

**(DRAFT) TELANGANA STATE ELECTRICITY REGULATORY  
COMMISSION (DEVIATION, SETTLEMENT MECHANISM AND  
RELATED MATTERS) REGULATIONS, 2018**

**January, 2019**

**NOTIFICATION**

**No. \_\_\_/\_\_\_/2018/TSERC-** In exercise of the powers conferred under sub-section (3) of Section 32, sub-section (4) of Section 33, Clauses (b) and (h) of sub-section (1) of Section 86, and Clauses (g) and (zp) of Section 181 of the Electricity Act, 2003 (36 of 2003), and all other powers hereunto enabling, the Telangana State Electricity Regulatory Commission hereby makes the following regulations, namely:

**1. Short title and commencement**

- 1 These regulations may be called the Telangana State Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2018.
- 2 These regulations except commercial arrangements, deviation charges and penalty shall come into force on the date of notification in these Regulations the official Gazette [\_\_\_\_\_, 2018].

Provided that the commercial arrangements specified under clause 9 and 10 these Regulations, and the related provisions regarding Deviation Charges, Additional Charge for Deviation and penal actions if any, shall come into force six months thereafter.

**2. Definitions and Interpretation**

- 1 In these regulations, unless the context otherwise requires -
  - a. ‘**Act**’ means the Electricity Act, 2003 (36 of 2003);
  - b. ‘**Actual drawal**’ in a time-block means electricity drawn by a buyer, as the case may be, measured by the interface meters;
  - c. ‘**Actual injection**’ in a time-block means electricity generated or supplied by the seller, as the case may be, 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. ‘**Beneficiary**’ means a person purchasing electricity generated from a generating station;

- f. **‘Buyer’** means a person, including distribution licensee or open access consumer, purchasing electricity through a transaction scheduled in accordance with the regulations applicable for short-term open access, medium-term open access and long-term access;
- g. **‘Connectivity Regulations’** means the Telangana State Electricity Regulatory Commission (Terms and Conditions of Open Access Regulations), 2005 as amended from time to time and shall include any subsequent amendment thereof.
- h. **‘Commission’** means the Telangana State Electricity Regulatory Commission referred to in sub-section (1) of section 82 of the Act;
- i. **‘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 the Commission.”
- j. **‘Deviation’** in a time-block for a Seller means its total actual injection minus its total scheduled generation and for a Buyer means its total actual drawal minus its total scheduled drawal, and shall form part of the State Energy Accounts to be prepared by SLDC.
- k. **‘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 Regulation 6 of these Regulations.
- l. **‘Force Majeure’** shall mean any event which is beyond the control of the persons involved which they could not foresee or with a reasonable amount of diligence could not have foreseen or which could not be prevented, and which substantially affect the performance by either persons such as but not limited to:-
  - a. Acts of God, natural phenomena, including but not limited to floods, droughts, earthquakes and epidemics;
  - b. Acts of any Government domestic or foreign, including but not limited to war declared or undeclared, hostilities, priorities, quarantines, embargoes;
  - c. Riot or Civil Commotion;
  - d. Grid’s failure not attributable to persons involved.
- m. **‘Gaming’** in relation to these regulations, shall mean an intentional mis-declaration of declared capacity by any seller in order to make an undue commercial gain through Charge for Deviations;
- n. **‘Grid Code’** means the Grid Code specified by the Commission under clause (h) of sub-section (1) of Section 86 of the Act.
- o. **‘Indian Electricity Grid Code’ (or ‘IEGC’)** means the Grid Code specified by the Central Electricity Regulatory Commission under Section 79(1)(h) of the Act;

- p. **‘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.
- q. **‘Load Despatch Centre’** means National Load Despatch Centre, Regional Load Despatch Centre or State Load Despatch Centre, as the case may be, responsible for coordinating scheduling of the Buyers and the Sellers in accordance with the provisions of Grid Code;
- r. **“Open Access Consumer”** means a consumer 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.
- Provided that Open Access Consumer shall also be termed as “Full Open Access Consumer”.
- s. **'Open Access Regulations'** means the Telangana State Electricity Regulatory Commission (Grid Connectivity and Intra-State Open Access Regulations), 2012 as amended from time to time and shall include any subsequent amendment thereof.
- t. **“Scheduled Consumer”** means a consumer who has 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.
- Provided that Scheduled Consumer shall also be termed as “Partial Open Access Consumer”.
- u. **‘Scheduled Generation’** at any time or for a time block or any period means schedule of generation in MW or MWh *ex-bus* given by the concerned Load Despatch Centre;
- v. **‘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;
- w. **‘Seller’** means a person, including a generating station, supplying electricity through a transaction scheduled in accordance with the regulations applicable for short-term open access, medium-term open access and long-term open access;
- x. **‘State Deviation Pool Account’** means the State Account for receipts and payments on account of deviations by Buyers and Sellers.

- y. **‘State Entity’** means such person who is in the SLDC control area and whose metering and energy accounting is done at the state level
  - z. **‘Time-Block’** means a time block as defined in the CERC (Indian Electricity Grid Code) Regulations, 2010 as amended from time to time;
- 2 Save as aforesaid and unless repugnant to the context or the subject-matter otherwise requires, words and expressions used in these regulations and not defined, but defined in the Act, or the Grid Code or any other regulations of this Commission shall have the meaning assigned to them respectively in the Act or the Grid Code or any other regulation as the case may be.

### **3. Objective**

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.

### **4. Applicability**

These regulations shall apply to the transactions of conveyance of electricity through short-term open access or medium-term open access or long-term open access using intra-State transmission system or distribution system of electricity (including inter-state wheeling of power), subject to following conditions:-

(A) Deviation Settlement Mechanism under these Regulations shall be applicable for all Seller(s), connected to Intra-State Transmission system including Open Access Generators, Captive Generators (excluding In-Situ Captive Generators), All Renewable Energy Generators but excluding Wind and Solar Generating Station(s).

Provided that, Forecasting, Scheduling and Deviation Settlement related matters in respect of Wind and Solar generation 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” and its amendments thereof.

(B) Deviation Settlement Mechanism under these Regulations 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 Intra-State Transmission system.

Provided that, Deviation Settlement of Scheduled Consumers or Partial Open Access Consumers connected to Intra-State Transmission system and all Open Access Consumers connected to Distribution Network shall be in accordance with the provisions of Telangana State Electricity Regulatory Commission (Interim Balancing and Settlement Code) Regulations, 2006 and its amendment thereof.

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

These Regulations aim to govern the functioning of the various State Entities in a way that discipline is maintained with regards to the injection and drawal of energy by such State

Entities and the reliability and integrity of power system is maintained.

In order to meet these objectives, necessary preconditions and covenants for participation by State Entities shall be as under:

- (1) The State Entities shall inform the SLDCs of all contracts they have entered into for exchange of energy.
- (2) State Entities shall operate their equipment and loads in a manner that is consistent with the provisions of the Indian Electricity Grid Code and the Telangana State Electricity Grid Code.
- (3) State Entities shall enter into Connection Agreement/Open Access Agreement with the concerned transmission licensee, which shall specify the physical and operational requirements for a reliable operation and gain physical access and connection to the intra-State transmission system (InSTS) or enter into Connection Agreement/Open Access Agreement with concerned Distribution Licensee for use of distribution system, as the case may be in accordance with Telangana State Electricity Regulatory Commission (Terms and Conditions of Open Access Regulations), 2005, and its amendment thereof. State Entities shall make necessary arrangements for putting up 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 injection and drawal. The time synchronisation of metering system shall be through Global Positioning System with counter check from the State Energy Accounting Centre which is the SLDC.
- (4) SLDC shall take all decisions with regard to the despatching of stations after evaluating all possible network parameters, constraints, congestions in the transmission network and in the eventuality of any such network aberration, the instructions by the SLDC with regard to despatch and drawal shall be binding on all State Entities.

SLDC shall publish 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**

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 of frequency (d) Deviation (e) Settlement period (f) Measurement unit for State Deviation Pool Account (g) Deviation Pool Price Vector (h) Deviation Volume Limit (i) Premise for allocation of losses.

- (A) **Scheduling Period:** The scheduling period shall comprise of 96 time blocks, each of 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 stipulate.

Based on the availability schedule forecasted by Sellers and load requirement forecasted by Buyers, the SLDC shall draw up the least cost despatch schedule on Day Ahead basis for the State Entities in accordance with the merit order principles approved by State Commission from time to time;

Provided that wheeling transactions of captive users and open access consumers shall be despatched as contracted subject only to transmission constraints and system emergency conditions.

- (B) Guiding principles for scheduling and despatch:** All the Sellers and Buyers under these Regulations shall be guided by the scheduling and Despatch procedure to be formulated by SLDC in accordance with provisions of Telangana State Grid Code.
- (C) Operating Range for Frequency:** The normal operating range for average grid frequency for time block shall be in line with range stipulated under IEGC and Telangana State Grid Code from time to time. No Deviation shall be allowed beyond the specified operating range of frequency band by the Commission time to time.
- (D) Deviation:** For the purposes of Deviation settlement amongst State Entities, the SLDC shall work out the Deviation for 'State Deviation Pool Account' comprising over-drawal/under-drawal and over-injection and under-injection for each State Entity corresponding to each Scheduling period. Charges for deviation shall be in accordance to regulation 9 and 10 of these regulations.
- (E) Settlement Period:** Preparation and settlement of 'State Deviation Pool Account' shall be undertaken on weekly basis coinciding with mechanism followed for regional energy accounts.
- (F) Measurement Unit for State Deviation Pool Account:** 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.
- (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 amendments thereof.

Provided that Deviation of Wind/Solar Generators shall be treated 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".

Further, 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 on daily base DSM payable / receivable as the case may be shall be levied for the duration of continuance of violation.

**(H) Deviation Volume Limit:** In order 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 Deviation Charges as specified under Regulation 10 shall be applicable.

**(I) Premise for Allocation of Losses:** For the purpose of State Deviation Pool accounting, intra-state transmission system losses as approved by the Commission shall be allocated amongst the State Entities in proportion to the actual drawal by each State Entity.

Provided that State Load Despatch Centre shall maintain account of actual intra-state transmission system loss for each time block and publish reconciliation statement of 52 weekly average loss vis-à-vis approved loss by the Commission on its website.

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

(1) The provisions of the Telangana State Electricity Grid Code and Telangana State Electricity Regulatory Commission (Terms and Conditions of Open Access Regulations), 2005 as amended from time to time, shall be applicable for declaration of capacity and scheduling.

(2) The generating station, as far as possible, shall generate electricity as per the day-ahead generation schedule finalized by the State Load Despatch Centre in accordance with the Telangana State Electricity Grid Code.

Provided that the revision in generation schedule on the day of operation shall be permitted, in accordance with the procedure specified under the Telangana State Electricity Grid Code and Telangana State Electricity Regulatory Commission (Terms and Conditions of Open Access Regulations), 2005 as amended from time to time, as the case may be.

## **8. Treatment for Gaming**

(1) The Commission, either suo-motu or on a petition made by SLDC, or any affected party, may initiate proceedings against any generating company or seller on charges of gaming and if required, may order an enquiry to be made by such officer of the Commission on such other party as the Commission may deem fit. The enquiry officer so appointed shall submit his findings within such time as may be fixed by the Commission and such investigating officer or authority shall exercise all powers as envisaged under section 128 of the Act.

(2) If in the proceeding initiated by the Commission or in the enquiry made in this regard under clause (1) above, it is proved that any generating company or seller has indulged in gaming, the Commission may without prejudice to any other action under the Act or Regulation made thereunder, disallow any charges for deviation to such seller or generating company during the period of such gaming.

## 9. Charges for deviations

### (A) Deviation Charges for Sellers and Buyers:

(1) 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 specified in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 and its amendments thereof considering the methodology specified in the **Annexure-1** of these Regulations and subject to conditions stipulated under clause (2) to (8) of this regulation:

Provided that, a change in sign of the deviation shall be made once every 6 time blocks, failing which additional charges @10% of the deviation charges applicable shall be levied for the duration of continuance of violation.

- (2) The charges for the Deviation for the generating stations whose tariff is determined by the Commission, when actual injection is higher or lower than the scheduled generation, shall not exceed the <sup>1</sup>Cap Rate to be determined by Central Commission from time to time <sup>2</sup>[303.04 ]Paise/kWh.
- (3) The charges for the deviation for the generating stations other than those covered under Sub-Clause (2) of Clause (A) of Regulation 9, 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.
- (4) 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, whichever is less, shall be zero; wherein limit of [X] MW shall be determined as per methodology specified under Clause (B) of the regulation 10 of these Regulations;
- (5) The charges for the deviation for the over-injection by the seller in a time block in excess of 12% of the schedule or [10] MW, whichever is less, shall be zero, except in case of injection of infirm power, which shall be governed by clause (8) of this regulation;
- (6) The charge for deviation shall be zero at grid frequency of 50.05 Hz and above.
- (7) The linkage of deviation charges to frequency may be reviewed by the State Commission as and when revised by Central Commission keeping in view the changing power market conditions and shall be re-notified accordingly.
- (8) The Charge 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. The

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<sup>3</sup> to be linked to variable cost for imported coal price as determined by Central Commission

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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.

- (9) The infirm power injected into the grid by a generating unit of a generating station during the testing, prior to 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 9 months or the extended time allowed by the Commission in the Telangana State Electricity Regulatory Commission (State Electricity Grid Code Regulations), 2018, as amended from time to time, subject to ceiling of Cap Rates corresponding to the <sup>3</sup>[main fuel] as determined by the Central Commission used for such injection. as specified below:

Domestic coal/ Lignite/Hydro	[1.78] / kWh sent out
APM gas as fuel	[2.82]/ kWh sent out <i>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 Commission separately</i>
Imported Coal	[3.03] / kWh sent out
RLNG	[8.00] / kWh sent out

#### 10. Limits on Deviation volume and consequences of crossing limits

- (A) 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**, the limit arrived as per clause (B) of this regulation, 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.

- (B) The Volume Limit of **[X] MW** for distribution licensee(s) and Buyers shall be determined as under:
- i. Minimum of (12% of schedule, (Peak Demand of Distribution Licensee or Buyer /  $\sum$ NCPD) x State Volume Limit)

<sup>3</sup> to be linked to variable cost for imported coal price as determined by Central Commission

Where NCPD (Non-Coincident Peak Demand) represents the sum of Peak Demand of Distribution Licensee(s) and Buyer(s) subject to condition stipulated under following sub-clause (iii).

- ii. State Volume Limit shall be linked to Volume Limit (<sup>4</sup>L) applicable to the State as per CERC (Deviation Settlement Mechanism and related matters) Regulations, 2014 and its amendments thereof;
- iii. Where Peak Demand of the Distribution Licensee shall be recorded Peak Demand in the previous Financial Year or Projected Peak Demand of Buyer in ensuing Financial Year, whichever is higher;

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".

(C) The under-injection or over-injection of electricity by Seller shall not exceed following when grid frequency is "49.85 Hz or above and below 50.05 Hz";

- i. 12% of the scheduled injection or **[10] MW**, whichever is lower for a Seller

Provided that in case schedule of a Seller, in a time block, is less than or equal to **[40] MW**, under-injection / over-injection in a time-block shall not exceed [5] MW, when grid frequency is "49.85 Hz or above and below 50.05 Hz".

(D) In addition to Charges for Deviation as stipulated under Regulation 9 of these Regulations, Additional Charge for Deviation shall be applicable for over-drawal as well as under-injection of electricity for each time block in excess of the volume limit specified in Clause (B) and (C) of this regulation when average grid frequency of the time block is "49.85 Hz and above" at the rates specified in the **Table I of Annexure-II** in accordance with the methodology specified in clause (H) of this regulation:

(E) Additional Charge for Deviation for under-injection of electricity, during a time-block in excess of the volume limit specified in clause (C) of this regulation when grid frequency is "49.85 Hz and above", by the generating stations regulated by the Commission using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be at the rates specified in **Table II of Annexure-II** in accordance with the methodology specified in clause (J) of this regulation;

(F) In addition to Charges for Deviation as stipulated under Regulation 9 of 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".

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<sup>4</sup> For Telangana State Volume Limit (L) is 250 MW

- (G) In addition to Charges for Deviation as stipulated under Regulation 9 of these Regulations, Additional Charge for Deviation shall be applicable for over-drawal or under-injection of electricity when grid frequency is “below 49.85 Hz” in accordance with the methodology specified in clause (I) of these Regulations ”.

Provided that Additional Charge for Deviation for under-injection of electricity by a Seller, during the time-block when grid frequency is “below 49.85 Hz”, by the generating stations regulated by the Commission using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel in accordance with the methodology specified in clause (J) of this Regulation shall be equivalent to 100% of the Cap Rate being equivalent to the energy charges as billed for the previous month of Main Fuel.

- (H) The Additional Charge for Deviation for over-drawal and under-injection of electricity for each time block in excess of the volume limit specified in clause (B) and (C) of this regulation when grid frequency is "49.85 Hz and above" shall be specified by the Commission as a percentage of the charges for the Deviation corresponding to average grid frequency of the time block with due consideration to the behaviour of the Buyers and Sellers towards grid discipline:

Provided that the Commission may specify different rates for additional Charges for Deviation for over draws and under injections depending upon different % deviation from the schedule in excess of the volume limit specified in clause (B) and (C) of this Regulation.

- (I) The additional Charge for Deviation for over-drawals and under-injection of electricity for each time block when grid frequency is “below 49.85 Hz” shall be as specified by the Commission as a percentage of the charges for the Deviation corresponding to average grid frequency of the time block with due consideration to the behaviour of the Buyers and Sellers towards grid discipline:

Provided that the Commission may specify different rates for Additional Charges for Deviation for over draws and under injections and for different ranges of frequencies “below 49.85 Hz”.

- (J) The Additional Charge for Deviation for under-injection of electricity during the time-block in excess of the volume limit specified in Clause (C) of this regulation when grid frequency is ’49.85 Hz and above“, by the generating stations regulated by the Commission using coal/ lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be as specified by the Commission as a percentage of the Cap Rate or the Charges for Deviation corresponding to the grid frequency of the time block, or both with due consideration to the behaviour of the generating stations regulated by the Commission towards grid discipline:

- (K) In the event of sustained deviation from schedule in one direction (positive or negative) by any state entity, such State Entity (Buyer or Seller) shall have to make sign of their deviation from schedule changed, at least once, after every 6 time blocks.

To illustrate, if a state entity has positive deviation from schedule from 07.30 hrs to 9.00 hrs, sign of its deviation from schedule shall be changed in the 7<sup>th</sup> time block i.e. 9.00 to 9.15 hrs from positive to negative or negative to positive; as the case may be.

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

- (1) No under injection of electricity by a seller shall be permissible when grid frequency is “below 49.85 Hz” and no over injection of electricity by a seller shall be permissible when grid frequency is “50.05 Hz and above”.
- (2) 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 volume limit specified above for a period not exceeding 9 months or the extended time allowed by the Commission in accordance with Telangana State Electricity Regulatory Commission (Grid Connectivity and Intra-State Open Access Regulations), 2012 as amended from time to time.
- (3) 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 specified above when grid frequency is “49.85 Hz and above”.
- (4) 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 of Deviation.

#### **12. Framework for operationalisation and monitoring of Deviation Settlement Mechanism**

- (1) State Load Despatch Centre 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 and under-injection..
- (2) Payment of Charges for Deviation under Regulation 9 and the Additional Charges for Deviation under Clauses (G), (H), and (I) of Regulation 10, shall be levied 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 under-injection /over-injection, for each time block or violation of provision of clause (K) of Regulation 10.
- (3) The additional charge for violation of sign change stipulation shall be leviable for each such violation during a day.

To illustrate, the change of sign should take place at least once after every six time blocks. Accordingly, the entity, starting from time block t1, should change the sign after time block t6. In case, sign change does not take place immediately after time block t6, but takes place from time block t7 upto time block t12, additional charge shall be levied equivalent to one violation. In case, sign change does not take place immediately after time block t12, but takes place from time block t13 upto time block t18, additional charge shall be levied equivalent to two violations.

Provided that in case of run of river projects without pondage, payment of additional charge for failure to adhere to sign change requirement shall apply from such date as may be notified by the Commission. Such generators shall, however, be required to follow the sign change requirement and report to POSOCO the reasons for non-adherence to the requirement.

- (4) The charges for over-drawal/ under-injection and under-drawal/over-injection of electricity shall be computed by the State Load Despatch Centre in accordance with the methodology used for preparation of "State Energy Accounts."
- (5) The State Load Despatch Centre 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 corresponding amount of Charges for Deviation payable/receivable for each Buyer and Seller for all the time-blocks when grid frequency was "49.85 Hz and above" and "below 49.85" Hz separately.

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

- (1) The State Load Despatch Centre shall prepare the statement of State Energy Account for each time block for sellers and buyers on monthly basis. Data required for billing of open access consumers shall be passed on to the billing centre of the distribution licensee by the SLDC. The billing centre of the distribution licensee shall be responsible for energy accounting, raising and settlement of bills with open access consumers. Payments of capacity and energy charges by the buyers to the sellers shall be as per the provisions in the respective power purchase agreements or agreement(s) with respect to transactions through power exchange and through Short Term Open Access, as the case may be.
- (2) Energy Account Statement for Deviation Settlement of Partial Open Access Consumers connected to Intra-State Transmission system and all Open Access Consumers connected to Distribution Network shall be in accordance with the provisions of Telangana State Electricity Regulatory Commission (Interim Balancing and Settlement Code) Regulations, 2006 and its amendment thereof.
- (3) The State Load Despatch Centre shall be responsible for preparation of weekly deviation charges statement to all State Entities and billing and collection of deviation charges from the State Entities in accordance with regulation 12 of these Regulations.
- (4) A detailed energy accounting procedure shall be prepared by SLDC and submitted to the Commission for approval.

Provided that, SLDC shall undertake stakeholder consultation by uploading the draft procedure on SLDC's website before submission of procedure to the Commission for approval.

### **14. Compliance with instructions of Load Despatch Centre**

Notwithstanding anything specified in these Regulations, the Sellers and the Buyers shall strictly follow the instructions of the State Load Despatch Centre on injection and drawal in the interest of grid security and grid discipline.

## 15. Accounting of Charges for Deviation

- (A) A statement of Charges for Deviations including Additional Charges for Deviation levied under these Regulations shall be prepared by SLDC on weekly basis based on the data provided by SLDC by the Thursday of the week and shall be issued to all constituents by next Tuesday, for seven-day period ending on the penultimate Sunday mid-night.
- (B) 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 the 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 SLDC.
  - iii. The State Entities shall comply with statutory requirements of 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 reporting requirements of Statutory Authorities, as necessary.
- (C) All payments received in the “State Deviation Pool Account” shall be appropriated in the following sequence:
- i. First towards any cost or expense or other charges incurred on recovery of Charges for deviation.
  - ii. Next towards over dues or penal interest, if applicable.
  - iii. Next towards normal interest.
  - iv. Next dues towards Regional Deviation Pool Account
  - v. Lastly, towards charges for deviation and additional charges for deviation.

## 16. Schedule of Payment of Charges for Deviation

- (A) The payment of charges for Deviation shall have a high priority and the concerned State Entity 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**”.
- (B) 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 State Entity shall have to pay simple interest @ 0.04% for each day of delay.

(C) 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 –

- i. In case of delay in the Payment of charges for Deviations into the State Deviation Pool Account and interest there on 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.
- ii. 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.

(D) 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 –

- i. 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.
- ii. 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%.

### **Illustration**

If the average payable weekly liability for Deviation of a State entity during [2016-17] is ₹2.0 crore, the State entity shall open LC for 2.2 crore in [2017-18]. If the weekly payable liability during any week in [2017-18] is ₹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 ₹3.85 Crore (1.1\*3.50) by adding 1.65 Crore.

(E) 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.

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

(A) Within four months from date of notification of these Regulations, the State Load Despatch Centre shall formulate Operating Procedures and Business Rules for constitution of State Power Committee, which shall be approved by the State Commission.

(B) The State Power Committee shall:

- i. Co-ordinate and facilitate the intra-state energy exchange for ensuring optimal utilisation of resources.
- ii. Monitor compliance of these Regulations by State Entities.
- iii. Guide the SLDC for modification of Procedure(s) in order to address the implementation difficulties including force majeure conditions, if any.
- iv. 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**

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

**19. Power to remove difficulties**

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

**20. Power to relax**

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

**21. Power to issue directions**

If any difficulty arises in giving effect to these Regulations, the Commission may on its own motion or on an application filed by any affected party, issue such directions as may be considered necessary in furtherance of the objective and purpose of these Regulations.

Sd/-

Commission Secretary [FAC]

Telangana State Electricity Regulatory Commission

Date: 05 January, 2019

Place: Hyderabad

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

- 1) As specified in the Regulation 9 (A) of these Regulations, 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 specified in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 and its amendments as stipulated in the following table:

Average frequency of time block (Hz)		Charges for Deviation
Below	Not below	(Paise / kWh)
	50.05	0.0
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 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 49.85 Hz, 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 its energy charges as billed for the previous month.

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 Annexure-I
- 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.”

## **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 to the State Entities, as per regulation 9 & 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 the State Entities.

**Annexure-II: Additional Deviation Charges**

**TABLE – I: Additional Deviation Charge (for Seller/Buyer)**

<b>(A) When 12% of the Schedule is less than or equal to [10] 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 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>(B) When 12% of the Schedule is more than [10] 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 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
<b>(B) When 12% of the Schedule is more than [10] MW</b>		

4	For under-injection of electricity by any Seller is above [10] MW and upto[20] 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 [20] MW and upto [25] 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 [25] 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 regulated by the Commission using coal or lignite or gas supplied under Administered Price Mechanism (APM)**

<b>(A) When 12% of the Schedule is less than or equal to [10] 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 Cap Rate being equivalent to the energy charges as billed for the previous month 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 being equivalent to the energy charges as billed for the previous month 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 being equivalent to the energy charges as billed for the previous month or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less.
<b>(B) When 12% of the Schedule is more than [10] MW</b>		

1	For under-injection of electricity by any Seller is above X MW and upto X+[10] MW in a time block	Equivalent to 20% of Cap Rate being equivalent to the energy charges as billed for the previous month 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 X+[10] MW and upto X + [20] MW in a time block	Equivalent to 40% of Cap Rate being equivalent to the energy charges as billed for the previous month 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 X + [20] MW in a time block	Equivalent to 100% of Cap Rate being equivalent to the energy charges as billed for the previous month or charge for Deviation corresponding to average grid Frequency of the time-block, whichever is less.

### Annexure-III

Illustration to the DSM Price Vector specified in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 and its amendments under Clause 3.1

Average Frequency of the time block (Hz)		Charges for Deviation (Paise/kWh)
Below	Not Below	
	50.05	0.00
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>50.00+15xP/16</b>
49.99	49.98	<b>100.00+14xP/16</b>
49.98	49.97	<b>150.00+13xP/16</b>
49.97	49.96	<b>200.00+12xP/16</b>
49.96	49.95	<b>250.00+11xP/16</b>
49.95	49.94	<b>300.00+10xP/16</b>
49.94	49.93	<b>350.00+9xP/16</b>
49.93	49.92	<b>400.00+8xP/16</b>
49.92	49.91	<b>450.00+7xP/16</b>
49.91	49.90	<b>500.00+6xP/16</b>
49.90	49.89	<b>550.00+5xP/16</b>
49.89	49.88	<b>600.00+4xP/16</b>
49.88	49.87	<b>650.00+3xP/16</b>
49.87	49.86	<b>700.00+2xP/16</b>
49.86	49.85	<b>750.00+1xP/16</b>
49.85		800.00

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