

**TELANGANA STATE ELECTRICITY REGULATORY COMMISSION  
(DEVIATION SETTLEMENT MECHANISM AND RELATED MATTERS)  
REGULATION, 2021**

**No. TSERC / 03 / 2021**

**Dated 16.06.2021**

**REGULATION No. 3 of 2021**

**Preamble:**

The Commission with an objective to maintain grid discipline and grid security as per provisions of IEGC and State Electricity Grid Code and to enforce standards with respect to the quality, continuity and reliability services through the commercial mechanism for Deviation Settlement by monitoring and controlling the deviations against the final schedule issued by SLDC for drawal of electricity for Buyer(s) and schedule for injection of electricity for Seller(s), involved in the transactions of conveyance of electricity facilitated through open access using intra-state transmission system (In-STS) and/or distribution system of electricity made a Draft 'Deviation Settlement Mechanism and related matters' Regulations, 2018 on 05.01.2019, and invited suggestions, comments, objections from all the interested persons/stakeholders.

In the meantime, the Central Electricity Regulatory Commission, for effective

implementation of the Deviation Settlement Mechanism Regulation and to ensure safe and secure grid operations, has notified 'Deviation Settlement Mechanism and Related Matters (Fifth Amendment)' Regulations, 2019 dated 28.05.2019.

The Commission considered it appropriate to incorporate the provisions of the CERC's amendment regulations in TSERC draft Regulation to ensure safe and secure grid operations. Therefore, the Commission published the Draft Telangana State Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulation, 2020 and undertook afresh stakeholder consultation process before finalizing it.

In exercise of the powers conferred under sub-section (3) of section 32, sub-section (4) of section 33, Section 66, clauses (b) and (h) of sub-section (1) of section 86, and clauses (g) and (zp) of sub-section (2) of section 181 of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in that behalf, and after previous publication, the Telangana State Electricity Regulatory Commission hereby makes the following Regulation, namely:-

## **1. Short title, extent and commencement**

- (1) This Regulation may be called the Telangana State Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulation, 2021.
- (2) This Regulation shall extend to the entire State of Telangana.
- (3) This Regulation shall come into force from the effective date i.e., on 1<sup>st</sup> April 2022:

Provided that SLDC will arrange for and complete all necessary modifications or development in software and all other aspects including trial run of accounting of State Deviation Pool Account for smooth implementation of this Regulation from the effective date:

Provided further that till the date prior to the effective date of this Regulation the provisions of Open Access Regulation shall remain in force for the purpose of energy accounting and deviation settlement:

## **2. Definitions and Interpretation**

- (1) In this Regulation, unless the context otherwise requires -
  - (a) '**Act**' means the Electricity Act, 2003 (36 of 2003) and subsequent amendments thereof;
  - (b) '**Actual Drawal**' in a time-block means the electricity drawn by a Buyer as measured by the interface meters;
  - (c) '**Actual Injection**' in a time-block means electricity generated or supplied by the Seller as measured by the interface meters;
  - (d) '**Area Clearing Price (ACP)**' means the price of a time block electricity contract established on the Power Exchange after considering all valid purchase and sale bids in particular area(s) after market splitting, i.e., dividing the market across constrained transmission corridor(s);
  - (e) '**Buyer**' means a person, including distribution licensee, deemed distribution licensee or open access consumer, purchasing electricity through a transaction scheduled in accordance with the provisions of Open Access Regulation;

- (f) **‘Captive Generating Plant’** shall have the same meaning as assigned to it under Section 2(8) of the Act and the rules framed thereunder.
- (g) **‘CERC’** means Central Electricity Regulatory Commission referred to in sub-section (1) of section 76 of the Act;
- (h) **‘Commission’** means the Telangana State Electricity Regulatory Commission referred to in sub-section (1) of section 82 of the Act;
- (i) **‘Connectivity Regulation’** means Open Access Regulation;
- (j) **‘Daily Base DSM Charge’** means the sum of Charges for Deviations for all time blocks in a day payable or receivable as the case may be, excluding the Additional Charges for Deviation specified under clause 10 of this Regulation;
- (k) **‘Day Ahead Market (DAM)’** means a market where physical delivery of electricity occurs on the next day (T+1) of the date of transaction (T) and is governed by the Central Electricity Regulatory Commission (Power Market) Regulations, 2010 as amended from time to time, the Rules and Bye-Laws of the Power Exchanges as approved by CERC;
- (l) **‘Deviation’** in a time-block for a Buyer means its total actual drawal minus its total scheduled drawal and for a Seller means its total actual injection minus its total scheduled generation;
- (m) **‘Deviation Settlement Mechanism’** shall mean and include the framework for energy accounting, deviation accounting, rules for pricing of deviation(s) payable and receivable by State Entities and other design parameters as specified under clause 6 of this Regulation;
- (n) **‘Distribution Licensee’** means a licensee authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply and includes deemed distribution licensee and those exempted from obtaining distribution license.
- (o) **‘Full Open Access Consumer or Open Access Consumer’** means a consumer connected to intra-state transmission system (In-STS) and/or distribution system but not having a supply agreement with the distribution licensee in whose area of supply the consumer is located, but availing or intending to avail supply of energy from a person other than that distribution licensee under the Open Access Regulation and includes a consumer availing wheeling facility for carrying the electricity from his captive generating plant to the destination of his own use without having a supply agreement with the distribution licensee of the area in which the consumer’s premises is located;  
**Explanation:-** *The in situ captive user, who is having captive generating plant/facility within its premises for captive use, yet has been connected to the grid for the sake of banking if any, shall not be amenable to this definition;*
- (p) **‘Gaming’** in relation to this Regulation, shall mean an intentional misdeclaration of drawal schedule by any Buyer or intentional misdeclaration of declared capacity by any Seller, in order to make an undue commercial gain through Charges for Deviation;
- (q) **‘Indian Electricity Grid Code (or IEGC)’** means the Grid Code specified by the Central Electricity Regulatory Commission under (h) of

sub-section (1) of Section 79 of the Act;

- (r) **'Interface Meters'** 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;
- (s) **'Load Despatch Centre'** means National Load Despatch Centre (NLDC), Regional Load Despatch Centre (RLDC) or State Load Despatch Centre (SLDC), as the case may be, responsible for coordinating, scheduling of Buyers and Sellers in accordance with the provisions of IEGC;
- (t) **'MoD Guidelines'** means the Guidelines for operation of Merit Order Despatch and amendments thereof, as approved by the Commission separately, if required, in accordance with the State Electricity Grid Code;
- (u) **'Open Access Generator'** means a generating company using or intending to use the intra-state transmission system and/or the distribution system of the licensees in the state for supply of electricity to a scheduled consumer or open access consumer under the Open Access Regulation;
- (v) **'Open Access Regulation'** means (Terms and Conditions of Open Access) Regulation, 2005 [Regulation No.2 of 2005] in conjunction with (Interim Balancing and Settlement Code) Regulation, 2006 [Regulation No.2 of 2006] as amended from time to time and as adopted by the Commission through Regulation No.1 of 2014 and shall include any subsequent notification and amendments thereof;
- (w) **'Partial Open Access Consumer or Scheduled Consumer'** means a consumer connected to intra-state transmission system (In-STS) and/or distribution system and having a supply agreement with the distribution licensee in whose area of supply the consumer is located and also has a supply agreement with a person other than the distribution licensee under the Open Access Regulation and includes a consumer of a distribution licensee who also avails of wheeling facility for carrying the electricity from his captive generating plant to the destination of his own use;
- (x) **'Scheduled Drawal'** at any time or for a time block or any period time block means schedule of despatch in MW or MWh ex-bus given by the concerned Load Despatch Centre;
- (y) **'Scheduled Generation'** at any time or for a time block or any period means schedule of generation or injection in MW or MWh ex-bus given by the concerned Load Despatch Centre;
- (z) **'Seller'** means a person, including a generating station or unit of generating station including Captive Power Plant, supplying electricity to the grid through a transaction scheduled in accordance with the provisions of Open Access Regulation;
- (aa) **'State'** means Telangana State;
- (bb) **'State Deviation Pool Account'** means the State Account for receipts and payments on account of deviations by the Buyers and Sellers;

- (cc) **'State Electricity Grid Code'** means the Grid Code specified by the Commission under clause (h) of sub-section (1) of section 86 of the Act viz., Telangana State Electricity Regulatory Commission (State Electricity Grid Code) Regulation, 2018 (Regulation No.4 of 2018) as amended from time to time;
  - (dd) **'State Entity'** means such person who is in SLDC control area and whose metering and energy accounting is done at the State level;
  - (ee) **'State Load Despatch Centre or SLDC'** means the Load Despatch Centre of the State established under sub-section (1) of section 31 of the Act, responsible for coordinating, scheduling of the State Entities in accordance with the provisions of State Electricity Grid Code;
  - (ff) **'Time-Block'** means block of 15 minutes each or any such shorter duration as may be notified by the Commission, for which specified electrical parameters and quantities are recorded by a Special Energy Meter (SEM), with first time block starting at 00:00 hours;
  - (gg) **'Time Block DSM Charge'** means the Charges for Deviation for the specific time block in a day payable or receivable as the case may be, excluding the additional charges as specified under clause 10 of this Regulation.
- (2) Words and expressions used and not defined in this Regulation but defined in the Act, or IEGC or any other Regulations of this Commission shall have the meanings assigned to them respectively in the Act or IEGC or any other Regulation as the case may be.

### **3. Objective**

The objective of this Regulation is to maintain grid discipline and grid security as envisaged under the State Electricity Grid Code through the commercial mechanism for Deviation Settlement for controlling drawal and injection of electricity by the users of the grid.

### **4. Applicability**

- (1) This Regulation shall be applicable to Buyer(s) and Seller(s) involved in the transactions of conveyance of electricity facilitated through open access using intra-state transmission system (In-STS) and/or distribution system of electricity (including inter-state wheeling of power), subject to the following conditions: -

- (a) Deviation Settlement Mechanism under this Regulation shall be applicable for all Buyer(s) including distribution licensee(s), deemed distribution licensee(s) located in the State and full open access consumers connected to In-STS:

Provided that, Deviation Settlement of partial open access consumers connected to In-STS and all open access consumers connected to the distribution network shall be in accordance with the provisions of the Open Access Regulation.

- (b) Deviation Settlement Mechanism under this Regulation shall be applicable for all Seller(s) having installed generating capacity of 5 MW and above (threshold capacity) connected to In-STS and/or distribution system, including open access generators, captive

generators (excluding in-situ captive generators), all renewable energy generators (excluding solar and wind generating station(s)):

Provided that, the revision in the threshold capacity limit shall be separately notified by the Commission in stages over the period considering implementation aspects and based on report to be submitted by SLDC:

Provided further that, the forecasting, scheduling and deviation settlement related matters in respect of solar and wind based generation sources shall be governed as per the provisions of 'Telangana State Electricity Regulatory Commission (Forecasting, Scheduling Deviation Settlement and Related Matters for Solar and Wind Generation Sources) Regulations, 2018' as amended from time to time.

## **5. Duties of State Load Despatch Centre and State Entities**

- (1) This Regulation aim to govern the functioning of the various State Entities in a way that discipline is maintained with regards to the drawal and injection of energy by the State Entities and the reliability and integrity of power system is maintained.
- (2) To meet these objectives, necessary pre-conditions and covenants for participation by the State Entities shall be as under:
  - (a) The State Entities shall inform SLDC of all contracts that they have entered into for exchange of energy.
  - (b) The State Entities shall operate their loads and generating equipment in a manner that is consistent with the provisions of IEGC and State Electricity Grid Code.
  - (c) The State Entities shall enter into a Connection Agreement and/or Open Access Agreement with the concerned transmission licensee and/or the distribution licensee, which shall specify physical and operational requirements for reliable operation and gain physical access and connectivity to In-STS and/or the distribution system, as the case may be, in accordance with Open Access Regulation. The State Transmission Utility (STU) and/or the distribution licensee, as the case may be, shall make necessary arrangements for installation of suitable meters, capable of recording energy flows at 15-minute intervals or any other time interval as specified by the Commission, at the points of drawal and injection of the State Entities. The time synchronization of the metering system shall be through Global Positioning System (GPS) with counter check from the State Energy Accounting Centre, which is SLDC.
  - (d) SLDC shall take all decisions regarding the despatch of generating stations after evaluating all the possible network parameters, constraints, congestions in the transmission network. In the event of any such network aberration, the instructions issued by SLDC relating to despatch and drawal shall be binding on all the State Entities.
  - (e) SLDC shall publish on its website all such information as required for all other State Entities to be aware of the energy exchanges taking place within the pool as well as exigency conditions, if any with regard

to despatch of power.

## **6. Principles for operationalising Deviation Settlement Mechanism**

(1) The framework for Deviation Settlement Mechanism shall cover the following key design parameters, viz. (a) Scheduling Period (b) Guiding Principles for Scheduling and Despatch (c) Operating Range for Frequency (d) Deviation (e) Settlement Period (f) Measurement Unit for State Deviation Pool Account (g) Deviation Pool Price Vector (h) Deviation Volume Limit (i) Allocation of Losses.

(a) Scheduling Period: The scheduling period shall comprise of ninety six (96) time blocks, each of fifteen (15) minute duration starting from 00:00 hours (IST) ending with 24:00 hours (IST). The first time block of scheduling period shall commence from 00:00 hours (IST) to 00:15 hours (IST), second time block of scheduling period shall commence from 00:15 hours (IST) to 00:30 hours (IST) and so on or such other period as the Commission may specify.

(b) Guiding Principles for Scheduling and Despatch: All Buyers and Sellers under this Regulation shall be guided by the scheduling and despatch procedure to be formulated by SLDC in accordance with provisions of State Electricity Grid Code. The scheduling and despatch code thereon shall be governed by following principles:

(i) Based on the load requirement forecasted by Buyers and availability schedule forecasted by Sellers (generators), SLDC shall draw up the least cost despatch schedule on Day Ahead basis for State Entities in accordance with the Merit Order Despatch (MoD) principles as specified in State Electricity Grid Code or MoD guidelines as may be approved by the Commission separately, if required, in accordance with the State Electricity Grid Code.

(ii) Wheeling transactions of captive users and open access consumers shall be despatched as contracted, subject only to transmission constraints and system emergency conditions.

(iii) SLDC shall maintain and publish a separate account of exchange of surplus power capacity amongst Buyers/Sellers.

(iv) During real time operation, in case the grid parameters including frequency, voltage, transmission line loading and substation loading conditions deviate beyond permissible operation range, SLDC shall take suitable measures in the interest of reliable and safe grid operations or to ensure compliance of RLDC instructions in conformity with the provisions of CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 and subsequent amendments thereof. Accordingly, SLDC shall issue necessary despatch or curtailment instructions in accordance with centralized MoD guidelines for the State to maintain the load generation balance and comply with conditions stipulated under IEGC and State Electricity Grid Code.

(v) SLDC shall maintain and publish a separate account of such actions initiated by it in the interest of grid operations or in

compliance of RLDC instructions in conformity with the provisions of CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 and subsequent amendments thereof. The SLDC shall publish monthly report of exchange of power capacity, if any, amongst State Entities consequent of such SLDC interventions.

- (vi) The time block wise settlement of such exchange of power on account of such actions initiated by SLDC shall be settled at the applicable Charges for Deviation including Additional Charges for Deviation, if any, for the State at the State periphery for the respective time block.
- (c) Operating Range for Frequency: The normal operating range for average grid frequency for a time block shall be in line with range stipulated under IEGC and State Electricity Grid Code from time to time. No deviation shall be allowed beyond the specified operating range of frequency band by the Commission from time to time.
- (d) Deviation: For the purposes of deviation settlement amongst the State Entities, SLDC shall work out deviation for 'State Deviation Pool Account' comprising over-drawal/under-drawal and over-injection/under-injection for each State Entity corresponding to each scheduling period. Charges for Deviation and Additional Charges for Deviation shall be in accordance with clause 9 and 10 of this Regulation.
- (e) Settlement Period: Preparation and settlement of 'State Deviation Pool Account' shall be undertaken on weekly basis coinciding with the mechanism followed for the regional Deviation Settlement Accounts.
- (f) Measurement Unit for State Deviation Pool Account: The measurement unit for State Deviation Pool Account for volume shall be kilowatt hours (kWh) and for value (payable and receivable) shall be Indian Rupees (INR). The decimal component of the energy unit (kWh) and amount (INR) shall be rounded off to the nearest integer value. In addition, the interface meters and the state energy account shall capture the reactive energy exchange over interface points, however, the reactive energy pricing framework and compensation for reactive energy exchange shall be dealt with separately.
- (g) Deviation Pool Price Vector: The pricing of deviation of Buyers/Sellers shall be in accordance with the Deviation Price Vector as specified in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 and its subsequent amendments thereof:  
Provided that in the event of violation of the sign change requirement, an Additional Charges shall be levied as specified under clause 10 of this Regulation.
- (h) Deviation Volume Limit: To ensure grid discipline and grid security, conditions for Deviation Volume Limit and consequences for exceeding such Deviation Volume Limit by way of levy of Additional Charges for Deviation as specified under clause 10 shall be applicable.
- (i) Allocation of Losses: For scheduling purposes, intra-state transmission system losses as approved by the Commission shall be allocated



amongst the State Entities in proportion to the scheduled drawal by each State Entity:

Provided that SLDC shall maintain account of actual intra-state transmission system loss for each time block and publish on its website a reconciliation statement of the monthly average intra-state transmission loss and 52-week average intra-state transmission loss vis-à-vis approved loss by the Commission.

## **7. Declaration of Capacity and Scheduling**

- (1) The provisions of the State Electricity Grid Code as amended from time to time and Open Access Regulation, shall be applicable for declaration of capacity and scheduling.
- (2) The generating unit, as far as possible, shall generate electricity as per the day-ahead generation despatch schedule finalized by SLDC in accordance with the State Electricity Grid Code:

Provided that the revision in generation despatch schedule on the day of operation shall be permitted, in accordance with the procedure specified under the State Electricity Grid Code as amended from time to time and Open Access Regulation.

## **8. Treatment for gaming**

- (1) The Commission, either Suo-Moto or on a petition made by SLDC, or any affected party, may initiate proceedings against any Buyer or any Seller on charges of gaming and if required, may order an inquiry in such manner as decided by the Commission.
- (2) When the charge of gaming is proved in the inquiry made in this regard under above-mentioned sub-clause (1), the Commission may without prejudice to any other action under the Act or Regulation made thereunder, disallow any Charges for Deviation to such Buyer or Seller during the period of such gaming.

## **9. Charges for Deviations**

### **Charges for Deviation for Buyers and Sellers:**

- (1) The Charges for 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 DSM Price Vector as specified in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 as amended from time to time and is reproduced in Annexure-I subject to the conditions under clause 9(2) to 9(7).
- (2) The Charges for Deviation for under-drawal by the Buyer in a time block in excess of 12% of the schedule or [X] MW, whichever is less, shall be zero; wherein limit of [X] MW shall be determined as per methodology specified under clause 10(2) of this Regulation.
- (3) The Charges for Deviation for generating stations, irrespective of the fuel type and whether the tariff of such generating station is regulated by the Commission or not, shall not exceed the Cap Rate for Deviation of

Rs.3.0304/kWh.

- (4) The Charges for Deviation for over-injection by the Seller in a time block in excess of 12% of the schedule or 30 MW, whichever is less, shall be zero, except in case of injection of infirm power, which shall be governed by clause 9(7) of this Regulation.
- (5) The Charges for Deviation shall be zero at grid frequency of '50.05 Hz and above'.
- (6) The Charges for Deviation corresponding to grid frequency interval of 'below 50.01 Hz and not below 50.00 Hz' shall be the daily average of the Area Clearing Price (ACP) discovered in the Day Ahead Market (DAM) segment of Power Exchange. 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.

**Charges for Deviation for Infirm Power Injected into the Grid**

- (7) The infirm power injected into the grid by a generating unit of a generating station during the testing, prior to the date of commissioning (COD) of the unit shall be paid at Charges for Deviation for infirm power injected into the grid, consequent to testing, for a period not exceeding six (6) months or the extended time as may be allowed by the Commission, subject to ceiling of Cap Rate corresponding to the main fuel used for such injection as specified below:

Domestic Coal/Lignite/Hydro	Rs.1.78/kWh sent out
Administered Price Mechanism (APM) gas as fuel	Rs.2.82/kWh sent out up to the date of revision of price of APM gas by Government of India and thereafter, at the rate to be notified by the CERC separately
Imported Coal	Rs.3.03/kWh sent out
RLNG	Rs.8.00/kWh sent out

**10. Limits on Deviation Volume and Consequences of Crossing Limits**

- (1) The over-drawal/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 the range of '49.85 Hz or above and below 50.05 Hz'. The Volume Limit for Buyer shall be determined as per clause 10(2) of this Regulation:

Provided that no over-drawal of electricity by any Buyer shall be permissible when grid frequency is 'below 49.85 Hz' and no under-drawal of electricity by any Buyer shall be permissible when grid frequency is '50.05 Hz and above'

- (2) The **Volume Limit for Buyer** shall be determined as under:  
12% of scheduled drawal or [X] MW, whichever is lower.

Where  $[X] \text{ MW} = (\text{Peak Demand of Buyer} / \sum \text{NCPD}) \times \text{State Volume Limit}$ .

Where,

Buyer is a person, including distribution licensee(s), deemed

distribution licensee(s) located in the State and full open access consumers connected to In-STTS;

Non-Coincident Peak Demand (NCPD) represents the sum of Peak Demand of Buyer(s) and which shall be recorded Peak Demand in the previous Financial Year or Projected Peak Demand in the ensuing Financial Year, whichever is higher;

Volume Limit for the Buyer determined as per above formula, shall be rounded off to nearest integer value subject to minimum of 1 MW;

State Volume Limit shall be linked to Volume Limit (L) applicable to Telangana State as per CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 and subsequent amendments thereof.

- (3) The over-injection/under-injection of electricity by the Seller shall not exceed 12% of the scheduled injection or 30 MW, whichever is lower when grid frequency is '49.85 Hz or above and below 50.05 Hz':

Provided that no under-injection of electricity by a Seller shall be permissible when the grid frequency is 'below 49.85 Hz' and no over-injection of electricity by a Seller shall be permissible with the grid frequency is '50.05 Hz and above'.

#### **Additional Charges for Deviation**

- (4) In addition to Charges for Deviation as stipulated under clause 9 of this Regulation, Additional Charges for Deviation shall be applicable for –
- (a) over-drawal as well as under-injection of electricity for each time block in excess of the volume limit specified in clause 10(2) and 10(3), when average grid frequency of the time block is '49.85 Hz and above' at the rates specified in Annexure-II in accordance with the methodology specified in clause 10(5) and 10(6) of this Regulation;
  - (b) under-drawal as well as over-injection of electricity for each time block by a Buyer/Seller, as the case may be; when grid frequency is '50.10 Hz and above' at the rates equivalent to Charges for Deviation corresponding to the grid frequency of 'below 50.01 Hz but not below 50.00 Hz' or Cap Rate for Deviation of Rs.3.0304/kWh, whichever is lower.
  - (c) over-drawal of electricity by a Buyer for each time block when grid frequency is 'below 49.85 Hz' as a percentage of Charges for Deviation corresponding to the average grid frequency of the time block and the same shall be equivalent to 100% of Charges for Deviation of Rs.8.00/kWh corresponding to the grid frequency of 'below 49.85 Hz'.
  - (d) under-injection of electricity by a Seller, during the time-block when grid frequency is 'below 49.85 Hz', by any generating station irrespective of fuel type and whether the tariff of such generating station has been determined by the Commission or not shall be equivalent to 100% of the Cap Rate for deviations of Rs.3.0304/kWh.

**Methodology for computation of Additional Charges for Deviation for crossing the volume limits specified for over-drawal/under-injection:**

- (5) The Additional Charges for Deviation for over-drawal by a Buyer for each time-block in excess of the volume limit specified in clause 10(2), when grid frequency is '49.85 Hz and above' shall be as specified by the Commission as a percentage of the Charges for Deviation corresponding to the average grid frequency of the time block with due consideration to the behaviour of the Buyer towards grid discipline.
- (6) The Additional Charges for Deviation for under-injection of electricity during the time-block in excess of the volume limit specified in clause 10(3), when grid frequency is '49.85 Hz and above', by the generating stations irrespective of the fuel type and whether the tariff of such generating stations is regulated by the Commission or not, shall be as specified by the Commission as a percentage of the Cap Rate or the Charges for Deviation corresponding to the average grid frequency of the time block, or both, with due consideration to the behaviour of the generating stations towards grid discipline.

**Additional Charges for Sustained Deviation**

- (7) In the event of sustained deviation from schedule in one direction (positive or negative) for six (6) time blocks, the State Entity (Buyer or Seller), shall correct its position, by making the sign of its deviation from schedule changed or by remaining in the range of  $\pm 20$  MW with reference to its schedule, at least once, latest by 7<sup>th</sup> time block, such range being a subset of the Volume Limit as specified under clause 10(2) and 10(3) of this Regulation:

Provided that violation of the sign change requirement as aforesaid shall attract an Additional Charge, as specified in the table below:

<b>No. of violations in a day</b>	<b>Additional Charge payable</b>
From first to fifth violation	For each violation, an additional charge @ 3% of daily base DSM charge payable or receivable
From sixth to tenth violation	For each violation, an additional charge @ 5% of daily base DSM charge payable or receivable
From eleventh violation onwards	For each violation, an additional charge @ 10% of daily base DSM charge payable or receivable

Provided further that the counting of number of sign change violations shall start afresh at 00:00 hours for each day:

Provided also that the Commission may adopt a different methodology or change the allowed time blocks for sign change as required from time to time:

Provided also that payment of additional charge for failure to adhere to sign change requirement as aforesaid shall not be applicable to:

- (a) Renewable energy generators which are State Entities;
- (b) Run of river projects without pondage;
- (c) Any infirm injection of power by a generating station prior to COD of a unit during testing and commissioning activities;
- (d) Any drawal of power by a generating station for the start-up activities of

- a unit;
- (e) Any inter-regional deviations;
  - (f) Forced outage of a generating station in case of collective transactions on Power Exchanges;

***Illustration:*** A State Entity having a schedule deviation from time block  $t_1$ , shall correct its position either by changing the sign of its schedule deviation (from positive to negative or negative to positive, as the case may be) or come back in the range of  $\pm 20$  MW with reference to its schedule, latest by the end of time block  $t_7$ . In case, such sign change does not take place or it fails to come back in the aforesaid range by the end of time block  $t_7$ , but such correction of position takes place from time block  $t_8$  upto time block  $t_{13}$  then an Additional Charge shall be levied equivalent to one (1) violation. Further, in case, sign change does not take place or its fails to come back in the range as aforesaid latest by the end of time block  $t_{13}$ , but correction in position takes place from time block  $t_{14}$  up to time block  $t_{19}$ , then the additional charge shall be levied for two (2) violations and so on.

The additional charge shall be at the rate as specified in 10(7) of this Regulation.

#### **11. Treatment of Infirm Power and Start Up Power prior to COD**

- (1) Any infirm power injection by a generating station prior to COD of a unit during testing and commissioning activities shall be exempted from the volume limit as specified in clause 10 above for a period not exceeding six (6) months or the extended time allowed by the Commission.
- (2) Any drawal of power by a generating station prior to COD of a unit for the startup activities shall be exempted from the volume limit as specified in clause 10 above when the grid frequency is '49.85 Hz and above'.
- (3) Any drawal of power by a generating station prior to COD of a unit for the start-up activities shall be exempted from the levy of Additional Charges for Deviation.

#### **12. Framework for Operationalization and Monitoring of Deviation Settlement Mechanism**

- (1) SLDC shall develop and publish on its website procedures and methodologies for the computation of Charges for Deviation and Additional Charges for Deviation for each State Entity for crossing the volume limits specified for the under-drawal/over-injection and for over-drawal/under-injection respectively.
- (2) Payment of Charges for Deviation under clause 9 and the Additional Charges for Deviation under clause 10(4)(b), 10(4)(c) and 10(4)(d) shall be levied by SLDC without prejudice to any action that may be considered appropriate by the Commission under section 142 of the Act for contravention of the limits of over-drawal/under-drawal or over-injection/under-injection as specified in this clause, for each time block of violation of provision of clause 10(7) of this Regulation.
- (3) The charges for over-drawal/under-injection and under-drawal/over-injection of electricity shall be computed by SLDC in accordance with the methodology used for preparation of 'State Energy Accounts'

- (4) SLDC shall, on weekly basis, prepare and publish on its website the records of the Deviation Accounts, specifying the quantum of over-drawal/under-injection and the corresponding amount of Charges for Deviation payable/receivable for each Buyer and Seller for all the time-blocks when the grid frequency was '49.85 Hz and above' and 'below 49.85 Hz' separately.

### **13. State Energy Account**

- (1) SLDC shall prepare the statement of State Energy Account for each time block for Buyers and Sellers on monthly basis. Data required for billing of partial open access consumers connected to In-STS and all open access consumers connected to distribution system shall be passed on to the billing centre of the distribution licensee by SLDC. The billing centre of the distribution licensee shall be responsible for energy accounting, raising and settlement of bills with partial open access consumers connected to In-STS and all open access consumers connected to distribution system. Payments towards capacity charges and energy charges by the Buyers to the Sellers shall be as per the mutually agreed terms in the respective Power Purchase/Sale Agreement subject to the condition that the same are not inconsistent with the provisions of this Regulation.
- (2) Energy Account Statement for Deviation Settlement of partial open access consumers connected to In-STS and all open access consumers connected to distribution network shall be in accordance with the provisions of Open Access Regulation.
- (3) SLDC shall be responsible for preparation of weekly Charges for Deviation statement to all State Entities and billing and collection of Charges for Deviation from the State Entities in accordance with clause 15 of this Regulation:

Provided that the Provisional State Energy Account and Statement for Deviation Account Settlement should be available for scrutiny and verification by the concerned State Entities for a specified time period. The same would be finalized within a stipulated time period upon addressing comments/ discrepancies (if any):

Provided further that State Energy Account and Deviation Account Statements shall be available for third (3<sup>rd</sup>) party verification and audit on periodic basis and such third (3<sup>rd</sup>) party verification and audit shall be carried out at least once (1) a year.

- (4) A detailed energy accounting procedure shall be prepared by the SLDC within three (3) months of notification of this Regulation and shall be submitted to the Commission for approval:

Provided that SLDC shall undertake a stakeholder consultation process by uploading the draft procedure on its website before its submission to the Commission for approval.

### **14. Compliance with the Instructions of State Load Despatch Centre**

- (1) Notwithstanding anything specified in this Regulation, Buyers and Sellers shall strictly follow the instructions of SLDC on drawal and injection in the interest of grid security and grid discipline:

Provided that SLDC shall exercise its authority and invoke the provisions of sub-sections 4 and 5 of section 33 of the Act to secure compliance of its directions:

Provided further that SLDC, while initiating any proceedings before the Commission, is required to follow the applicable regulations including but not limited to Conduct of Business Regulation, 2015 and Levy of Fee Regulation, 2016.

## **15. Accounting of Charges for Deviation**

- (1) A statement of Charges for Deviations including Additional Charges for Deviation levied under this Regulation shall be prepared by SLDC on a weekly basis (starting Monday 00:00 hrs to Sunday 24:00 hrs) based on the data collected by it on or before Thursday of the week under review and shall communicate the same to all constituents involved in grid operations by the succeeding Tuesday, for seven-day period ending on the penultimate Sunday mid-night.
- (2) All payments on account of Charges for Deviation including Additional Charges for Deviation levied under this Regulation 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 SLDC in accordance with the provisions of this Regulation:

Provided that –

- (a) The Commission may by order direct any other entity to operate and maintain respective 'State Deviation Pool Account'.
  - (b) Separate books of accounts shall be maintained for the principal component and interest component of Charges for Deviation and Additional Charges for Deviation by SLDC.
  - (c) The State Entities shall comply with all statutory requirements for payment of applicable statutory levies, taxes and duties, if any.
  - (d) The State Entities shall facilitate SLDC in complying with reporting requirements of statutory authorities, as necessary.
- (3) All payments received in the 'State Deviation Pool Account' shall be appropriated in the following sequence:
    - (a) Any cost or expense or other charges incurred on recovery of Charges for Deviation.
    - (b) Over dues or penal interest, if applicable.
    - (c) Normal interest.
    - (d) Regional deviation pool account.
    - (e) Charges for Deviation and Additional Charges for Deviation.
    - (f) Any other charges as may be raised by the RLDC.
  - (4) The surplus funds in the State Deviation Pool Account at the end of the financial year shall be utilized for the purpose of improvements in power system operations, for undertaking such measures and studies for improvement in reliability, security and safety or grid operations, undertaking capacity building and training programs related to system operations and market operations and for such other purposes as may be specified by the

Commission 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, 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 an additional charge from the State Entities in proportion to the Net Charges for Deviation payable by the concerned State Entity for the applicable weekly settlement period through supplementary bills:

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

#### **16. Schedule of payment of Charges for Deviation**

(1) The payment of Charges for Deviation shall have a high priority and the concerned State Entity shall pay the indicated amounts within ten (10) days of the issue of statement of Charges for Deviation including Additional Charges for Deviation by SLDC into the 'State Deviation Pool Account'.

(2) If payments against the Charges for Deviation including Additional Charges for Deviation are delayed by more than two (2) days, that is beyond twelve (12) days from the date of issue of the statement by SLDC, the defaulting State Entity shall have to pay simple interest @ 0.04% 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.

(3) All payments to State Entities entitled to receive any amount on account of Charges for Deviation shall be made within two (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 interest there on if any, beyond twelve (12) days from the date of issue of the statement of Charges for Deviations, State Entities receiving 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 State Entities, the payment from the State Deviation Pool Account 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.

(4) All the State Entities 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 SLDC within a fortnight from the effective date of this Regulation:

Provided that if any State Entity fails to make payment of Charges for Deviation including Additional Charges for Deviation by the time specified in this Regulation during the current financial year, it shall be required to open a LC equal to 110% of weekly outstanding liability in favour of SLDC within a



fortnight from the due date of payment.

Provided further that LC 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%:

Provided further that, "Letter of Mandate" issued by Reserve Bank of India (RBI), wherever applicable, shall also be accepted as Payment Security Mechanism in lieu of Letter of Credit

Provided also that if instances of repeated defaults are observed, the Commission may notify an appropriate penal mechanism.

**Illustration**

*If the average payable weekly liability for deviation of a State Entity during  $n^{th}$  year is Rs.2.0 crore, the State Entity shall open LC for Rs.2.2 crore in  $(n+1)^{th}$  year. If the weekly payable liability during any week in  $(n+1)^{th}$  year is Rs.3.5 crore which is more than 50% of the previous financial year's average payable weekly liability of Rs.3.0 crore, the concerned State Entity shall increase the LC amount to Rs.3.85 crore ( $1.1 \times Rs.3.50$ ) by adding Rs.1.65 crore.*

- (5) In case of failure to pay into the 'State Deviation Pool Account' within the specified time of twelve (12) days from the date of issue of statement of Charges for Deviations, 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 three (3) days.

**17. Governance Structure and constitution of State Power Committee**

- (1) Within three (3) months from date of notification of this Regulation, SLDC shall formulate operating procedures and business rules for constitution of State Power Committee, which shall be subject to approval by the Commission upon the same being placed for consideration before it.
- (2) The State Power Committee shall perform the following functions:
- (a) Co-ordinate and facilitate the intra-state energy exchange for ensuring optimal utilization of resources.
  - (b) Monitor compliance of this Regulation by the State Entities and submit an annual compliance report to the Commission.
  - (c) Guide SLDC for modification of procedure(s) to address any implementation difficulties.
  - (d) Provide necessary support and advice to the Commission for suitable modifications/issuance of operating procedures, practice directions, and amendment to provisions of this Regulation, as may be necessary upon due regulatory process.

**18. Power to amend**

- (1) The Commission may, at any time add, vary, alter, modify or amend any provisions of this Regulation.

**19. Power to issue directions**

- (1) The Commission may, from time to time, issue orders and practice directions in regard to the implementation of the Regulation and procedures to be followed.

**20. Power to relax**

- (1) 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, may relax any of the provisions of this Regulation on its own motion or on an application made before it by an interested person.

**21. Power to remove difficulties**

- (1) If any difficulty arises in giving effect to the provisions of this Regulation, the Commission may, by general or special order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

**22. Repeal and Savings**

- (1) The Telangana State Electricity Regulatory Commission (adoption of previously subsisting regulations, decisions, directions or orders, licences and practice directions) Regulation, 2014 (Regulation No.1 of 2014) to the extent relating to the matters covered in this Regulation stand repealed from the effective date of this Regulation.
- (2) Notwithstanding such repeal, anything done or any action taken or purported to have been done or taken including any rule, notification, inspection, order or notice made or issued or any confirmation or declaration made under the provisions hereby repealed shall be deemed to have been done or taken under the corresponding provisions of this Regulation.

**23. Inquiry, investigation and adjudication**

- (1) All inquiries, investigations and adjudications under this Regulation shall be done by the Commission through the proceedings in accordance with the provisions of the Conduct of Business Regulations as amended from time to time.

**(BY ORDER OF THE COMMISSION)**

Hyderabad  
16.06.2021

Sd/-  
UMAKANTA PANDA  
Commission Secretary [FAC]

## Annexure-I

### 1. Deviation charges for Buyers, Sellers, and other conditions:

As specified in the clause 9(1) of this Regulation, the Charges for 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 specified in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 as amended from time to time and as reproduced below:

Average frequency of time block (Hz)		Charges for Deviation
Below	Not below	(Rs./kWh)
	50.05	0.00
50.05	50.04	Slope determined by joining the price at Not Below 50.05 Hz and identified price at 50.00 Hz, and as detailed in the note below
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 49.85 Hz, and as detailed in the note below
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		8.00

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

Rs.8.00/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 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, irrespective of the fuel type and whether the tariff of such generating station is regulated by the Commission or not, shall not exceed Rs.3.0304/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 expressed in Rs./kWh and shall be rounded off to nearest four (4) decimal places.
- (ix) An illustration to the DSM price vector specified in table above, is provided as Annexure-III.
- (x) The NLDC shall act as the Nodal Agency to declare the daily DSM rates and shall display all relevant information on its website.

2. Deviation charges applicable for inter-state open access transactions of State Entities:

The Charges for Deviation including Additional Charges for Deviation for inter-state open access transactions of State Entities shall be levied by considering 95% of the rates as specified in the table above when these charges are receivable by State Entities, as per clause 9 and 10 and the Charges for Deviation shall be levied by considering 105% of the rates as specified in the table above, when these charges are payable by State Entities.

## Annexure-II

### Additional Charges for Deviation

**Table–1: Additional Charges for Deviation for Buyer**

<b>(A) When 12% of the schedule is less than or equal to [X] MW</b>		
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 Charges 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 Charges 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 Charges for Deviation corresponding to average grid frequency of the time-block.
<b>(B) When 12% of the schedule is more than [X] MW</b>		
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 Charges 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 Charges 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 Charges for Deviation corresponding to average grid frequency of the time-block.

**Table–2: Additional Charges for Deviation for Seller**

<b>(A) When 12% of the schedule is less than or equal to 30 MW</b>		
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 the Cap Rate for Deviation of Rs.3.0304/kWh or Charges 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 the Cap Rate for Deviation of Rs.3.0304/kWh or Charges 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 the Cap Rate for Deviation of Rs.3.0304/kWh or Charges for Deviation corresponding to average grid frequency of the time-block, whichever is less.
<b>(B) When 12% of the schedule is more than 30 MW</b>		
4	For under-injection of electricity by any Seller is above 30 MW and upto 40 MW in a time block.	Equivalent to 20% of the Cap Rate for Deviation of Rs.3.0304/kWh or Charges for Deviation corresponding to average grid frequency of the time-block, whichever is less.
5	For under-injection of electricity by any Seller is above 40 MW and upto 50 MW in a time block.	Equivalent to 40% of the Cap Rate for Deviation of Rs.3.0304/kWh or Charges for Deviation corresponding to average grid frequency of the time-block, whichever is less.
6	For under-injection of electricity by any Seller is above 50 MW in a time block.	Equivalent to 100% of the Cap Rate for Deviation of Rs.3.0304/kWh or Charges for Deviation corresponding to average grid frequency of the time-block, whichever is less.

### Annexure-III

**Illustration to the DSM Price Vector specified in  
CERC (Deviation Settlement Mechanism and Related Matters) Regulations,  
2014 as amended from time to time**

<b>Average Frequency of the time block (Hz)</b>		<b>Charges for Deviation (Rs./kWh)</b>
<b>Below</b>	<b>Not Below</b>	
	50.05	<b>0.00</b>
50.05	50.04	<b>1xP/5</b>
50.04	50.03	<b>2xP/5</b>
50.03	50.02	<b>3xP/5</b>
50.02	50.01	<b>4xP/5</b>
50.01	50.00	<b>P</b>
50.00	49.99	<b>0.50+15xP/16</b>
49.99	49.98	<b>1.00+14xP/16</b>
49.98	49.97	<b>1.50+13xP/16</b>
49.97	49.96	<b>2.00+12xP/16</b>
49.96	49.95	<b>2.50+11xP/16</b>
49.95	49.94	<b>3.00+10xP/16</b>
49.94	49.93	<b>3.50+9xP/16</b>
49.93	49.92	<b>4.00+8xP/16</b>
49.92	49.91	<b>4.50+7xP/16</b>
49.91	49.90	<b>5.00+6xP/16</b>
49.90	49.89	<b>5.50+5xP/16</b>
49.89	49.88	<b>6.00+4xP/16</b>
49.88	49.87	<b>6.50+3xP/16</b>
49.87	49.86	<b>7.00+2xP/16</b>
49.86	49.85	<b>7.50+1xP/16</b>
49.85		<b>8.00</b>

Where **P** is the Daily average Area Clearing Price (ACP) in Rs. per kWh discovered in the Day Ahead Market (DAM) segment of Power Exchange.