (Three) months or for the exact period if known and agreed upon by both the parties, by applying correction as determined by the STU or Distribution Licensee to the consumption registered by the meter with lesser error.

5.12. The open access customer shall check the healthiness of metering arrangement by superficially checking indicator lamps or by taking readings as frequently as possible. If both the main meter and the check meter fail to record energy either due to the blowing of the P.T. fuses or due to any other causes, the energy imported or

exported may be arrived at based on the standby meter, if available, or by mutual agreement of the parties involved.

5.13. Meter testing and calibration shall be done periodically as per CEA metering regulations 2006 & its subsequent amendments there on.

5.14 Data related to the reactive energy between state entities at the interface points shall be metered and considered for reactive energy accounting as and when directed by the commission.

5.15. Any new line /generating stations /ICTs forming part of Intrastate transmission system network, the concerned entity must confirm to SLDC the installation of ABT meter with DLMS facility at interface points at least 7 days before charging of the element.

5.16. All concerned entities having ABT meters with DLMS facility in their premises shall fully cooperate and extend necessary assistance for collecting the meter data for the purpose of Deviation Accounting as specified in this Procedure.

5.17. Any addition, replacement, testing of interface meters and/or change in meter location shall be done with prior intimation to TNSLDC.

5.18. Any Change/correction in CT/PT ratios to be informed immediately to TNSLDC.

6. Deviation Energy Accounting:

6.1. General Provisions.

6.1.1. The State Power Committee shall prepare weekly deviation charges statement to all pool members and billing & collection of deviation charges from the pool members in accordance with the provisions of these regulations.

6.1.2. Deviations from schedule by the Sellers and Buyers shall be governed by the provisions of these Regulations.

6.1.3. The measurement unit for State Deviation Pool Account Volume preparation shall be kilowatt hours (kWh). Measurement unit for State Deviation Pool Account Value (Payable and Receivable) preparation shall be Indian Rupees (INR). The decimal component of the energy unit (kWh) and amount (INR) shall be rounded off to nearest integer value.

6.1.4. The transmission and distribution losses shall be as per the provisions of prevailing TNERC Orders until estimation of actual average intrastate transmission losses.

6.1.5. The SR reference frequency will be taken for deviation energy accounting calculations.

6.1.6. The Deviation computations made by State Power Committee shall be open to all intrastate entities for checking/verifications for a period of 15 days. In case any mistake / omission is detected, the SPC shall forthwith make a complete check and rectify the same.

6.1.7 If any misdeclaration / mistake (ie DC is given by the generator, while the generating plant is under shutdown/outage) done by the generators is found by SPC while preparing the deviation energy statement, the implemented schedule of DISCOM, sellers, buyers of power from this generating plant/unit for the above period will be revised accordingly. The same will be communicated to TANGEDCO for necessary revision of monthly billing of the open access consumers.

6.2 Deviation Volume Limit:

6.2.1. The over-drawal or under drawal of electricity by any Buyer during a time block shall not exceed 12% of its scheduled drawal or [X] MW, whichever is lower, when grid frequency is between range of '49.85 Hz and above to below 50.05 Hz.'

Provided that from a date not earlier than one year as may be notified by the Commission, the total deviation from schedule in energy terms during a day shall not be in excess of 3% of the total schedule for the drawee entities and 1% for the generators and additional charge of 20% of the daily base DSM payable / receivable shall be applicable in case of said violation.

6.2.2. The Volume Limit of [X] MW for distribution licensee(s) and Buyers shall be determined as under:

Minimum of (12% of schedule, (Peak Demand of Distribution Licensee or Buyer / Σ NCPD) x State Volume Limit)

Where NCPD (Non-coincident Peak Demand) represents the sum of Peak Demand of Distribution Licensee(s) and Buyer(s).

State Volume Limit shall be linked to Volume Limit (L) applicable to the State as per CERC DSM Regulations and its amendments thereof.

Where Peak Demand of the Distribution Licensee shall be recorded Peak Demand in the previous Financial Year or Projected Peak Demand in ensuing Financial Year, whichever is higher.

6.2.3. No over drawal of electricity by any Buyer shall be permissible when grid frequency is "below 49.85 Hz".

6.2.4. No under drawal of electricity by any Buyer shall be permissible when grid frequency is "50.05 Hz and above".

6.2.5. The under-injection or over-injection of electricity by Seller shall not exceed 12% of the scheduled injection or [100] MW, whichever is lower when grid frequency is "49.85 Hz or above and below 50.05 Hz":

6.2.6. No under injection of electricity by a Seller shall be permissible when grid frequency is "below 49.85 Hz" .

6.2.7. No over injection of electricity by a seller shall be permissible when grid frequency is "50.05 Hz and above".

6.2.8. Any infirm injection of power by a generating station prior to COD of a unit during testing and commissioning activities shall be exempted from the deviation volume limit for a period not exceeding 6 months or the extended time allowed by the Commission in accordance with Tamil Nadu Electricity Regulatory Commission (Grid Connectivity and Intra-State Open Access Regulations), 2014.

6.2.9. Any drawal of power by a generating station prior to COD of a unit for the startup activities shall be exempted from the deviation volume limit when grid.

6.2.10. Additional condition for a change in sign of the deviation shall be met once every 6 time blocks by Buyer/Seller, failing which additional charges @20% of the deviation charges applicable on daily base DSM payable/receivable as the case may be, shall be levied for the duration of continuance of violation from the date to be notified separately by the Commission.

6.3. Deviation Charges:

6.3.1. The charges for Deviation shall be in accordance with the provisions of these regulations with the Deviation Price Vector to be notified by the Commission from time to time. Pricing of Deviation of Buyers/Sellers shall be treated as stipulated under this Regulations **vide Annexure**. The Charges for Deviation corresponding to grid frequency interval of 'below 50.01 Hz and not below 50.0 Hz' shall be daily average

Area Clearing Price discovered in the Day-Ahead Market (DAM) segment of Power Exchange for S2 segment considered by SRLDC. The daily simple average ACP of the Power Exchange having a market share of 80% or more in energy terms on a daily basis shall be used for linking to the DSM price. If no single Power Exchange is having a market share of 80% or more, the weighted average daily simple average ACP shall be considered.

In case non availability of daily simple average ACP due to no trade on a given day daily simple average ACP of the last available day shall be considered for determining the DSM charge.

6.3.2. In addition to Charges for Deviation as stipulated under these Regulations, Additional Charge for Deviation shall be applicable for over-drawal/ under-injection of electricity by a buyer/Seller for each time block in excess of the volume limit specified in this regulation when average grid frequency of the time block is "49.85 Hz and above" at the rates specified in these regulations.

6.3.3. In addition to Charges for Deviation as stipulated under these Regulations, Additional Charge for Deviation shall be applicable for over-injection/under drawal of electricity for each time block by a Seller or Buyer, as the case may be, when grid frequency is "50.05 Hz and above" at the rates equivalent to charges of deviation corresponding to the grid frequency of "below 50.01 Hz but not below 50.0 Hz".

6.3.4. The Charges for Deviation of generating stations whose tariff is determined by the Commission, when actual injection is higher than the scheduled generation, shall not exceed the Cap Rate [311] Paise/kWh to be determined by the Commission from time to time.

6.3.5. The Charges for the Deviation for the generating stations other than those covered above, irrespective of the fuel source, when actual injection is higher or lower than the scheduled generation, shall not exceed the Cap Rate of [303.04] Paise/kWh.

6.3.6. The charge for deviation shall be zero at grid frequency of 50.05 Hz and above.

6.3.7. The charges for the Deviation for the under-drawal by the Buyer in a time block in excess of 12% of the schedule or [X]MW.

6.3.8. The charges for the deviation for the over-injection by the Seller, in a time block in excess of 12% of the schedule or [100] MW, whichever is less, shall be zero, except in case of injection of infirm power.

6.3.9 The under draws by partial or full open access consumers shall be treated as inadvertent energy supplied by the generator.

6.3.10. Overdrawal by Full open access consumers in excess of the schedule provided by Sellers shall be settled to the Distribution licensee at the charges applicable for excess demand to a normal consumer of the Distribution licensee as per the provisions of the Regulations of the Tamil Nadu Electricity Supply code and any drawal during outage of the generator supplying power to the full open access consumer shall be settled at 125% of the applicable energy and demand charges as determined in the Commission's tariff orders in respect of the Distribution licensee.

6.3.11. Overdrawal by Partial open access consumers in excess of the schedule provided by Sellers shall be settled as per the agreement governing the terms and conditions of supply entered into with the Distribution licensee.

6.4. Calculation of Deviation of Energy for Intrastate Entities for each 15min time block.

6.4.1. State Owned Generating Stations (SGS) and IPPs.

Deviation for SGS = (Actual injection - Scheduled injection)

Actual Injection = (Summation of Energy injection at ABT meters at evacuation feeders at their end.)

Scheduled Injection = Implemented schedule in Final Form D issued to SGS.

6.4.2. Private Generators:

Deviation for Private Generators = (Actual injection - Scheduled injection)

Actual Injection = (Summation of Energy injection at ABT meters provided in the evacuation feeders at their end)

Scheduled Injection = Implemented schedule in Final Form D issued to Private generators.

6.4.3. Deemed Distribution Licensee:

Deviation for Deemed Distribution Licensee = (Scheduled I Drawl - Actual Drawl)

Actual Injection = (Summation of Energy drawl at interface ABT meters provided in the dedicated feeders at TANTRANSCO Substation end)

Scheduled Drawl = Implemented schedule in Final Form D issued to Deemed Distribution Licensee.

6.4.5. A statement of Charges for Deviations including Additional Charges for Deviation shall be prepared by State Power Committee on weekly basis based on the data received at SLDC from various wings of TANTRANSCO/TANGEDCO by the Thursday of the week for seven-day period ending on the penultimate Sunday mid-night and shall be issued to all pool members by next Thursday as per the provisions of these Regulations.

6.5. Monthly Energy Accounting:

6.5.1. SPC shall prepare the scheduled energy and actual energy statement for the month for all the intrastate entities as per the provisions of these regulations. The following energy statement is to be prepared by SPC.

- ❖ Net energy received from various sources at TANTRANSCO network.
- ❖ Energy Despatched to TANGEDCO network.
- ❖ Net energy received from intrastate private generators.
- ❖ Net energy received from SGS.
- ❖ Net Energy received from Central sector at TANTRANSCO network and supplied to TANGEDCO network.
- ❖ Intra -State transmission losses.
- ❖ Account of exchange of surplus power.
- ❖ Report of incidences of violating the provisions of these regulations.

6.5.2. 15 min block wise , daywise Scheduled energy for open access consumers from various sources such as Third party sale, CPP, interstate purchase from power exchange and Bilateral transactions etc have to be compiled for the month and communicated to TANGEDCO for 15min block wise energy adjustment for the HT consumers. The billing centre of TANGEDCO shall be responsible for energy accounting , raising and settlement of bills with open access consumers.

6.5.3. 15 min block wise ,daywise Scheduled Despatch energy for the private generators for supplying power to TANGEDCO, Third party sale, CPP, interstate sale through power exchange and Bilateral transactions etc have to be compiled for the month communicated to TANGEDCO for the monthly billing.

6.5.4.TNSPC shall prepare and publish provisional monthly State Energy Account and Weekly State Deviation Pool Account Statement on its website for review by the State entities. The State entities shall provide suggestions for rectification (if any) within 15 days from the date of publishing. Upon such scrutiny and rectification (if necessary), monthly State Energy Account and weekly State Deviation Pool Account Statement as prepared by the TNSLDC shall be final and binding on all State entities.

6.6. DSM Pool Account operation

6.6.1. All payments on account of Charges for Deviation including Additional Charges for Deviation levied under these Regulations and interest, if any, received for late payment shall be credited to the funds called the "State Deviation Pool Account", which shall be maintained and operated by the State Load Despatch Centre in accordance with provisions of these regulations.

Provided that –

- i.* The Commission may by Order direct any other entity to operate and maintain respective "State Deviation Pool Account".
- ii.* Separate books of accounts shall be maintained for the Principal component and Interest component of Charges for Deviation and Additional Charges for Deviation by the SLDC.
- iii.* The State entities shall comply with statutory requirements for payment of applicable statutory levies, including but not limited to Goods and Service Tax (GST), Tax deduction at source (TDS);
- iv.* The State entities shall facilitate SLDC in meeting with the reporting requirements of Statutory Authorities, as necessary.

6.6.2. All payments received in the "State Deviation Pool Account" shall be appropriated in the following sequence:

- i.* any cost or expense or other charges incurred on recovery of Charges for deviation.
- ii.* over dues or penal interest, if applicable.
- iii.* normal interest.
- iv.* Regional Deviation Pool Account
- v.* charges for deviation and additional charges for deviation.
- vi.* Any other charges as may be raised by the RLDC

6.6.3.. An amount of surplus funds in the State Deviation Pool Account at the end of the financial year shall be utilised for the purpose of improvements in power system operations, for undertaking such measures and studies for improvement in reliability, security and safety of grid operations, undertaking capacity building and training programs related to system operations and market operations and for such other purposes or for other schemes as may be devised in consultation with National Load Despatch Centre, or Regional Load Despatch Centre, with prior approval of the Commission.

Provided that SLDC shall prepare scheme(s) and shall submit annual plan for utilisation of surplus funds and implement the scheme(s) only upon approval of the Commission.

6.6.4. The amount payable/receivable by TANGEDCO will be calculated by equalizing the amount payable to State DSM pool account & Regional pool account and the amount receivable from State DSM pool account & Regional pool account until completion of installation of boundary meters. The State DSM pool account will be balanced every week.

6.6.5. After completion of installation of ABT meters in TANTRANSCO/TANGEDCO boundaries, The shortfall in funds in the State Deviation Pool Account, if any, at the end of the weekly settlement period shall be recovered by levy of additional charge from the State Entities in proportion to Net Deviation Charges Payable by concerned State Entity for the applicable weekly settlement period through supplementary bills.

7. Commercial Settlement:

7.1. The payment of charges for Deviation shall have a high priority and the concerned constituent shall pay the indicated amounts within 10 (ten) days of the issue of Statement of Charges for Deviation including Additional Charges for Deviation by SLDC into the "State Deviation Pool Account".

7.2. If payments against the Charges for Deviation including Additional Charges for Deviation are delayed by more than two days, i.e., beyond twelve (12) days from the date of issue of the statement by the SLDC, the defaulting constituent shall have to pay simple interest @ 0.06% for each day of delay. 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.

7.3. All payments to the entities entitled to receive any amount on account of charges for Deviation shall be made within 2 working days of receipt of the payments in the "State Deviation Pool Account".

Provided that –

In case of delay in the Payment of charges for Deviations into the State Deviation Pool Account and if any, beyond 12 days from the date of issue of the Statement of Charges for Deviations, the State Entities who have to receive payment for Deviation or interest thereon shall be paid from the balance available in the State Deviation Pool Account.

In case the balance available is not sufficient to meet the payment to the State Entities, the payment from the State Deviation Pool Accounts shall be made on pro rata basis from the balance available in the State Deviation Pool Account.

The liability to pay interest for the delay in payments to the "State Deviation Pool Account" shall remain till interest is not paid, irrespective of the fact that constituents who have to receive payments, have been paid from the "State Deviation Pool Account" in part or full.

7.4. All State Entities which had at any time during the previous financial year failed to make payment of Charges for Deviation including Additional Charges for Deviation within the time specified in these Regulations shall be required to open a Letter of Credit (LC) equal to 110% of its average payable weekly liability for Deviations in the previous financial year, in favour of the SLDC within a fortnight from the date these Regulations come into force.

Provided that –

If any State entity fails to make payment of Charges for Deviation including Additional Charges for Deviation by the time specified in these Regulations during the current financial year, it shall be required to open a Letter of Credit equal to 110% of weekly outstanding liability in favour of State Load Despatch Centre within a fortnight from the due date of payment.

C amount shall be increased to 110% of the payable weekly liability for Deviation in any week during the year, if it exceeds the previous LC amount by more than 50%.

Illustration

If the average payable weekly liability for Deviation of a State entity during [2018-19] is Rs.2.0 crores, the State entity shall open LC for Rs.2.2 crores in [2019-20].

If the weekly payable liability during any week in [2019-20] is Rs.3.5 crores which is more than 50% of the previous financial year's average payable weekly liability of Rs 3.0 crores, the concerned state entity shall increase the LC amount to Rs.3.85 crores (1.1×3.50) by adding Rs.1.65 Crores.

7.5. In case of failure to pay into the "State Deviation Pool Account" within the specified time of 12 days from the date of issue of statement of charges for Deviations, the SLDC shall be entitled to encash the LC of the concerned constituent to the extent of the default and the concerned constituent shall recoup the LC amount within 3 days.

8. Payment of Fixed and Variable Charges.

Payment towards Fixed charges & energy charges by the buyer to Sellers shall be as per the mutually agreed terms in the respective power purchase agreements subject to the condition that the same are not inconsistent with the provisions of these regulations.

9. Formation of State Power Committee(SPC).

The State power committee will be formed as per the provisions of these regulations.

10.Compliance Monitoring:

10.1. The following events would be considered event of breach or default:

- i. Non-payment or delay in Deviation/Additional Deviation charges
- ii. Non-compliance of procedures outlined in these procedures.
- iii. Non-compliance of any directives by MERC or MSLDC in this matter.
- iv. In case Available Capacity is wilfully mis-declared by any seller.
- v. Non availability of Meter data for calculation of charges
- vi. In case of continued default for statutory compliance leading to declaration of wilful defaulter.

10.2.Consequences of event of default

- i. In case of default of provisions stated this procedure without prejudice, TNSLDC shall intimate the Entity for actions to be taken.

- ii. In case the entity fails to take corrective measures within stipulated time, the TNSLDC may take decision under its Power and approached the Commission.

11. Grievance Redressal:

All complaints unfair practices, delays, discrimination, lack of information, supply of wrong information or any other matter related to implementation of DSM shall be directed to Hon'ble TNERC for redressal.

12. Removal of Difficulties:

12.1. This procedure aims at easy and pragmatic implementation of Deviation Settlement Mechanism (DSM) to intrastate entities. However, some teething problems may still be experienced. The various implications would be known only after practical experience is gained by way of implementing these procedures. In case of any difficulty in implementation of this procedure, SLDC may approach the Commission for review or revision of the procedure.

12.2. In case any dispute between these procedures and TNERC DSM Regulations 2019, the later shall supersede these procedures and will be applicable.

12.3. Notwithstanding anything contained in this Procedure, SLDC may take appropriate decisions in the interest of System Operation. Such decisions shall be taken under intimation to TNERC and the procedure shall be modified /amended, as necessary.

13. General:

13.1. The intrastate entities shall keep the nodal agency and SLDC/STU indemnified at all times and shall undertake to indemnify, defend and keep the nodal agency, SLDC/STU harmless from any and all damages, losses, claims and actions including those relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties arising out of implementation of DSM mechanism in State.

13.2. Payment of Deviation charges, fees and charges for the concerned SLDC/STU and Distribution licensee as well as other charges for SLDC etc as applicable shall be made by the applicant as per the prevailing TNERC/CERC Regulations.

13.3. The applicant shall abide by the provisions of the Electricity Act 2003, the prevailing CERC/TNERC Regulations and Indian Electricity Grid Code, State Electricity Grid Code as amended from time to time.

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Annexure

1. Deviation charges for sellers, buyers, and other conditions:

1) As specified in the Regulation 10 (A) of Tamilnadu Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2019, the charges for the Deviations for all the time-blocks shall be payable for over-drawal by the Buyer and under-injection by the Seller and receivable for under-drawal by the Buyer and over-injection by the Seller, which are State Entities, and shall be worked out on the average frequency of a time-block by considering the Price Vector for Deviation Charges as stipulated in the following table:

<i>Average frequency of time block (Hz)</i>		<i>Charges for Deviation</i>
Below	Not below	(Paise/kWh)
	50.05	0.0
50.05	50.04	Slope determined by joining the price at Not Below 50.05Hz and identified price at 50.00Hz, and as detailed in the note below this Regulation
50.04	50.03	
50.03	50.02	
50.02	50.01	
50.01	50.00	Daily (simple) average Area Clearing Price discovered in the Day Ahead Market segment of power exchange
50.00	49.99	Slope determined by joining the price identified at 50.00 Hz and price at below 49.85Hz, and as detailed in the note below this Regulation
49.99	49.98	
49.98	49.97	
49.97	49.96	
49.96	49.95	
49.95	49.94	
49.94	49.93	
49.93	49.92	
49.92	49.91	
49.91	49.90	
49.90	49.89	
49.89	49.88	

49.88	49.87	
49.87	49.86	
49.86	49.85	
49.85		800.00

Note:-

- i. The Deviation Settlement Mechanism (DSM) rate vector will have a dynamic slope determined by joining the identified price points at 50 Hz. (daily simple average ACP), frequency of 49.85 Hz (Rs. 8 per unit) and 50.05 Hz (zero) on a daily basis.
- ii. The maximum ceiling limit applicable for average Daily ACP discovered in the DAM segment of Power Exchange at 50.00 Hz shall be 800 Paise/kWh.
- iii. Charges for deviation for each 0.01 Hz step shall be equivalent to the Slope determined by joining the price at 'Not below 50.05 Hz' and 'identified price at 50.00 Hz' in the frequency range of 50.05-50.00 Hz, and to the Slope determined by joining the 'price identified at 50.00 Hz' and price at 'below 49.85 Hz' in frequency range 'below 50 Hz' to 'below 49.85 Hz'.
- iv. The daily simple average ACP of the Power Exchange having a market share of 80% or more in energy terms on a daily basis shall be taken into consideration for linking to the DSM price vector. If no single Power Exchange is having a market share of 80% or more, the weighted average day-ahead price shall be used for linking to the DSM price.
- v. Daily simple average Area Clearing Prices (ACP) in the day-ahead market (exclusive of any transmission charges and transmission losses) shall be used as the basis for market linked DSM price at 50 Hz.
Provided that based on a review of the above mechanism within one year or in such time period as may be decided by the Commission, if the Commission is satisfied that the market conditions permit, the basis for market linked DSM price shall be substituted, by the time-block-wise ACP in the day ahead market or as and when the real time market is introduced, by the hourly ACP or the ACP of such periodicity as may be considered appropriate by the Commission.
- vi. The Cap rate for the charges for deviation for the generating stations whose tariff is determined by the Commission shall be equal to 311 paise/kWh.

Provided that no retrospective revision of DSM account shall be allowed even if the energy charges are revised at a later date.

- vii. In case of non-availability of daily simple average ACP due to no-trade on a given day, daily simple average ACP of the last available day shall be considered for determining the DSM charge.
- viii. Deviation price shall be rounded off to nearest two decimal places
- ix. An **illustration***** to the DSM price vector specified in table above, is provided as below.
- x. The National Load Despatch Centre (NLDC) shall act as the Nodal Agency to declare the daily DSM rates and shall display all relevant information on its website.”

*****Illustration to the DSM Price Vector specified in the Tamil Nadu Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2019.**

Average frequency of time block (Hz)		Charges for Deviation
Below	Not below	(Paise/kWh)
	50.05	0.0
50.05	50.04	1xP/5
50.04	50.03	2xP/5
50.03	50.02	3xP/5
50.02	50.01	4xP/5
50.01	50.00	P
50.00	49.99	50.00+15xP/16
49.99	49.98	100.00+14xP/16
49.98	49.97	150.00+13xP/16
49.97	49.96	200.00+12xP/16
49.96	49.95	250.00+11xP/16
49.95	49.94	300.00+10xP/16
49.94	49.93	350.00+9xP/16
49.93	49.92	400.00+8xP/16

49.92	49.91	$450.00+7xP/16$
49.91	49.90	$500.00+6xP/16$
49.90	49.89	$550.00+5xP/16$
49.89	49.88	$600.00+4xP/16$
49.88	49.87	$650.00+3xP/16$
49.87	49.86	$700.00+2xP/16$
49.86	49.85	$750.00+1xP/16$
49.85		800.00

Where P is the Daily average Area Clearing Price in paisa per kWh discovered in the Day Ahead Market segment of power exchange.

Additional Deviation Charges

Table – I: Additional Deviation Charges (for Seller/Buyer)

(A) When 12% of the Schedule is less than or equal to [100] MW

1	For over-drawal of electricity by any Buyer in excess of 12% and upto 15% of the schedule in a time block	Equivalent to 20% of Charge for Deviation corresponding to average grid frequency of the time-block
2	For over-drawal of electricity by any Buyer in excess of 15% and upto 20% of the schedule in a time block	Equivalent to 40% of Charge for Deviation corresponding to average grid frequency of the time-block
3	For over-drawal of electricity by any Buyer in excess of 20% of the schedule in a time block	Equivalent to 100% of Charge for Deviation corresponding to average grid frequency of the time-block
4	For under-injection of electricity by any Seller in excess of 12% and upto 15% of the schedule in a time block	Equivalent to 20% of Charge for Deviation corresponding to average grid frequency of the time-block
5	For under-injection of electricity by any Seller in excess of 15% and upto 20% of the schedule in a time block	Equivalent to 40% of Charge for Deviation corresponding to average grid frequency of the time-block
6	For under-injection of electricity by any Seller in excess of 20% of the schedule in a time block	Equivalent to 100% of Charge for Deviation corresponding to average grid frequency of the time-block

(B) When 12% of the Schedule is more than [100] MW

1	For over-drawal of electricity by any Buyer is above X MW and upto X+[10] MW in a time block	Equivalent to 20% of Charge for Deviation corresponding to average grid frequency of the time-block
2	For over-drawal of electricity by any Buyer is above X+[10] MW and upto X + [20] MW in a time block	Equivalent to 40% of Charge for Deviation corresponding to average grid frequency of the time-block
3	For over-drawal of electricity by any Buyer is above X + 20 MW in a time block	Equivalent to 100% of Charge for Deviation corresponding to average grid frequency of the time-block
4	For under-injection of electricity by any Seller is above [100] MW and upto[110] MW in a time block	Equivalent to 20% of Charge for Deviation corresponding to average grid frequency of the time-block
5	For under-injection of electricity by any Seller is above [110] MW and upto [120] MW in a time block	Equivalent to 40% of Charge for Deviation corresponding to average grid frequency of the time-block
6	For under-injection of electricity by any Seller is above [120] MW in a time block	Equivalent to 100% of Charge for Deviation corresponding to average grid frequency of the time-block

Table – II: Additional Deviation Charge for Under-Injection by Generating Stations other than the generating stations whose tariff is determined by the Commission

(A) When 12% of the Schedule is less than or equal to [100] MW

- | | | |
|---|--|---|
| 1 | For under-injection of electricity by any Seller in excess of 12% and upto 15% of the schedule in a time block | Equivalent to 20% of Cap Rate of [303.04] Paise/kWh or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less. |
| 2 | For under-injection of electricity by any Seller in excess of 15% and upto 20% of the schedule in a time block | Equivalent to 40% of Cap Rate [303.04] Paise/kWh or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less. |
| 3 | For under-injection of electricity by any Seller in excess of 20% of the schedule in a time block | Equivalent to 100% of Cap Rate [303.04] Paise/kWh or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less. |

(B) When 12% of the Schedule is more than [100] MW

- | | | |
|---|--|---|
| 1 | For under-injection of electricity by any Seller is above 100 MW and upto 110 MW in a time block | Equivalent to 20% of Cap Rate [303.04] Paise/kWh or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less. |
| 2 | For under-injection of electricity by any Seller is above 110 MW and upto 120 MW in a time block | Equivalent to 40% of Cap Rate [303.04] Paise/kWh or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less. |
| 3 | For under-injection of electricity by any Seller is above 120 MW in a time block | Equivalent to 100% of Cap Rate [303.04] Paise/kWh or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less. |

Note:

Additional Deviation Charge for Under-Injection by Generating Stations whose tariff is determined by the Commission

In the above table the cap rate of 303.04 Paise/kWh shall be replaced with 311 Paise/kWh for the generating stations whose tariff is determined by the commission.

Note: Stakeholders are requested to furnish their Suggestions / Comments to the Email.id tnsldcdsm@gmail.com on or before 11.06.2019.