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Bihar Electricity Regulatory Commission

Notification
2nd June 2020

No. BERG-SMP-17/2019-02 — In exercise of the powers conferred under Section 181 (Power of State Commission to make regulations) read with sub- clause (i) of clause (d) of sub-section (2) of section 39, sub-clause (i) of clause (c) of section 40 of the Electricity Act 2003, the Bihar Electricity Regulatory Commission hereby makes the following Regulations:-

Bihar Electricity Regulatory Commission (Intra-state Availability Based Tariff and Deviation Settlement Mechanism) Regulations, 2020.

CHAPTER – 1

PRELIMINARY

1. PREAMBLE

1.1 The National Electricity Policy (NEP) envisages implementation of the Availability Based Tariff (ABT) at State level to establish a credible settlement mechanism for Intra-day power transfers among Intra-State Entities. As per the Tariff Policy, this framework should be extended to generating stations (including Grid connected Captive Plants of capacities as determined by the State Electricity Regulatory Commission). These Regulations have been specified to give effect to the intentions of Section 5.7.1(b) and (d) of the National Electricity Policy as well as section 6.2(1) and 6.3 of the Tariff Policy, 2016. To maintain discipline and grid security as envisaged under the Grid Code, Central Electricity Regulatory Commission has notified Deviation Settlement Mechanism and Related Matters Regulations, 2014 and repealing Central Electricity Regulatory Commission (UI charges and related matters), Regulations, 2009. In view of the aforesaid, the Bihar Electricity Regulatory Commission (Intra-state Availability Based Tariff and Deviation Settlement) Regulations, 2020 are notified.

2. SHORT TITLE, EXTENT OF APPLICATION AND COMMENCEMENT

- 2.1. These Regulations may be called the "Bihar Electricity Regulatory Commission (Intra-state Availability Based Tariff and Deviation Settlement Mechanism) Regulations, 2020".
- 2.2. These Regulations shall apply within the geographical area of the State of Bihar and shall apply to all Intra-State Entities in Bihar in a manner as specified in these Regulations.
- 2.3. These Regulations shall come into force from the date notified separately by the commission.

3. DEFINITIONS.—In these Regulations, unless the context otherwise requires:-

- 3.1. "**Act**" means the Electricity Act, 2003 (36 of 2003) and any amendments made to the same or any succeeding enactment thereof;
- 3.2. "**Absolute Error**" (also termed as Deviation-RE) "shall mean the absolute value of the error in the actual generation of solar and wind generators with reference to the scheduled generation and the 'Available Capacity' (AvC), as calculated using the following formula for each 15-minute time block:
Error (%) = 100 x [Actual Generation – Scheduled Generation]/ (AvC)
- 3.3. "**Actual Drawal**" in a time-block means electricity drawn by a buyer, as the case may be, measured by the interface meters;
- 3.4. "**Actual Injection**" in a time-block means electricity generated or supplied by the seller, as the case may be, measured by the interface meters;
- 3.5. "**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)."
- 3.6. "**Available Capacity (AvC)**" for wind or solar generators is the cumulative capacity rating of the wind turbines or solar inverters that are capable of generating power in a given time-block;
- 3.7. "**Average Pooled Cost of Power Purchase (APPC)**" means the weighted average pooled price approved by the commission in tariff order for purchasing of electricity by distribution licensee in the previous year from all the long-term energy suppliers excluding the transmission charges and excluding purchases based on liquid fuel, traders, short-term purchases and purchases from renewable sources.
- 3.8. "**Buyer**" means a person, including a distribution licensee or open access customer or captive user, purchasing electricity through a transaction scheduled in accordance with the BERC Intra-State Open access Regulations, 2018 applicable for short term open access, medium term open access and long term open access;
- 3.9. "**Central Commission**" or "**CERC**" means the Central Electricity Regulatory Commission referred to in section 76 of the Act;
- 3.10. "**Commission**" means the Bihar Electricity Regulatory Commission referred to in sub-section (1) of section 82 of the Act;
- 3.11. "**Day**" means a continuous period starting at 00.00 hours and ending at 24.00 hours;
- 3.12. "**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.
- 3.13. "**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 charge under Regulation 8.
- 3.14. "**Declared Capacity**" means the capability of a seller in MW in proportion to their schedule power at interface point with the State Grid.
- 3.15. "**Despatch Schedule**" means the ex-Power Plant net Mega Watt and Mega Watt Hour output of a Generating Station, Scheduled to be exported to the Grid from time to time;

- 3.16. **"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;
- 3.17. **"Deviation Charges"** means the charges computed as per the rates corresponding to average Frequency of the grid in a 15-minute time block as specified by the Central Electricity Regulatory Commission from time to time;
- 3.18. **"Deviation Settlement Mechanism Regulations"** means Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 including any subsequent amendments thereof;
- 3.19. **"Distribution Licensee or "DISCOMS"** means a License authorized to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
- 3.20. **"Drawal Point"** means connection point(s) at which electricity is drawn from the State-Grid by the State-Grid user;
- 3.21. **"Drawal Schedule"** means the ex-Power Plant, Mega Watt that a Discom or a Buyer is scheduled to receive from an electricity generating station, through Long Term, Medium Term & Short Term including bilateral and collective transactions from time to time;
- 3.22. **"Ex-Power Plant"** means net Mega Watt / Mega Watt hour output of an electricity generating station, after deducting Auxiliary consumption and Transformation losses;
- 3.23. **"Gaming"** in relation to these regulations, shall mean an intentional mis-declaration of declared capacity /schedule by any seller in order to make an undue commercial gain through Deviations Charge.
- 3.24. **"Grid"** means the high voltage backbone system of inter-connected Transmission lines, Sub-Stations and Generating plants;
- 3.25. **"Indian Electricity Grid Code Regulations (IEGC)"** means the Grid Regulations specified by the Central Electricity Regulatory Commission under Clause (h) of Sub-section(1) of Section 79 of the Act;
- 3.26. **"Intra-state Entity"** Intra-state entity, means a person whose scheduling and energy accounting is coordinated by State Load Despatch Centre or any other authorized state agency.
- 3.27. **"Injection Point"** means connection point(s) at which electricity is injected into the State-grid by the State-grid user;
- 3.28. **"Interface meters"** means meters installed at interface point as defined by the Central Electricity Authority (CEA) under the CEA (Installation and Operation of Meters) Regulations, 2006 as amended from time to time;
- 3.29. **"Losses"** means the energy losses in percentage for the intra-state transmission system or distribution system as specified by the Commission from time to time;
- 3.30. **"Month"** means a calendar month as per the British Calendar;
- 3.31. **"Net Drawal Schedule"** means the drawal schedule of the DISCOMS or a Buyer after deducting the apportioned Transmission Losses (estimated);
- 3.32. **"Open access customer"** means a consumer permitted to receive supply of electricity from a person other than the distribution licensee of his area of supply, or a generating company (including captive generating plant) or a licensee or a captive user who has availed of or intends to avail of long-term open access or medium term open access or short-term open access, as the case may be;
- 3.33. **"Qualified coordinating Agency (QCA)"**: means the agency coordinating on behalf of Wind/Solar Generators connected to a pooling station. QCA may be one of the generators or any other mutually agreed agency for the following purposes:-
- Coordinate for schedules with periodic revisions on behalf of all the Wind/Solar Generators connected to the pooling station(s).
 - Responsible for coordination with STU/SLDC for metering, data collection/ transmission, communication.

- Undertake commercial settlement on behalf of the generators of such charges pertaining to generation deviations only including payments to the Regional/State Deviation Pool Accounts through the SLDC.
 - Undertake de-pooling of payments received on behalf of the generators from the State Deviation Pool Account and settling them with the individual generators.
 - QCA shall be treated as a State Entity and shall be registered with SLDC.
- 3.34. **"Seller"** means a generating station including captive generating plant (selling directly or through trader) or licensee, injecting power into the State-grid including such system when it is used in conjunction with inter-State transmission system and whose scheduling and/ or, metering and energy accounting is coordinated by SLDC;
- 3.35. **"State Load Despatch Centre (SLDC)"** means the centre established under Sub-section (I) of Section 31 of the Act;
- 3.36. **"State"** means the State of Bihar;
- 3.37. **"State Energy Account (SEA)"** means monthly State Energy Account prepared by State Load Despatch Centre for the billing and settlement of Capacity charges, Energy charges and incentives, if any, applicable;
- 3.38. **"State Entity"** means person who is in the SLDC control area and whose metering and energy accounting is done at the state level.
- 3.39. **"State Deviation Settlement Mechanism Account (SDSMA)"** means weekly State Deviation Settlement Mechanism Account prepared by State Load Despatch Centre for the billing and settlement of Deviation charges;
- 3.40. **"State Grid"** means the intrastate transmission network owned by the State Transmission utility, transmission licensee and/or the network of any other person who has been granted license by the Commission to establish or operate transmission system within the State;
- 3.41. **"State Grid User"** means buyer and/or seller;
- 3.42. **"State Transmission Utility (STU)"** means Bihar Power Transmission Company Limited.
- 3.43. **"Time Block"** means the time block as defined in the CERC (Indian Electricity Grid Code) Regulations, 2010 as amended from time to time.
- 3.44. **"Time Block DSM Charge"** means the charge for deviation for the specific time block in a day payable or receivable as the case may be, excluding the additional charges under Regulation 8.
- 3.45. **"Week"** means a period of consecutive seven days commencing from 00.00 hours on the Monday and ending at 24.00 hours on following Sunday as per the British Calendar;
- 3.46. The words and expressions used in these Regulations and not defined herein but defined in the Act shall have the meaning assigned to them under the Act and other Regulations notified by the Commission, provided that when a word or phrase is used by the Commission in a specific context, the meaning applicable in that specific context, shall prevail and the generic definition given above may not be applicable.

CHAPTER — II AVAILABILITY BASED TARIFF

4. The tariff under the ABT regime will have three components namely the capacity charge, the energy charge and the Deviation Settlement charge.
- (a) **Fixed charges/capacity charges.**— Capacity charges of the generators are payable on the capacity allocated and are linked to 'Availability' of the generating stations declared on daily basis in MW.
- (b) **Energy charges/variable charges.**— Energy charges or variable charges are payable on the scheduled energy irrespective of actual drawal.

Computation of capacity charges and energy charges shall be governed by BEREC (Terms and Conditions for determination of tariff) Regulations, 2007 or its subsequent amendments or enactments and BEREC (Terms and conditions for determination of tariff from RE sources) regulations, 2017 or its subsequent amendments or enactments.

- (c) **Deviation Charges.**— Variation between actual injection and scheduled generation or actual drawal and scheduled drawal shall be accounted for through Deviation Settlement Charges and are dependent on the average frequency prevailing at that time-block.

5. Conditions for participation in Deviation Settlement Mechanism:

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:

- (i) All State Entities shall have equal and non-discriminatory treatment as regards the 'Deviation Settlement mechanism as specified in these Regulations.
- (ii) The State Entities shall inform the SLDCs of all contracts they have entered into for exchange of energy.
- (iii) SLDC shall take all decisions with regard to the despatching of stations after evaluating all possible network parameters, constraints, congestions in network aberration, the instructions by the SLDC with regard to despatch and drawal shall be binding on all State Entities.
- (iv) 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 State Grid Code.
- (v) State Entities other than those having contract demand with distribution licensee shall enter into TSA (Transmission Service Agreement) and Connection Agreement with the concerned transmission licensee, which shall specify the physical and operational requirements for reliable operation and gain physical access and connection to the intra-State transmission system (InSTS) or enter into Connection and Use Agreement with concerned Distribution Licensee for use of distribution system, as the case may be.
- (vi) 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.
- (vii) All State Entities shall make necessary arrangements for putting up suitable meters, capable of recording energy flows at 15-minute intervals, at the points of injection and drawal as per Central Electricity Authority (Installation and Operation of meters) Regulations 2006 and its amendments thereon.

6. APPLICABILITY OF INTRA-STATE DSM

6.1. Generating Company/Captive generating plant

- (a) **State Generating Stations.**— To all generating stations owned by Bihar power Generation Company Ltd (BSPGCL) or by Government of Bihar.
- (b) **Conventional fuel based Generating Plants.**— All conventional fuel based power generating plants including Captive Generating Plant (CGP) located in the State and who have contracted to supply long-term and medium-term power to distribution licensees in State at tariff determined under Section 62 of the Act and under Section 63 of the Act.
- (c) **Renewable energy based generating plant.**— All renewable energy based power generating companies including bio-gas, municipal solid waste based generating stations etc. of installed capacity more than 5 MW located in the State and who have contracted to supply long-term and medium-term power to distribution licensees in State at tariff determined under Section 62 of the Act and under Section 63 of the Act.
- (d) All the generating stations including renewable energy power plant, CGP (Selling directly or through electricity traders or through exchange) who intend to supply power to the distribution licensee of the State under short-term contracts and to

consumers within the state and outside the state under long-term, medium-term or short-term contracts.

- (e) All buyers procuring power through open access within the State shall be governed by Intra-State DSM.
- (f) All generating companies including RE generator, Open Access Generator, Captive Power Plant of more than 5 MW & CGP (selling directly or through electricity trader) who have contracted to supply power to consumers shall be governed by intra-State DSM.

6.2. **Distribution Licensees.**— The distribution licensee shall be covered by Intra-State DSM if it draws power by using the State-grid.

6.3. **Consumers/captive users.**— All consumers/captive users located within the State and who intend to purchase/receive power through State grid shall be governed by intrastate DSM.

7. CHARGES FOR DEVIATION

7.1. 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 and shall be worked out on the average frequency of a time-block at the basic rates specified in the CERC (Deviation Settlement Mechanism and related matters) Regulations, 2014 as amended from time to time. Prevailing basic rates are as specified at **Schedule-A**.

Provided that:

- (i) The charges for the Deviation for the under drawals by the buyer in a time block in excess of 12% of the schedule or X MW, whichever is less, shall be zero.
 Provided that volume limit of [X] MW of buyers including distribution licensee(s) shall be determined as under:
 - a. Minimum of (12% of schedule, (Peak Demand of Distribution Licensee or Buyer / Σ NCPD) x State Volume Limit).
 Where NCPD (Non-Coincident Peak Demand) represents the sum of Peak Demand of Distribution Licensee(s) and Buyer(s) subject to condition stipulated under following sub-clause (c).
 - b. State Volume Limit shall be linked to Volume Limit applicable to the State as per CERC DSM Regulations and its amendments thereof.
 - c. Where Peak Demand of the Distribution Licensee and buyer shall be recorded peak demand in the previous financial year or projected peak demand in ensuing financial year, whichever is higher.
- (ii) The charges for the Deviation for the over-injection by the seller (except Wind & Solar generators) in a time block in excess of 12% of the schedule or 10MW, whichever is less, shall be zero.
- (iii) The fixed charge and energy charge, if any, for renewable energy generators (including wind and solar) shall be paid as per declared schedule. In the event of actual generation of renewable generator being less than the scheduled generation, the deviation charges for shortfall in generation shall be payable by renewable energy generators or the QCA, as the case may be, to the State DSM Pool as given in Table – 1 below:

Table – 1: Deviation Charges in case of under injection

S. No.	Absolute Error in the 15-minute time block	Deviation Charges payable to State DSM pool
1	$\leq 15\%$	At the Fixed Rate for the shortfall energy upto for absolute error upto 15%

2	>15% but ≤ 25%	At the Fixed Rate for the shortfall energy for absolute error upto 15% + 110% of the Fixed Rate for balance energy beyond 15% and upto 25%
3	>25% but ≤ 35%	At the Fixed Rate for the shortfall energy for absolute error upto 15% + 110% of the Fixed Rate for balance energy beyond 15% and upto 25% + 120% of the Fixed Rate for balance energy beyond 25% and upto 35%
4	> 35%	At the Fixed Rate for the shortfall energy for absolute error upto 15% + 110% of the Fixed Rate for balance energy beyond 15% and upto 25% + 120% of the Fixed Rate for balance energy beyond 25% and upto 35% + 130% of the Fixed Rate for balance energy beyond 35%

Where the Fixed Rate is the applicable rate (sum of fixed charges and energy charges, if any) as determined by the Commission under section 62 of the Act or adopted by the Commission under section 63 of the Act. In case of multiple PPAs, the weighted average of the PPA rates shall be taken as the Fixed Rate. The renewable energy generators shall furnish the PPA rates on affidavit for the purpose of Deviation charge account preparation to SLDC supported by copy of the Order of the Commission.

Fixed Rate for Open Access participants selling power whose tariff is not determined under Section 62 of the Act or adopted by the Commission under Section 63 of the Act, and the captive RE plants shall be the APPC rate at the State level.

- (iv) In the event of the actual generation of renewable generator (including wind & Solar) being more than the scheduled generation, the Deviation Charges for excess generation shall be payable to the RE generators or the QCA, as the case may be, from the State DSM Pool as given in Table – 2 below:

Table – 2: Deviation Charges in case of over injection

S. No.	Absolute Error in the 15- minute time block	Deviation Charges payable
1	≤ 15%	At the Fixed Rate for excess energy upto 15%
2	>15% but ≤ 25%	At the Fixed Rate for excess energy upto 15% + 90% of the Fixed Rate for excess energy beyond 15% and upto 25%
3	>25 % but ≤ 35%	At the Fixed Rate for excess energy upto 15% + 90% of the Fixed Rate for excess energy beyond 15% and upto 25% + 80% of the Fixed Rate for excess energy beyond 25% and upto 35%
4	> 35%	At the Fixed Rate for excess energy up to 15% + 90% of the Fixed Rate for excess energy beyond 15% and up to 25% + 80% of the Fixed Rate for excess energy beyond 25% and up to 35% + 70% of the Fixed Rate for excess energy beyond 35%

Where the Fixed Rate is the applicable rate (sum of fixed charges and energy charges, if any) as determined by the Commission under section 62 of the Act or adopted by the Commission under section 63 of the Act. In case of multiple PPAs, the weighted average of the PPA rates shall be taken as the Fixed Rate. The renewable energy generators shall furnish the PPA rates on affidavit for the purpose of Deviation charge account preparation to the SLDC supported by copy of the Order of the Commission.

Fixed Rate for Open access participants selling power whose tariff is not determined under section 62 of Act or adopted by the Commission under section 63 of the Act, and the captive RE plants shall be the APPC rate at the State level.

- (v) In reference to clauses (iv) and (v) of this Regulation, for balancing of deemed renewable purchase obligation (RPO) compliance of buyers with respect to schedule, deviations by all wind and solar generators which are state entities shall first be netted off for the entire pool on a monthly basis and any remaining shortfall in renewable energy generation must be balanced through purchase of equivalent solar and non-solar Renewable Energy Certificates (RECs), as the case may be, by SLDC by utilising funds from the Pool Account. For positive balance of renewable energy generation, equivalent notional RECs shall be credited to the DSM Pool and carried forward for settlement in future.
- 7.2. Intra-state open access transactions:- The charges for deviation including additional charges for deviation shall be applicable for over injection /over drawal, under injection/under drawal and shall be prepared by considering base Rates specified for Charges of Deviation by the CERC, when these charges are receivable/payable to the Seller/Buyer as per Regulations 7 & 8 as specified in **Schedule-A**.
- 7.3. 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 commission or not, shall not exceed 303.04 Paisa/kWh.
- 7.4. 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 6 months or the extended time allowed by the Commission in accordance with BERC (Terms and condition of Intra-state open access) Regulations, 2018, subject to cap rate corresponding to main fuel used for such injection as determined by State Commission/Central Commission.

8. LIMITS ON DEVIATION VOLUME AND CONSEQUENCES OF CROSSING LIMITS

- 8.1. The over-drawals / under drawals 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 "49.85Hz and above and below 50.05 Hz";
 Provided that [X] MW is as described in regulation 7.1.
 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".
- 8.2. The under-injection /over-injection of electricity by a seller during a time-block shall not exceed 12% of the scheduled injection of such seller or 10 MW, whichever is lower when frequency is "49.85 Hz and above and below 50.05 Hz";
 Provided that:
- (i) 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".

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 4.8 MW, when grid frequency is "49.85 Hz or above and below 50.05 Hz".

- (ii) 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 6 months or the extended time allowed by the Commission in accordance with BERC (Terms and condition of Intra-state open access) Regulations, 2018. 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".
- (iii) The consumers who have reduced their contract demand to zero and drawing start-up power from grid shall also be exempted from limits of deviations as mentioned above. For such consumers provisions specified in tariff order shall be applicable.
- (iv) Provided that additional charges for deviation for under injection of electricity during the time block in excess of the volume limit specified in clause 8.2 when grid frequency is 49.85 Hz and above by the generating stations regulated by CERC/BERC using coal/lignite or gas supplied under Administrative Price Mechanism (APM) as the fuel shall be as specified by the commission as a percentage of cap rate or the charges of deviation corresponding to the grid frequency of the time block, or both with due consideration to the behavior of the generating stations regulated by CERC/BERC towards grid discipline.

Provided that the limits on deviation volume and consequences for crossing these limits (including the additional charges for deviation) as stipulated under Regulation 8 shall not apply to solar and wind generators which are state entities.

- 8.3. In addition to charges for Deviation as stipulated under Regulation 7 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 8.1 and 8.2 of this regulation **when average grid frequency of the time block is from "49.85 Hz to 50.05 Hz"** at the rates specified in the table A below in accordance with the methodology specified in these Regulations:

TABLE – A

When 12% of Schedule is less than or equivalent to X MW/10MW		
(i)	For over drawal of electricity by any buyer in excess of 12% and up to 15% of the schedule in a time block.	Equivalent to 20% of the charges for Deviation corresponding to average grid frequency of the time block.
(ii)	For over drawal of electricity by any buyer in excess of 15% and up to 20% of the schedule in a time block	Equivalent to 40% of the charges for Deviation corresponding to average grid frequency of the time block.
(iii)	For over drawal of electricity by any buyer in excess of 20% of the schedule in a time block	Equivalent to 100% of the charges for Deviation corresponding to average grid frequency of the time block.
(iv)	For under injection of electricity by any seller in excess of 12% and up to 15% of the schedule in a time block	Equivalent to 20% of the charges for Deviation corresponding to average grid frequency of the time block.
(v)	For under injection of electricity by any seller in excess of 15% and up to 20% of the schedule in a time block	Equivalent to 40% of the charges for Deviation corresponding to average grid frequency of the time block.
(vi)	For under injection of electricity by any seller in excess of 20% of the schedule in a time block	Equivalent to 100% of the charges for Deviation corresponding to average grid frequency of the time block.

When 12 % of Schedule is more than X MW /10MW		
(i)	For over drawal of electricity by any buyer is above X MW and up to [X]+10 MW in a time block	Equivalent to 20% of the Charge for Deviation corresponding to average grid frequency of the time block.
(ii)	For over drawal of electricity by any buyer is above [X]+10 MW and up to [X]+20 MW in a time block	Equivalent to 40% of the Charge for Deviation corresponding to average grid frequency of the time block.
(iii)	For over drawal of electricity by any buyer is above [X]+20 MW in a time block	Equivalent to 100% of the Charge for Deviation corresponding to average grid frequency of the time block.
(iv)	For under injection of electricity by any seller is above 10 MW and up to 20 MW in a time block	Equivalent to 20% of the Charge for Deviation corresponding to average grid frequency of the time block.
(v)	For under injection of electricity by any seller is above 20 MW and up to 25 MW in a time block	Equivalent to 40% of the Charge for Deviation corresponding to average grid frequency of the time block.
(vi)	For under injection of electricity by any seller is above 25 MW in a time block in a time block	Equivalent to 100% of the Charge for Deviation corresponding to average grid frequency of the time block.

- 8.4. In addition to charges for Deviation as stipulated under Regulation 7 of these regulations, Additional Charge for Deviation shall be applicable for **over-injection/under drawal** of electricity for each time block by a seller/buyer as the case may be when **grid frequency is "50.10 Hz and above"** at the rates equivalent to the charges for deviation corresponding to the grid frequency of "below 50.01 Hz but not below 50.0 Hz" as specified in clause 7.1 or cap rate for deviation of 303.04 Paise/kWh whichever is lower.
- 8.5. In addition to charges for Deviation as stipulated under Regulation 7 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"** at the basic rates equivalent to the Charge for Deviation corresponding to the grid frequency of "below 49.85Hz" as specified in clause 7.1.

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

Provided that 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.

Provided that 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 correct its position in the manner as specified under clauses (a) and (b) below:

- (a) For the period up to 31.03.2020: If the sustained deviation from schedule continues in one direction (positive or negative) for 12 time blocks, the state entity (buyer), shall correct its position by making the sign of its deviation from schedule changed or by remaining in the range of +/- [Z] MW with reference to its schedule, at least once, latest by 13th time block. Such range being a subset of volume limit as specified under Regulations 7 & 8 of these Regulations
Where [Z] is (Peak Demand of Distribution Licensee or Buyer / Σ NCPD) x 20) MW.
Where NCPD is as defined in regulation 7.
For seller limit will be +/- 5 MW.

Provided that each violation of the requirement under this clause shall attract an additional charge of 10% of the time block DSM charge payable or receivable as the case may be.

Illustration: For the period up to 31.03.2020: A State entity having a sustained deviation from time blocks t_1 to t_{12} , shall correct its position by changing the sign of its deviation (from positive to negative or negative to positive as the case may be) with reference to its schedule latest by the end of time block t_{13} . In case, such sign change does not take place by the end of time block t_{13} , but such correction of position takes place from time block t_{14} up to time block t_{24} , then the additional charge shall be levied equivalent to one violation. The above violation shall attract an additional charge at the rate of 10% of the time block DSM charge for t_{13} . Further, in case, sign change does not take place even latest by the end of t_{25} , but correction of position takes place from time block t_{26} up to time block t_{36} , then the additional charge shall be levied equivalent to two violations. The above violation shall attract an additional charge at the rate of 10% of the time block DSM for t_{13} and t_{25} , and so on.

- (b) For the period from 01.04.2020: If the sustained deviation from schedule continues in one direction (positive or negative) for 6 time blocks, the State entity (buyer), shall correct its position, by making the sign of its deviation from schedule changed or by remaining in the range of +/- [Z] MW with reference to its schedule, at least once, latest by 7th time block. Such range being a subset of volume limit as specified under Regulations 7 & 8 of these Regulations.

Where [Z] is (Peak Demand of Distribution Licensee or Buyer / Σ NCPD) x 20) MW.

Where NCPD is as defined in regulation 7.

For seller limit will be +/- 5 MW.

Illustration: For the period from 01.04.2020: A State entity having a sustained deviation from time blocks t_1 to t_6 , shall correct its position by changing the sign of its deviation (from positive to negative or negative to positive as the case may be) with reference to its schedule latest by the end of time block t_7 . In case, such sign change does not take place by the end of time block t_7 , but such correction of position takes place from time block t_8 up to time block t_{12} , then additional charge shall be levied equivalent to one violation. Further, in case, sign change does not take place latest by the end of t_{13} , but correction in position takes place from time block t_{14} up to time block t_{18} , then the additional charge shall be levied for two violations and so on.

Provided that violation of the requirement under clause (b) above shall attract an additional charge as specified in the table below:

No. of Violation in a Day	Additional Charge Payable
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 counting of number of sign change violations under clauses (a) & (b) of this Regulation shall start afresh at 00.00 Hrs. for each day.

Provided also that payment of additional charge for failure to adhere to sign change requirement as specified under clauses (a) & (b) of this regulation shall not be applicable to:

- A. Renewable energy generators which are State entities.
- B. Run of River Projects without Pondage which are State entities.

- C. Any infirm injection of power by a generating station prior to CoD of a unit during testing and commissioning activities, in accordance with the BERC Open Access 2018 Regulations and as per Regulation 8.2 (ii)
- D. Any drawal of power by a generating station for the start-up activities of a unit.

Payment of Charges for Deviation under Regulation 7 and the Additional Charges for Deviation under clause (8.1) to (8.5) of Regulation 8 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 provisions of the said regulations.

Provided that commission shall notify separate date other than that provided in Clause 2.3 above for applicability of third proviso of regulation 8.5 above.

- 8.6. The State Load Despatch Centre shall, on monthly 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.
- 8.7. Methodologies for the computation of Charges for Deviation and Additional Charges for deviation by seller (excluding solar and wind generators)/ buyer for crossing the volume limits specified for the under-injection/ over-drawal and for over-injection / under-drawal in clause (7) & (8) of this Regulation shall be as per Annexure I and Annexure II respectively.

9. SCHEDULING AND DESPATCH

- 9.1 The provisions of the State Grid Code and the Bihar Electricity Regulatory Commission Open Access Regulations, 2018 as amended from time to time, shall be applicable for declaration of capacity, scheduling and Dispatch.
- 9.2 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 State Grid Code.

Provided that the revision in generation schedule shall be permitted, in accordance with the procedure specified under the Grid Code and Bihar Electricity Regulatory Commission Open Access Regulations, 2018 as the case may be.

- 9.3 The wind and solar generator or the QCA, as the case may be, shall have the option of accepting the concerned SLDC's forecast for preparing its schedule or provide the concerned SLDC with a schedule based on its own forecast, and such schedule shall be used as reference for deviation settlement.
- 9.4 The QCA shall coordinate the aggregation of schedules of all generators connected to a pooling station and communicate it to the SLDC. The QCA shall undertake all commercial settlement on behalf of the wind or solar generator(s) connected to the respective pooling station(s).

10. ELIMINATION OF GAMING

- 10.1. Generally, the Sellers/Buyers shall ensure that the actual injection/drawal shall be near to the injection/drawal schedule.
- 10.2. It shall be incumbent upon the State-grid-user to declare their schedule/plant capabilities faithfully, i.e. according to their best assessment. In case, it is suspected that they have deliberately over/under declared the schedule/ plant capability contemplating to deviate from the schedules given on the basis of their capability declarations (and thus make money either as undue capacity charge or as the charge for deviations from schedule), the SLDC may ask the State-grid-user to explain the situation with necessary backup data
- 10.3. If it is observed that the Seller is indulging in gaming, then any affected entity or SLDC may intimate the facts with relevant records to the Commission. The Commission on a petition made by any affected entity or SLDC, shall initiate proceedings against any "Seller" on charges of gaming and if required, may order an inquiry in such manner as decided by the Commission. When the charge of gaming is established in the above inquiry, the Commission may, without prejudice to any other action under the Act or regulations there

- under, disallow any deviation charge receivable by the Sellers/Buyers during the period of such gaming or may take any other action.
- 10.4. In case it is observed that a "Seller" has scheduled excess power than the approved quantum of open access in any time block; then no deviation charge shall be receivable by him for excess injection, done on that day and he will have to pay the transmission/wheeling charges as applicable for the excess schedule quantum, for the whole day, at the rate of two times of the transmission charges as applicable. In the case of implemented schedules indicated by the ERLDC for open access transactions, the rounding off of 0.01MWh whether on plus side or minus side shall be ignored and such a case shall not be considered either as excess scheduling or under injection.
- 10.5. Normally, the distribution licensee shall plan its power purchase to meet the demand of the area of supply. The distribution licensee shall not under draw from the grid until its demand is met i.e. no unscheduled load shedding be done in its area of supply to sell power by under drawing. If such type of case is observed, then the distribution licensee shall be liable for suitable action.
- 10.6. No set off towards deviation charges shall be allowed to open access customers due to load regulatory measures applied or due to any network constraints unless otherwise specifically allowed in these Regulations and BERC Open Access Regulations 2018.

11. ENERGY ACCOUNTING AND SETTLEMENT

Settlement of energy at drawal point in respect of Open Access Consumer

- 11.1. The scheduled drawal (MWh) at drawal point shall be computed for each time block from the scheduled injection (in MW) for such consumer through open access at the injection point considering the energy losses of the State grid (intra-state transmission system and/ or distribution system, as applicable) and the deviation from schedule shall be dealt as per Regulation 7 & 8.
- 11.2. The excess energy consumed, if any, at the drawal point for any time block with reference to scheduled drawal shall be deemed to have been consumed by the consumer from the State grid and shall be treated as deviation and shall be paid by the consumer at the applicable DSM charge corresponding to average frequency of that time block.
- 11.3. In case, where such a consumer under draws with reference to the scheduled drawal, he shall be compensated at the DSM charge corresponding to average frequency of that time block.
- 11.4. For open access consumer procuring power from solar and wind generators of capacity less than 5 MWp and 5 MW respectively, settlement of energy shall be as under:
- (a) If there is surplus energy available after set-off with Open Access consumption in the same 15 minutes time block, it shall be treated as sale to the concerned distribution licensee @ 85% of the generic RE tariff determined by the Commission for that year.
 - (b) If open access consumption is more than energy injected by generator in same time block, the balance energy shall be deemed to have been supplied by distribution licensee and shall have to be paid for as per the terms of the retail tariff order and supply agreement with the distribution licensee for that consumer category.

Settlement of energy at drawal point in respect of an Open Access Consumer having retail supply agreement

- 11.5. Such a consumer shall have supply agreement with the licensee (either for standby support or for meeting part requirement of his total requirement as may be chosen by the consumer) as also with the "Sellers" for availing power through open access.
- 11.6. The total scheduled drawal at drawal point shall be computed for each time block considering contract demand (in MVA) with licensee and injection schedule for the consumer through Open-Access at the injection point by considering the losses of the State-grid (Intra-State transmission system and / or distribution system, as applicable).
- 11.7. If the total actual drawal exceeds total scheduled drawal (scheduled drawal for the consumer at drawal point for power purchase through open access+ contract demand with licensee),

- the consumer shall be liable to pay Deviation charges corresponding to average frequency of that time block.
- 11.8. If the total actual drawal is less than total scheduled drawal (scheduled drawal for the consumer at drawal point for power purchase through open access + contract demand with licensee), the consumer shall receive the Deviation charges corresponding to average frequency of that time block.
- 11.9. For levy of demand charges by distribution licensee, the actual power drawn shall be first set off with open access supply and remaining drawal shall be considered for calculating demand charges as per retail tariff agreement.
- 11.10. Energy charges shall be levied by distribution licensee as per tariff on total energy consumed in the time block minus energy consumed towards open access schedule, subject to max of contract demand.
- 11.11. For open access consumer procuring power from solar and wind generators of capacity less than 5 MWp and 5 MW respectively, settlement of energy shall be as under:
- (a) The supply by generator shall be considered as the first supply and the extra supply in excess of actual open access supply by generator (wind and solar) in same time block shall be deemed to have been supplied by distribution licensee and shall have to be paid for as per the terms of the retail tariff order and supply agreement with the distribution licensee.
 - (b) The open access consumer shall have to pay demand charges as per the retail supply order considering contract demand as summation of contract demand for retail supply agreement and approved open access quantum.

12. STATE DSM ACCOUNT (SDSMA)

- 12.1. The State Load Despatch Centre shall prepare and issue (to all Sellers/ Buyers) SDSMA charges to all Sellers/ Buyers as per the modalities and timelines as under:
- (a) **Billing Cycle:** The SDSMA billing cycle for all Sellers/ Buyers shall be weekly (i.e. Monday to Sunday)
 - (b) **Meter Reading:** Meter reading of all meters (as required) for Sellers/ Buyers shall be provided by the concerned metering division of STUs/ DISCOMS/ State Owned Generators by every Tuesday of the succeeding week (ending with Sunday) in encrypted (.mrd/.xml) format, through e-mail to SLDC The concerned metering division of BSPGCL/State Govt. owned Generator, STUs and DISCOMS shall ensure authenticity of the meter readings/ consumption as recorded in meters (and communicated to the SLDC) by testing of meters and metering equipments, as per CEA metering Regulation 2006, as amended from time to time.
 - (c) **Implemented Schedule:** For preparation of SDSMA Statement, the SLDC shall consider implemented schedule as available in the ERLDC and SLDC websites and implemented schedule received from Power Exchanges through E-Mail. SLDC shall be responsible for timely (as per Grid Code) updation and uploading of the implemented schedule in respect of all Sellers/ Buyers in the SLDC website.
 - (d) **Frequency:** For preparation of SDSMA statement, SLDC shall consider frequency as considered by ERPC in the DSM statement issued to DISCOMS, as available in ERPC websites.
 - (e) **Confirmation of Meter-reading and Schedule:** Since meter reading and implemented schedule data are received in encrypted softcopy, so to minimize the possibility of error, before processing of the SDSMA bill, SLDC shall again verify data of schedule and energy injection/drawal from the concerned Sellers/ Buyers and concerned metering Dn. of BSPGCL/State Govt. owned Generator / STUs/ DISCOMS. The Sellers/ Buyers and the concerned metering Dn. of BSPGCL/State Govt. owned Generator / STUs/ DISCOMS shall verify and confirm the required information within 2 working days from the date of receipt of such data from SLDC through email.

- (f) **Processing of SDSMA Bill:** SLDC shall prepare SDSMA bill within 3 working days after the receipt of all related data from all concerned as above. Further, SLDC shall issue the SDSMA bill to all concerned through hardcopy and softcopy. The softcopy of the SDSMA bill shall be made available by publishing it on the SLDC website from the date of issue of SDSMA bill. The soft copy of the SDSMA shall broadly contain the following information:
- (i) Details of Deviation Settlement Mechanism Tariff Structure currently in force;
 - (ii) Details of Day-wise and total Deviation transactions for each Entity (details shall include Scheduled Energy, actual Energy, Charges for Deviation and Additional Charges for Deviation);
 - (iii) Summary table listing all paying Entities (along with net amount payable by them) on left-hand side and all receiving Entities (along with net amount receivable by them) on right-hand side;
 - (iv) Details of time-blocks of suspension of Deviation due to transmission constraints and Grid disturbances;
 - (v) Any other details which State Load Despatch Centre feels necessary to complete the Deviation Settlement Method Account.
- 12.2. Comparison of the actual drawal and scheduled drawal for each buyer will be carried out to calculate deviation. The deviation energy of each buyer is calculated by deducting scheduled drawal from the actual drawal on 15-minute basis. Similarly, deviation energy of each seller is calculated by deducting scheduled injection from the actual injection on 15-minute basis. This deviation energy is then converted into Deviation charge by multiplying the deviation rate for each time block corresponding to average Grid frequency in that time block. Similar calculations are to be carried out for all the time blocks in a Week.
- 12.3. Settlement of Deviation charges shall be done through "State DSM Pool Account" to be operated by SLDC. The SLDC shall open and maintain a separate Bank Account with a Nationalized/Scheduled Commercial Bank.
- 12.4. Payment of Deviation charges shall have a high priority and the concerned Entity shall pay the indicated amount, within ten days from the date of issue of State Deviation Settlement Mechanism Account, into a "State DSM Pool Account" operated by SLDC.
- 12.5. The State grid User which has to receive the money on account of Deviation charges would then be paid out from the State DSM Pool Account within next two working days of receipt of payments in the "State DSM Pool Account".
- 12.6. Separate books of accounts shall be maintained for the principal component of charges for Deviation and Additional Charges.
- 12.7. 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.
- 12.8. If payments against the Deviation Charges are delayed by more than two days, i.e. beyond ten days from date of issue of State Deviation Account, the defaulting State grid Users shall have to pay simple interest @ 0.04% for each day of delay. The interest so collected shall be paid to the entities who had to receive the amount and whose payment has got delayed.
- 12.9. All Sellers/Buyers which had at any time during the previous quarter of the 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 quarter of the year, in favor of the pool account maintained by SLDC with a nationalized/scheduled commercial bank.

Provided that: -

- (a) If any State Grid user fails to make payment of Charges for Deviation including additional charges for deviation by the time specified in these regulations during the current quarter of the year, it shall be required to open a Letter of Credit equal to 110% of weekly outstanding liability in favor of "State DSM Pool Account"
- (b) Letter of Credit amount shall be increased to 110% of the payable weekly liability for Deviation in any week during the quarter, if it exceeds the previous Letter of Credit amount by more than 50%.

Illustration: If the average payable weekly liability for Deviation of a State Grid user during Last Quarter of FY 2018-19 is Rs. 20 crore, the State Grid User shall open Letter of Credit for Rs. 22 crore in First Quarter of FY 2019-20. If the weekly payable liability during any week in First Quarter of FY 2019-20 is Rs. 35 crore which is more than 50% of the previous quarter of the year average payable weekly liability of Rs. 30 Crore, the concerned State Grid User shall increase the LC amount to Rs. 38.5 Crore (1.1*35.0) by adding Rs. 16.5 Crore.

- (c) In case of failure to pay into the "State Deviation Pool Account Fund" within the specified time of 10 days from the date of issue of statement of charges for Deviations, the SLDC shall be entitled to encash the Letter of Credit of the concerned entity to the extent of the default and the concerned entity shall recoup the Letter of Credit amount within 3 working days.

12.10 The surplus of the end of the year from the State DSM Pool Accounts shall be transferred to State Power System Development Fund. The amount lying in the State Power System Development Fund shall be utilized to bridge any deficit in DSM Pool Account during any year and for creation of transmission system (which shall be carried in by STU based on operational feedback) for relieving congestion in Intra-State transmission Network, after due approval from the State Regulatory Commission.

12.11 The State Load Dispatch Centre shall be the nodal agency for implementation of the scheme of State Power System Development Fund.

13. POWER TO RELAX

13.1 The Commission, 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 these Regulations on its own motion or on an application made before it by an interested person.

14. SAVINGS AND REPEAL

14.1 Nothing in these Regulations shall be deemed to limit or otherwise impede the inherent power of the Commission to revise/review and make such orders as may be necessary, in the absence of sufficient data, to meet ends of justice or to prevent abuses of the process of the Commission.

14.2 Nothing in these Regulations shall impede the Commission from adopting, in conformity with the provisions of the Act, a procedure, which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or class of matters, and for reasons to be recorded in writing, deems it necessary or expedient for dealing with such a matter or class of matters.

15. POWER TO REMOVE DIFFICULTIES

15.1 If any difficulty arises in giving effect to any of the provisions of these regulations, the Commission may, of its own motion or otherwise by an order and after giving a reasonable opportunity to those likely to be affected by such order, make such provisions, not inconsistent with these regulations or the Act, as may appear to be necessary for removing those difficulties.

By order of the Commission,
Rameshwar Pd. Das,
Secretary.

**Schedule –A
(Under Reg. 7.1)**

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 and shall be worked out on the average frequency of a time-block at the rates specified in the table below :

Average Frequency of the time block (Hz)		Charges for Deviation (Paise/kWh)
Below	Not Below	
	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 table
50.04	50.03	
50.03	50.02	
50.02	50.01	
50.01	50.00	Daily 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. 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.
- vii. Deviation price shall be rounded off to nearest two decimal places.
- viii. An illustration to the DSM price vector specified in table above, is provided as Annexure-II
- ix. 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.”

Annexure-I
(Under Reg. 8.7)

PART-A

Methodologies for the computation of charges of Deviation and Additional Charges for deviation for crossing the volume limits specified for the under injection/ over-drawl by seller/Buyer

1. When the grid frequency is 49.85 Hz and above
 - A. When D_{tb} i.e. Deviation from schedule in a time block in MW is **less than** (+/-)12% of the schedule in MW or X MW/ 10MW whichever is lower in each time block, D_{tb} to be payable by the intra-state entity at normal Charges for Deviation; Where X MW is as described in Regulations 7.1.
 - B. When D_{tb} i.e. Deviation from schedule in a time block in MW is **more than** (+/-) 12% of the schedule in MW or X MW/10MW whichever is lower in each time block
 - (i) $D_{tb} = D_0 + D_{12/[X]10}$
Where
 $D_0 = (+/-) 12\%$ of Schedule (SG) or X MW/ 10MW whichever is lower,
 $D_{12/[X]10} =$ Deviation in excess of (+/-) 12% of the SG or X MW/ 10MW, whichever is lower in each time block.
Where X MW is as described in Regulations 7.1.
 - (ii) $D_{12/[X]10} = D_{tb} - D_0$
 - (iii) The Charges for Deviation corresponding to D_0 shall be payable by the Intra State Entity at normal Charges of Deviation; In addition, graded Additional Charges for the Deviation for $D_{12/[X]10}$ shall be payable by the intra-state entity for over drawl/under injection for crossing the volume limit on the basis of percentage term or MW terms as the case may @ 20%, 40%, 100% of Charge of Deviation for the incremental deviation in each slab. The same is illustrated as under:

IIIustrations "A" When 12% of Schedule is less than or equal to X MW/10 MW

Category	Additional Charges for Deviation
D_{tb} is above 12% and up to 15% of schedule in MW	$50 \times (D_{tb} - 12\% \text{ of schedule}) \times$ Charge for Deviation corresponding to average grid frequency of the time block.
D_{tb} is above 15% and up to 20% of schedule in MW	$(100 \times (D_{tb} - 15\% \text{ of schedule}) + 1.50 \times \text{schedule}) \times$ Charge for, Deviation corresponding to average grid frequency of the time block.
D_{tb} is above 20%	$(250 \times (D_{tb} - 20\% \text{ of schedule}) + 6.50 \times \text{schedule}) \times$ Charge for Deviation corresponding to average grid frequency of the time block.

Provided that when the schedule is less than or equal to 40 MW, the additional charges for deviation shall be based on percentage of deviation worked out with reference to schedule of 40 MW.

IIIustrations "B" When 12% of schedule is more than X MW/10MW

Category	Additional Charges for Deviation
D_{tb} is above [X] MW/10MW and up to [X]+10 MW/ 20 MW	(i) $50 \times (D_{tb} - [X]) \times$ Charge for Deviation corresponding to average grid frequency of the time block. (ii) $50 \times (D_{tb} - 10) \times$ Charge for Deviation corresponding to average grid frequency of the time block.
D_{tb} is above [X]+10 MW/ 20 MW and up to [X]+20 MW/ 25 MW	(i) $(100 \times (D_{tb} - [X]+10) + 500) \times$ Charge for Deviation corresponding to average grid frequency of the time block. (ii) $(100 \times (D_{tb} - 20) + 250) \times$ Charge for, Deviation corresponding to average grid frequency of the time block

D _{tb} is above [X]+20 MW/ 25 MW	(i) (250 x (D _{tb} - _{[X]+20}) +1500) X Charge for Deviation corresponding to average grid frequency of the time block (ii) (250 x (D _{tb} - ₂₅) +750) X Charge for Deviation corresponding to average grid frequency of the time block
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Note: The Additional Charge for Deviation for under-injection of electricity, during the time-block in excess of the volume limit specified in Regulation 7 and 8, when grid frequency is '49.85 Hz and above', by the generating stations regulated by the CERC/BERC using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be calculated with the Cap Rate for deviation of 303.04 Paisa/kWh or the Charge for Deviation corresponding to average grid frequency of the time block, whichever is less.

2. When the grid frequency is below 49.85 Hz:

The charges for deviation corresponding to D_{tb} shall be payable by the intra-state entity at the charge for Deviation corresponding to the grid frequency of "below 49.85 Hz". In addition, additional deviation charges for deviation for D_{tb} shall be payable by the intra-state entity at the Charge for Deviation corresponding to the grid frequency of "below 49.85 Hz.

Note: The charges for deviation and additional charges for deviation for under injection, during the time-block when grid frequency is below '49.85 Hz' by the generating stations regulated by the CERC/BERC using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be calculated with the Cap Rate as specified in clause 7.3 of these Regulations.

PART-B

Methodologies for the computation of Charges of Deviation and Additional Charges for deviation for crossing the volume Limits specified for the over injection/ under drawal by seller / Buyer

A. When D_{tb} i.e. Deviation from schedule in a time block in MW is **less than** (+/-) 12% of the schedule in MW or X MW/ 10MW, whichever is lower in each time block, D_{tb} to be Receivable by the intra-state entity at normal Charges for Deviation;

B. When D_{tb} i.e. Deviation from schedule in a time block in MW is **more than** (+/-) 12% of the schedule in MW or X MW/ 10MW, whichever is lower in each time block

(i) $D_{tb} = D_0 + D_{12/[X]10}$

Where

$$D_0 = (+/-) 12\% \text{ of Schedule or } X \text{ MW/ } 10\text{MW} \text{ whichever is lower,}$$

$$D_{12/[X]10} = \text{Deviation in excess of } (+/-) 12\% \text{ of the SG or } X \text{ MW/ } 10\text{MW, whichever is lower in each time block}$$

(ii) $D_{12/[X]10} = D_{tb} - D_0$

C. The Charges for Deviation corresponding to D₀ shall be receivable by the intra-state entity at normal Charges of Deviation or the ceiling rate whichever is lower; the intra-state entity shall not be entitled to any receivable for D_{12/[X]10}

Provided that when the schedule is less than or equal to 40 MW, 12% of schedule will be considered as 4.8 MW for the purpose of this clause.

D. Additional Charges for the Deviation D_{tb} shall be payable by the intra-state entity for under drawal/ over injection when grid frequency is "50.10 Hz or above" in accordance with clause 8 of this Regulation.

Annexure-II
(Under Reg. – 8.7)

Illustration to the DSM Price Vector specified in Table under Annexure-I

Average Frequency of the time block (Hz)		Charges for Deviation (Paise/kWh)
Below	Not Below	
	50.05	0.00
50.05	50.04	1xP/5
50.04	50.03	2xP/5
50.03	50.02	3xP/5
50.02	50.01	4xP/5
50.01	50.00	P
50.00	49.99	50.00+15xP/16
49.99	49.98	100.00+14xP/16
49.98	49.97	150.00+13xP/16
49.97	49.96	200.00+12xP/16
49.96	49.95	250.00+11xP/16
49.95	49.94	300.00+10xP/16
49.94	49.93	350.00+9xP/16
49.93	49.92	400.00+8xP/16
49.92	49.91	450.00+7xP/16
49.91	49.90	500.00+6xP/16
49.90	49.89	550.00+5xP/16
49.89	49.88	600.00+4xP/16
49.88	49.87	650.00+3xP/16
49.87	49.86	700.00+2xP/16
49.86	49.85	750.00+1xP/16
49.85		800.00

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

Rameshwar Pd. Das,
Secretary.

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