Standard Operating Procedure (SOP)

For

Implementation of the MSERC (Intra-State Deviation Settlement Mechanism and Related Matters) Regulations, 2025

In compliance with Regulation 10.1

Table of Contents

Contents

Serial No.	Abbreviation	Full Form
1	ABT	Availability Based Tariff
2	AMR	Automatic Meter Reading
3	CEA	Central Electricity Authority
4	CERC	Central Electricity Regulatory Commission
5	CPP	Captive Power Plant
6	CTU	Central Transmission Utility
7	DISTRIBUTION LICENSEE	Distribution Licensee
8	DSM	Deviation Settlement Mechanism
9	D-1	Day Ahead (One day prior to operation)
10	ECR	Energy Charge Rate
11	FEHS	Free Energy Home Service
12	GNA	General Network Access
13	IST	Indian Standard Time
14	MeECL	Meghalaya Energy Corporation Limited
15	MePDCL	Meghalaya Power Distribution Corporation Limited
16	MePGCL	Meghalaya Power Generation Corporation Limited
17	MePTCL	Meghalaya Power Transmission Corporation Limited
18	MDMS	Meter Data Management System
19	MSC	Multiple Supply Consumer
20	MSERC	Meghalaya State Electricity Regulatory Commission
21	NLDC	National Load Despatch Centre
22	NERLDC	North Eastern Regional Load Despatch Centre
23	NERPC	North Eastern Regional Power Committee
24	OA	Open Access
25	PX	Power Exchange
26	RLDC	Regional Load Despatch Centre
27	SCADA	Supervisory Control and Data Acquisition
28	SDPA	State Deviation Pool Account
29	SEM	Special Energy Meter
30	SLDC	State Load Despatch Centre
31	SPC	State Power Committee
32	SSC	Single Supply Consumer
33	STU	State Transmission Utility
34	SDSMA	STATE DSM ACCOUNT
35	TGNA	Temporary General Network Access

1. Purpose & Scope

This Standard Operating Procedure (SOP) defines operational and accounting procedures to implement the (Intra-State Deviation Settlement Mechanism and Related Matters) Regulations, 2025 within Meghalaya. It covers:

(a) Scheduling, metering & deviation computation for all *State Entities*;

(b) Preparation, verification & issuance of *State DSM Account (SDSMA)*;

(c) Operation of the *State Deviation Pool Account (SDPA)*;

(d) Settlement & payment discipline;

(e) Governance and audit mechanisms to preserve grid security and financial integrity.

2. Applicability

Applicable to all grid-connected entities under Regulation 4, viz.

(a) Generators: State Generating Station (SGS), Captive Generating Plants (CGP), Renewable energy based generating plant, IPP, RE/WS;

(b) Buyers: State Distribution Licensee, Open-Access Consumers (OA), Captive Users;

(c) State Transmission Utility (STU) – for metering & data management;

(d) SLDC – for scheduling, accounting & settlement.

3. Roles and Responsibilities

3.1 SLDC

The roles and responsibilities of SLDC are:

(a) SLDC is the apex body for real-time operation of the State power system. It shall take all decisions related to scheduling and dispatch of generating stations and drawal by State Entities. SLDC shall evaluate network parameters, transmission constraints, congestions, outages and any other parameter in relation with grid security and reliability. In case of grid disturbances, network abnormalities, grid violations, or deviations from schedule, SLDC shall issue directions to all the State Entities and these shall be binding.

(b) SLDC shall implement scheduling and despatch operations in accordance with the State Grid Code and MSERC (Intra-State DSM and Related Matters) Regulations, 2025. Such functions will be applicable to Long-Term Access (LTA) customers, Medium-Term Open Access (MTOA) and Short-Term Open Access (STOA) customers. SLDC shall ensure capacity declaration, scheduling, and deviation settlement as per approved regulations. In case of any inconsistency with the Indian Electricity Grid Code (IEGC), the provisions of the IEGC shall prevail.

(c) SLDC shall function as the State Energy Accounting Centre. It shall be responsible for:

(i) Collection of real-time and metered data, verification of energy injection and drawal etc.;

(ii) Counter-checking time synchronization (GPS-based) of interface meters;

(iii) Collection of schedules, Actual metering data, Normal rates, frequency data etc.;

(iv) Preparation of DSM bills for Intra-State entities;

(v) Preparation & issuance of monthly SDSMA bills (Regulation 9.1);

(vi) Maintenance of SDPA (Regulation 9.2);

(vii) Ensuring timely payments (Regulations 9.3 → 9.7);

(viii) SLDC shall publish all such information as required for all other State Entities to be aware of the energy exchanges taking place within the state pool as well as exigency conditions, if any with regard to despatch of power;

(ix) Detection & reporting of gaming, if any (Reg 7A);

(x) Training and monitoring of the status of the metering system.

3.2 State Transmission Utility

The roles and responsibilities of STU can be broadly categorised as:

(1) Provision and maintenance of metering infrastructure;

(2) Meter data acquisition and management;

(3) Support to SLDC for DSM and Energy Accounting;

(4) Ensuring meter data integrity.

(1) Provision and maintenance of metering infrastructure

(a) Procurement, installation, operation and maintenance of ABT compliant Special Energy Meters (SEMs) at all identified intra state transmission interface points, substations and designated boundary metering locations;

(b) STU shall ensure that all SEMs are compliant with CEA Metering Regulations;

(c) Periodic testing, calibration, sealing, rectification of time drifts and replacement of meters as per approved procedures;

(d) Coordination with SLDC and the SEM Original Equipment Manufacturer (OEM) for any new meter integration into the Automatic Meter Reading (AMR) system;

(e) Provision of real time data communication for recording energy flows at 15-minute intervals (with capability for future data transmission at 5 minutes' interval) and speech communication facilities with SLDC.

(2) Meter data acquisition and management

(a) To ensure complete (100%) meter data availability on a weekly and monthly basis to the SLDC, including in cases of communication failure or other causes of non-availability;

(b) To ensure time synchronization of metering system through Global Positioning System with counter check from the State Energy Accounting Centre which is the SLDC;

(c) To ensure submission of validated data to SLDC within the prescribed timelines to facilitate timely energy accounting and DSM compilation and settlement;

(d) To facilitate remote meter reading wherever communication infrastructure is available.

(3) Support to SLDC for DSM and Energy Accounting

STU shall provide necessary support to SLDC by:

(a) Making available boundary meter data required for DSM computation by SLDC;

(b) Assisting in loss computation and analysis of energy flows across the State transmission network;

(c) Supporting reconciliation of metered data during disputes, audits or reviews by MSERC.

(4) Ensuring meter data integrity

STU shall ensure:

(a) Integrity, confidentiality and security of meter data;

(b) Controlled access to meter data systems;

(c) Coordination with SLDC for data backup and disaster recovery mechanisms.

3.3 <u>State DISTRIBUTION LICENSEE</u>

(a) Submit Day Ahead /Real Time Schedule, Forecasting and meter data for its control area;

(b) Distribution Licensee shall follow SLDC instructions on scheduling, dispatch, and drawal without deviation and other direction for grid security and reliability;

(c) Make DSM payments / receipts through SDPA;

(d) For multi-Distribution Licensee scenario (future), each Distribution Licensee shall be treated as a separate buyer under SDSMA.

3.4 <u>State Generator</u>

The roles and responsibilities of State Generator can be broadly categorised as:

(1) Provision and maintenance of metering infrastructure;

(2) Meter data acquisition and management;

(3) Support to SLDC for DSM and Energy Accounting;

(4) Ensuring meter data integrity.

(1) Provision and maintenance of metering infrastructure

(a) Procurement, installation, operation and maintenance of ABT compliant Special Energy Meters (SEMs) at all identified intra state transmission interface points, substations, power station and designated boundary metering locations;

(b) Generator shall ensure that all SEMs are compliant with CEA Metering Regulations;

(c) Periodic testing, calibration, sealing, rectification of time drifts and replacement of meters as per approved procedures;

(d) Coordination with SLDC and the SEM Original Equipment Manufacturer (OEM) for any new meter integration into the Automatic Meter Reading (AMR) system;

(e) Provision of real time data communication for recording energy flows at 15-minute intervals (with capability for future data transmission at 5 minutes interval) and speech communication facilities with SLDC.

(2) Meter data acquisition and management

(a) To ensure complete (100%) meter data availability on a weekly and monthly basis to the SLDC, including in cases of communication failure or other causes of non-availability;

(b) To ensure time synchronization of metering system through Global Positioning system with counter check from the State Energy Accounting Centre which is the SLDC;

(c) To ensure submission of validated data to SLDC within the prescribed timelines to facilitate timely energy accounting and DSM compilation and settlement;

(d) To facilitate remote meter reading wherever communication infrastructure is available.

(3) Support to SLDC for DSM and Energy Accounting

State Generators shall provide necessary support to SLDC by:

(a) Making available boundary meter data required for DSM computation by SLDC;

(b) Assisting in loss computation and analysis of energy flows of respective power station;

(c) Supporting reconciliation of metered data during disputes, audits or reviews by MSERC.

(4) Ensuring meter data integrity

State Generator shall ensure:

(a) Integrity, confidentiality and security of meter data;

(b) Controlled access to meter data systems;

(c) Coordination with SLDC for data backup and disaster recovery mechanisms.

(5) Submit declared capacity and schedule as per Regulation 7. In case of any inconsistency with the State Grid Code, 2012 and Open Access Regulations and amendments thereof, the provisions of the IEGC shall prevail.

(6) SGS shall follow SLDC instructions on scheduling, dispatch, and drawal without deviation and other directions for grid security and reliability

(7) Verify SDSMA data within 2 working days.

3.5 Open Access Consumers / Captive Power Plants (CPPs)

The roles and responsibilities of Open Access Consumers and Captive Power Plants (CPPs) shall be broadly categorised as:

(1) Scheduling and Declaration Obligations

(2) Metering and Data Availability

(3) Compliance with DSM and Energy Accounting

(4) Ensuring Data Accuracy and Grid Discipline

(1) Scheduling and Declaration Obligations

(a) Submission of **day-ahead schedules** to SLDC and Distribution Licensee in the prescribed format and within timelines specified under MSERC DSM Regulations, 2025/IEGC.

(b) Declaration of Open Access schedule (source-wise) to be submitted to SLDC, and, in case of Multiple Supply Consumers (MSC), Distribution Licensee drawal to be submitted to Distribution Licensee

(c) Multiple Supply Consumer shall ensure **clear and unambiguous declaration** of Open Access schedule and Distribution Licensee drawal.

(d) Ensuring that contracted capacity or PPA quantum is **not treated as scheduled drawal** unless duly scheduled and approved by SLDC.

(e) Adherence to the **schedule** issued by SLDC for each 15-minute time block.

(2) Metering and Data Availability

(a) Procurement, Installation and maintenance of ABT-compliant Special Energy Meters (SEM) at designated interconnection points, in compliance with CEA Metering Regulations;

(b) To facilitate remote meter reading and integration with the SLDC system, communication infrastructure shall be made available to SLDC;

(c) Coordination with SLDC and the SEM Original Equipment Manufacturer (OEM) for any new meter integration into the Automatic Meter Recorder (AMR) system;

(d) Provision of real time data communication for recording energy flows at 15-minute intervals (with capability for future data transmission at 5 minutes interval) and speech communication facilities with SLDC;

(e) To ensure complete (100%) meter data availability on a weekly and monthly basis to the SLDC, including in cases of communication failure or other causes of non-availability;

(f) Ensuring availability of time-synchronized meter data for DSM and energy accounting;

(g) Prompt reporting of any meter defect, communication failure, or data anomaly to SLDC and concerned utility;

(h) Periodic testing, calibration, sealing, rectification of time drifts and replacement of meters as per approved procedures.

(3) Compliance with DSM and Energy Accounting

(a) Acceptance of DSM settlement for deviations between actual drawal/injection and final implemented schedule;

(b) Timely payment of DSM charges through the State Deviation Pool Account (SDPA);

(c) For MSCs, ensuring that the aggregate scheduled drawal (Open Access + Distribution Licensee) does not exceed the contract demand on a block-wise basis;

(4) Ensuring Data Accuracy and Grid Discipline

(a) Compliance with all directions, instructions, and curtailment orders issued by SLDC in the interest of **grid security, reliability, and system operation**;

(b) Non-compliance with SLDC directions shall constitute **grid indiscipline** and shall be liable for action under the applicable Regulations and other laws;

(c) Maintenance of accurate declarations and scheduling discipline to avoid artificial neutralization of deviations;

4. Scheduling Procedure (Regulations 7)

(1) Day-Ahead Schedule Submission

(a) All State Entities shall submit day-ahead schedules to SLDC as per scheduling timelines

(b) STOA consumers must declare separately in the prescribed format their scheduled drawal from DISTRIBUTION LICENSEE and through Open Access as per regulation (DSM Reg 6.1 c) along with total power requirements for the day ahead schedules to SLDC via email and WhatsApp **STOA Scheduling Format-I**

(2) Revision

(a) Allowed as per State Grid Code/IEGC. In case of any inconsistency in the State Grid Code with IEGC, the provisions of IEGC shall prevail.

(b) Revision of Schedule for Collective transaction is not allowed.

(3) SLDC Schedule Compilation

SLDC shall compile final implemented schedule and upload it on its website daily as per State Grid Code/ IEGC.

(4) In the event of any inconsistency between the provisions of the State Grid Code or the State Open Access Regulations (including any amendments thereto) and the applicable provisions relating to scheduling and timelines for Intra-State entities as specified above in the procedure 4 (1) to 4 (3), the corresponding provisions of the Central Electricity Regulatory Commission (CERC) Indian Electricity Grid Code (IEGC), Open Access Regulations, and the General Network Access (GNA) and Temporary GNA (TGNA) Regulations shall prevail.

(5) Frequency Reference

SLDC shall use frequency data published by NERPC/NERLDC (Reg 9.1 d).

5. Metering and Data Acquisition (Regulation 5.4)

(a) Interface meters installed by STU/OA/State Generating Station (SGS)/State Generator and synchronized through GPS.

(b) Remote meter-reading automatic to SLDC data server.

(c) STU/OA/SGS must make 100%-meter data availability to SLDC data Server if any failure of remote meter-reading automatic.

(d) Weekly health check and quarterly calibration.

(e) Faulty meters to be replaced within 3 working days.

(f) Real-time data communication capability 15-min (now) and 5-min (future).

6. Deviation Computation (Regulation 6)

(1) Deviation Computation shall apply to all Intra-State Entities as per Clause 2 (Applicability) under the procedure and shall be calculated in accordance with Regulation 6 of these Regulations.

(2) In Meghalaya, there is only one (1) State Distribution Licensee (MePDCL) participating in the inter-state market. This Distribution Licensee inter-state drawal schedule and deviations are already settled by NERPC under the CERC DSM framework. Therefore, MSERC does not mandate recalculation of inter-state DSM for Distribution Licensee where the same is already settled by NERPC. If the State has more than one distribution licensee, MSERC Regulation Clause 4.2 would apply for DSM calculation of such Distribution Licensee.

(3) As per the MSERC State Grid Code and IEGC, State Generating Stations (SGS) are required to declare their Declared Capacity (DC) to the SLDC each morning within the specified timelines. In cases where such declarations are not furnished and the scheduling procedure is not complied with, SLDC assumes by taking own responsibility for declaring DC, entitlement, and implementing schedules to ensure secure grid operation. Revisions, if any, will be reflected in the final implemented schedule for generation and DSM will be calculated accordingly for all power stations inside the state.

As per regulatory provisions, the energy charge is calculated on the basis of the implemented ***Final Schedule declared by SLDC****, as follows:*

Energy Charge*: = (Energy Charge Rate in Rs. / unit) X (****Scheduled Energy for the month in Kwh****) X (100 – FEHS) / 100.*

7. Energy Accounting (Regulation 8)

7.1 For Single Supply Consumer (SSC) (Definition 3.45)

(a) Scheduled drawal computed at drawal point (after losses);

(b) Over-drawal → DSM payable; under-drawal → DSM receivable.

7.2 For Multiple Supply Consumer (MSC)

(a) Total schedule = Distribution Licensee supply + OA schedule (≤ contract demand).

(b) Actual drawal first adjusted against OA schedule; balance = Distribution Licensee component.

(c) **Rates:**

i. If actual > schedule but < contract demand → Whichever **higher of DSM rate or energy charge**.

ii. If actual > contract demand → penalty as per Electricity Supply Code.

iii. If actual < schedule → DSM rate applies.

(d) For MSC consumers using non-solar power, the distribution licensee will charge energy fees based on the actual electricity consumed during the billing month, after subtracting the energy scheduled through open access. Charges will follow the applicable tariff.

Note: I. Solar energy generated by the consumer is not billed by the licensee

(e) Simplified description **SSC Vs MSC**

Type	Description	Supply Source	Billing Authority
Partial Open Access Consumer (MSC – Multiple Supply Consumer)	Has a valid supply agreement with DISTRIBUTION LICENSEE and simultaneously purchases power from OA sources such as (exchange, bilateral, or captive etc).	DISTRIBUTION LICENSEE + OA+ other	DISTRIBUTION LICENSEE bills for its portion in terms of its supply obligation and deviations thereof and other applicable charges such as Cross subsidy etc as defined by MSERC. SLDC accounts for deviations from schedule for DSM for open access transactions and other applicable charges
Full Open Access Consumer (SSC – Single Supply Consumer)	Has no supply agreement with DISTRIBUTION LICENSEE (entire supply through OA).	Only OA	SLDC schedules and bills as per OA transactions and related regulations;

8. Preparation of State DSM Account (SDSMA) (Regulation 9.1)

(a) **Billing Cycle:** Monthly (calendar month).

(b) **Data Sources:** Implemented schedules (NERLDC/SLDC website), meter readings, frequency data.

(c) **Verification:** Entities confirm data within 2 working days of receipt.

(d) **Bill Preparation:** Within 5 working days after all confirmations.

(e) **Publication:** SDSMA (buyer & seller wise) uploaded on SLDC website.

(f) **Content of SDSMA:** Schedule, actual, deviation charges, grid events, remarks.

9. Operation of State Deviation Pool Account (SDPA) (Regulation 9.2 – 9.8)

(a) **Account Type:** Separate bank account in nationalized bank named "State Deviation Pool Account";

(b) **Payment Timeline:** Within 10 days of issue (Regulation 9.3);

(c) **Disbursement:** Within 2 working days after receipts (Regulation 9.4);

(d) **Interest on Delay:** 0.04 % per day (Regulation 9.6);

(e) **Letter of Credit:** 110 % of average liability of previous quarter (Regulation 9.7);

(f) **Encashment Procedure:** If default > 10 days, SLDC to encash LC which will require recoup in 3 days;

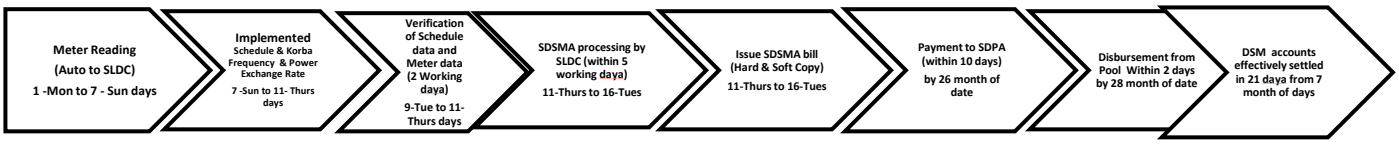
(g) **Appropriation Order (Regulation 9.8)**

1. Regional DSM dues
2. Penal & Normal interest,
3. Recovery costs

(h) **Surplus Handling:** 90 % utilized by SLDC for system improvement schemes with MSERC approval; 10 % carry forward

(i) **Shortfall:** Recovered via pro-rata supplementary bills (Regulation 9.8 last proviso);

(j) **Timeline of Preparation of State DSM Accounts (SDSMA)**



10. Settlement Scenarios

Type	Action	Description
Surplus (Positive SDPA)	Retain till FY-end → 90 % towards system improvement fund	No immediate redistribution needed.
Deficit (Negative SDPA)	Issue pro-rata supplementary bill next cycle	All entities share shortfall per net payable DSM.
Zero Balance Policy	Optional — SLDC may normalize to zero for operational ease.	

Illustration of State Deviation Pool Accounts (Shortfall cases):

Entities: 11 OA consumers, 8 SSGS, 1 Distribution Licensee

All amounts in Rupees lakh

Entity Group	Payable to SDPA	Receivable from SDPA
State Entity 1	15	—
State Entity 2	—	8
NERPC DSM Statement:	**20**	**—**

Distribution Licensee payable (Figure taken directly NERPC)		
Step 2: State Pool Balance = 15 + 20 − 8 = **+27** (surplus) [Preliminary SPA /Before regional payment]		

Step 3: If Distribution Licensee's NERPC bill is payable ₹20.00, SDPA will pay ₹20.00 to NERPC from the pool.

Pool after regional payment = 27.00 − 20.00 = ₹7.00 (remaining surplus)

Step 4 — Disbursement to intra-state receivables

Pay full receivables to State Entity 2: ₹8.00

Pool after disbursement = 7.00 − 8.00 = −₹1.00 (shortfall)

Note: this intermediate shortfall can occur if regional payment timing and intra-state disbursements overlap. Two practical treatments are possible (both consistent with the Regulation):

(A) Immediate normalization to make pool zero in the week (collect small additional amount from payables).

B) Allow temporary negative balance and recover next cycle / use LC encashment for defaulters; however, **Reg.9.8 prefers shortfall recovery in the cycle by proportionate levy.**

For clarity in SOP, immediate normalization (option A) is considered to close the cycle.

Step 5 — Normalization to close pool (if SLDC chooses to zero the pool)

Net shortfall = ₹1.00

Total payables (for proportional sharing) = State Entity 1 (15.00) + Distribution Licensee (20.00) = ₹35.00

Normalization factor = 1.00 / 35.00 = 2.857%

Apply proportionally:

OA extra = 15.00 × 2.857% = ₹0.43

Distribution Licensee extra = 20.00 × 2.857% = ₹0.57

Final SDSMA (post-normalization)

Entity Group	Original Payable	Normalization Adj.	Final Payable	Receivable
State Entity 1	₹15.00	+ ₹0.43	**₹15.43**	—
Distribution Licensee (NERPC)	₹20.00	+ ₹0.57	**₹20.57**	—
State Entity 2	—	—	—	**₹8.00**
Totals	**₹35.00**	**+₹1.00**	**₹36.00**	**₹8.00**

11. Governance Structure (Regulation 10.1)

(a) **Constitution:** State Power Committee (SPC) within 3 months;

(b) **Members:** SLDC (Chair), MePTCL, MePDCL, MePGCL, major OA entity rep., MSERC observer;

(c) **Functions:** Monitor DSM implementation, review SDPA liquidity, recommend procedural changes any other matters;

(d) **Meetings:** Quarterly; minutes published on SLDC portal.

12. Gaming and Penalty (Regulation 7A)

(a) SLDC to monitor for intentional schedule mis-declaration.

(b) On detection, file petition before MSERC with evidence (Mis-declaration of Schedule, logs, SEM data and any other).

(c) MSERC may disallow DSM charges and debar entity from OA (Reg 7A (2)).

13. Record Management & Data Retention

a. All SDSMA files, SEM data & correspondence retained minimum 5 years.

b. Data backed up daily in two geographically separated locations.

14. Training & Capacity Building

(1) Utilize up to 90 % surplus fund (Regulation 9.8) for:

(a) Operator training on DSM software, Maintenance of SAMAST hardware and software including all the Application software modules, financial reconciliation etc.

(b) Procurement of required infrastructure such as cyber security, Hardware and software, IT system and others etc.

(c) Workshops with CERC/RLDC experts on new DSM framework.

15. Reporting Format

Report	Prepared by	Frequency	Recipient
SDSMA summary	SLDC Accounting	Monthly	SPC, Intra-State entities
SDPA cash balance	SLDC Finance section	Monthly	SLDC DDO/AAO
Meter health report	STU	Monthly	SLDC, MePTCL/MePGCL, SPC, entities

16. Revision Mechanism

(a) SOP review every 12 months or on MSERC amendment;

(b) Interim revisions subject to SPC approval.

STOA Scheduling Format-I

BLOCK WISE DRAWAL FORECASTED					
NAME OF THE OPEN ACCESS CONSUMER					
DRAWAL DATE				DRAWAL FROM	
TIME	TIME		FORECASTED DRAWAL	MePDCL	MARKET (OPEN ACCESS)
Block No.	From Hrs	To Hrs			
1	00:00	00:15			
2	00:15	00:30			
3	00:30	00:45			
95	23:30	23:45			
96	23:45	24:00			
TOTAL (MWhr)			0.000	0.000	0.000