



SCHEDULING AND DESPATCH CODE

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

Prepared by

Maharashtra State Load Despatch Centre

Approved by

Maharashtra Electricity Regulatory Commission
(Vide Letter dated 11 November, 2019)

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[Note: The Scheduling and Despatch Code and Procedures outlined under this document shall form Part-E of the MERC (State Grid Code) Regulations, 2006 and its amendment thereof, upon regulatory process and approval by MERC. The provisions and procedures stipulated under this Scheduling and Despatch Code shall be read along with MERC State Grid Code Regulations, 2006 and its amendment thereof, IEGC 2010 and its amendment thereof, MERC (Deviation Settlement Regulations and related matter) Regulations, 2019 and MERC (Forecasting, Scheduling and Deviation Settlement for Solar and Wind Generation) Regulations, 2018. In case of interpretation, variation, deviation in the operating framework, if any, observed in this document, the provisions of applicable Regulations, Orders, Practice Directions and Guidelines as issued by MERC from time to time, shall prevail.]

SCHEDULING AND DESPATCH CODE

1. Background

1.1. Maharashtra State Power Grid shall be operated as an integrated power pool for which Maharashtra State Load Despatch Centre (MSLDC) shall have total responsibility for the following functions:

- i) Scheduling and Despatch for the State Entities as specified in the Maharashtra Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2019, hereafter referred as MERC DSM Regulations and MERC (Forecasting, Scheduling and Deviation Settlement and related matters for wind and solar) Regulations, 2018 hereafter referred as MERC F&S Regulations.
- ii) Monitoring the drawls from the ISGS and drawal from InSGS in consultation with Buyers.
- iii) Revision of Scheduling and Despatch and interstate drawals to meet emergency conditions as specified in the MERC DSM Regulations, Indian Electricity Grid Code (IEGC), State Grid Code and Merit Order Despatch (MoD) principle as specified by the Commission.

1.2. The State Grid Code (Part E) provides for a Scheduling and Despatch Code to be prepared by MSLDC. As per the clause 33 of State Grid Code, Scheduling and Despatch Code shall contain provisions with respect to the following:

- (i) Actions and responsibilities of MSLDC and State Entities in preparing and issuing time block wise despatch schedule on daily basis;
- (ii) Modality of flow of information between MSLDC and State Entities for the purpose of Scheduling and Despatch;
- (iii) Modality of flow of information between MSLDC, Transmission Licensees and State Entities for the purpose of Scheduling and Despatch;
- (iv) Modality of flow of information between MSLDC and Western Regional Load Despatch Centre (WRLDC) for the purpose of Scheduling and Despatch;

This Scheduling and Despatch Code has been prepared to comply with provisions of the State Grid Code, MERC DSM Regulations and its amendment thereof and MERC F&S Regulations.

2. Definitions

In Scheduling & Despatch Code, unless the context otherwise requires, the words/expressions mentioned below shall have meaning as assigned hereunder:

- (a) “Act” means the Electricity Act, 2003 (36 of 2003), including amendments thereto;
- (b) “Availability” in relation to a thermal generating station for any period means the average of the daily average declared capacities as certified by MSLDC for all the days during that period, expressed as a percentage of the installed capacity of the generating station /Unit minus normative auxiliary consumption in Megawatts (MW), as specified in MERC MYT Regulations, and shall be computed in accordance with the following formula:

$$\text{Availability} = 100 \times \frac{\sum_{i=1}^N \text{DC}_i}{\{N \times \text{IC} \times (1 - \text{AUX}_n)\}} \%$$

Where – N = number of time blocks in the given period

DC = Average Declared Capacity in MW for the ith time block in such period

IC = Installed Capacity of the Generating Station/Unit in MW

AUX = Normative Auxiliary Consumption in MW, expressed as a percentage of gross generation.

And

“Availability” in relation to a hydro generating station for any period means the average of the daily average declared capacities as certified by MSLDC for all the days during that period, expressed as a percentage of the installed capacity of the generating station /Unit minus normative auxiliary consumption in Megawatts (MW), as specified in MERC MYT Regulations, and shall be computed in accordance with the following formula:

The Plant Availability Factor achieved during the Month (PAFM), in Percentage shall be computed in accordance with the following formula :—

$$\text{PAFM} = 100 \times \frac{\sum_{i=1}^N \text{DC}_i}{\{N \times \text{IC} \times (1 - \text{AUX})\}} \%$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

DC_i = Declared Capacity (in ex-bus MW) for the ith day of the month which the Station can deliver for at least three hours, as certified by MSLDC after the day is over.

IC = Installed Capacity (in MW) of the complete Generating Station

N = Number of days in the month

- (c) ‘Buyer’ means a person, including distribution licensee, deemed distribution licensees, open access consumer, purchasing electricity through a transaction scheduled in accordance with the regulations applicable for short-term open access, medium-term open access and long-term access;
- (d) “Captive Power Plant (CPP)” means a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such cooperative society or association;
- (e) “Collective Transaction” means a set of transactions discovered in power exchange through anonymous, simultaneous competitive bidding by Buyers and Sellers;
- (f) “Commission” means the Maharashtra Electricity Regulatory Commission;
- (g) “Demand” means Active Power in MW and Reactive Power in MVAR of electricity unless otherwise stated;
- (h) “Deemed Distribution Licensee means, Person is authorized under Section 13 or Section 14 of the Act by virtue of Notification by the Appropriate Regulatory Commission to operate and maintain a power distribution system for supplying electricity to consumers in the area of supply as specified in the Notification;
- (i) “Despatch Schedule” means ex-power plant net MW and MWh output of a generating station, scheduled to be exported to the Grid from time to time;
- (j) “Distribution Licence” means a Licence granted under Section 14 of the Act to distribute electricity;
- (k) “Ex-Power Plant” means the net MW/MWh output of a generating station, after deducting auxiliary consumption and transformation losses;
- (l) “Forced Outage” means an outage of a Generating Unit or a transmission facility due to a fault or other reasons, which has not been planned;
- (m) “Gaming” in relation to this Code, shall mean an intentional mis-declaration of declared capacity by any Seller or intentional mis-declaration of drawal schedule by any Buyer in order to make an undue commercial gain through Charge for Deviations;
- (n) “Independent Power Producer (IPP)” means a generating company not owned/ controlled by the Central/State Government or not a captive power plant;
- (o) “Indian Electricity Grid Code (IEGC)” means the grid code specified by the CERC under sub section 1(h) of Section 79 of the Act; as amended from time to time;

- (p) “Installed Capacity” means the summation of the name plate capacities of all the units of the generating station or the capacity of the generating station (reckoned at the generator terminals) as approved by the Commission from time to time;
- (q) “Inter-State Generating Station (ISGS)” means a Central/other generating station in which two or more than two States have a share and whose scheduling is to be coordinated by RLDC;
- (r) “Intra State Generating Station (InSGS)” means a generating station connected to intra-State Transmission System whose scheduling is to be coordinated by MSLDC;
- (s) “Inter State Transmission System (ISTS)” means:
 - i) Any system for the conveyance of electricity by means of a main transmission line from the territory of one State to another State
 - ii) The conveyance of electricity across the territory of an intervening State as well as conveyance within the State which is incidental to such inter-State transmission of energy
 - iii) The transmission of electricity within the territory of State on a system built, owned, operated, maintained or controlled by CTU;
- (t) “Intra-State Transmission System” (InSTS) means any system for conveyance of electricity by transmission lines within the area of the State and includes all transmission lines, sub-stations and associated equipment of transmission licensees in the State excluding inter-state transmission system;
- (u) “Licensee” means a person who has been granted a licence or deemed licensee under Section 14 of the Act;
- (v) “Load” means the MW/MWh/MVAR/MVARh consumed by a utility/State Entity/installation;
- (w) “Maharashtra State Load Despatch Centre (MSLDC)” means the Centre established under sub-section (1) of Section 31 of the Act;
- (x) “MERC DSM Regulations” refers to the regulations MERC (Deviation Settlement Mechanism and Related Matters) Regulation, 2019 notified by the Commission for the State of Maharashtra and its amendment thereof;
- (y) “MERC F&S Regulations” refers to the regulations MERC (Forecasting, Scheduling and Deviation Settlement and related matters for wind and solar) Regulations, 2018 notified by the Commission for the State of Maharashtra and its amendment thereof;
- (z) “MoD Principles” means the Principles for operation of Merit Order Despatch and amendments thereof, as specified by the Commission in the State Grid Code and as amended from time to time;
- (aa) “Operation” means a scheduled or planned action relating to the operation of a System;

- (bb) “Open Access” means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensees or consumer or a person engaged in generation in accordance with regulations of the appropriate Commission;
- (cc) “Power Exchange” means the power exchange established with the prior approval of the Central Electricity Regulatory Commission;
- (dd) “Reference Frequency” for DSM computation means the frequency as recorded by WRLDC and used by WRPC for regional Deviation Settlement Mechanism for that particular time block;
- (ee) “Regional Power Committee (RPC)” means a Committee established by resolution of Central Government for a specified region for facilitating the integrated operation of the power system in that region;
- (ff) “Regional Grid” means the entire synchronously connected electric power network of the concerned Region, comprising of ISTS, ISGS and intra-state systems;
- (gg) “Regional Load Despatch Centre (RLDC)” means the Centre established under sub-section (1) of Section 27 of the Act;
- (hh) “Seller” means a person, including a generating station or unit of generating station, supplying electricity through a transaction scheduled in accordance with the regulations applicable for short term open access, medium-term open access and long-term open access;
- (ii) “Share” means percentage share of a beneficiary in an ISGS/InSGS either notified by Government of India or agreed through contracts as the case maybe, and implemented through long term/medium term access;
- (jj) “Scheduled Drawal” at any time or for a time block or any period means schedule of drawal for Buyer in MW or MWh given by the concerned Load Despatch Centre;
- (kk) “Scheduled Generation” at any time or for a time block or any period means schedule of generation in MW or MWh ex-bus given by the concerned Load Despatch Centre;
- (ll) “Special Energy Meter” or SEM means such meters, of not less than 0.2S class accuracy, as are capable of:-
- i. Recording time-differentiated measurements of active energy and voltage differentiated measurement of reactive energy, at intervals of fifteen (15) minutes or any other shorter interval as specified by the Commission;
 - ii. Storing such measurements as specified by the State Grid Code; and
 - iii. Communication of such measurements at such intervals as may be specified by the Commission or required by the MSLDC for deviation settlement of energy transactions;
 - iv. Shall be DLMS protocol compliant, Communicable and have the intelligence to synchronize the time with GPS (Local GPS/CDCS GPS) signal.

- (mm) “Spinning Reserve means: The Capacities which are provided by devices including generating station or units thereof synchronized to the grid and which can be activated on the direction of the System Operator and effect the change in active power.
- (nn) “State RE Deviation Pool Account” means the State Account for receipts and payments on account of deviations by Wind or Solar Energy Generators;
- (oo) ‘State Deviation Pool Account’ means the State Account for receipts and payments on account of deviations by Buyers and Sellers including Wind and/or Solar Energy Generators;
- (pp) “State Entity” means such person who is in the MSLDC control area and whose metering and energy accounting is done at the State level;
- (qq) “State Periphery” means the periphery of electrical power system and its components thereof under operational supervision and under control area jurisdiction of Maharashtra State Load Despatch Centre covering Intra-State Transmission System;
- (rr) “State Grid Code (SGC)” means the grid code specified by the Commission under sub section 1(h) of Section 86 of the Act;
- (ss) “Time Block” means block of 15 minutes or any such shorter duration as may be notified by Central Commission and State Commission for which specified electrical parameters and quantities are recorded by Special Energy Meters with first time block starting from 00.00 hours;
- (tt) “Transmission Licence” means a licence granted under Section 14 of the Act to transmit electricity;
- (uu) “Transmission Open Access User” means a person who has been allotted transmission capacity rights to access an intra-state transmission system pursuant to a Bulk Power Transmission Agreement;
- (vv) “Trader” means a person who is granted a license to undertake trading of electricity;
- (ww) ‘User’ means a person such as intra-State Generating Stations including Captive Generating Plant or Transmission Licensee (other than the Central Transmission Utility and State Transmission utility) or Distribution Licensee or Consumer, connected to the InSTS;

Save as aforesaid and unless repugnant to the context or the subject-matter otherwise requires, words and expressions used in this Code and not defined, but defined in the Act, or the Grid Code or any Regulations of the Regulatory Commission shall have the meaning assigned to them respectively in the Act or the Grid Code or any other Regulation as the case may be.

3. Objectives

Scheduling and Despatch Code has been prepared to facilitate MSLDC in discharging its responsibilities as per the provisions of State Grid Code, the Scheduling and Despatch Code under IEGC and MERC DSM Regulations. The Code identifies roles and responsibilities of Users and State Entities for preparation and finalisation of the following by MSLDC:

- A day-ahead Despatch Schedule for Sellers,
- A day ahead Drawal Schedule for Buyers,
- A load generation balance for State.

4. Scope

- 4.1.** This code deals with the procedures to be adopted for scheduling of Sellers connected to InSTS and assistance in scheduling of inter-State generating stations (ISGS) through WRLDC as per IEGC and net drawal of buyers on a day ahead basis and during intra-day operation. This code sets down the procedure for the flow of information between MSLDC and WRLDC, between MSLDC and Sellers and between MSLDC and buyers of the InSTS system.
- 4.2.** This Scheduling and Despatch code shall apply to all State Entities i.e., Buyers and Sellers connected to or using InSTS under its control area as defined in the State Grid Code.
- 4.3.** The procedure for submission of day-ahead generation schedules by each Seller and drawal schedule by each Buyer and submission of day-ahead schedule of ISGS to WRLDC is also covered under this code.
- 4.4.** It also provides methodology of issuing real time Despatch/Drawal instructions and rescheduling, if required, to State Entities.

5. Applicability

This Scheduling and Despatch Code shall be applicable to

- 5.1.** All Seller(s) having installed generating capacity of Unit or Combined capacity of all units in the generating station above 25 MW(or such other threshold capacity), including renewable energy generators open access generators, captive generators having connected to intra-state transmission system but excluding wind and solar generating stations(s). Forecasting, scheduling and deviation settlement related matters regarding wind and solar generation shall be governed as per the provisions of “Maharashtra Electricity Regulatory Commission (Forecasting, Scheduling and Deviation Settlement for Solar and Wind Generation) Regulations, 2018” and its amendments thereof.

Provided that, the provisions of the Scheduling and Despatch Code shall be also applicable to all RE generating stations (except Wind and Solar Generators) having

installed capacity less than 25 MW connected to InSTS for the purpose of scheduling as per the detailed procedure specified in this Code.

- 5.2. All Buyer(s) including distribution licensee(s), deemed distribution licensee(s) located in the state and full open access consumers connected to intra-state transmission system. Deviation Settlement of partial open access consumers connected to intra-state transmission system and all open access consumers connected to distribution network shall be in accordance with the provisions of Maharashtra Electricity Regulatory Commission (Transmission Open Access) Regulations, 2016 and Maharashtra Electricity Regulatory Commission (Distribution Open Access) Regulations, 2016 and its amendment thereof.
- 5.3. This Scheduling and Despatch code shall be binding to all State Entities from the date notified by the Commission.
- 5.4. The provisions of this scheduling code shall be read with the provisions of the MERC (Deviation Settlement Mechanism and related matters) Regulations, 2019, MERC (Forecasting, Scheduling and Deviation Settlement and related matters for wind and solar) Regulations, 2018 and procedure framed there under and MERC guidelines for Merit Order Despatch, 2019.
- 5.5. The provisions of this Scheduling and Despatch Code shall come into force from date to be notified by the Commission for implementation of commercial arrangement under MERC DSM Regulations. The commercial arrangements specified under Clause (9) and (10) of MERC DSM Regulations, and the related provisions regarding Deviation Charges, Additional Charge for Deviation and penal actions if any, shall come into force from date to be notified separately through Order, which shall be not later than 1st April, 2020.

The Commission vide its MERC DSM Regulations has specified that, until notification of such date as referred hereinabove, the Final Balancing and Settlement Mechanism (FBSM) as approved by Commission under Order in Case 42 of 2006 along with relevant amendments from time to time shall be in operation.

6. Roles and Responsibilities

6.1. Roles and Responsibilities of MSLDC

- 6.1.1. In accordance with section 33 of the Electricity Act, 2003, MSLDC in the State may give such directions and exercise such supervision and control as may be required for ensuring the integrated grid operations and for achieving the maximum economy and efficiency in the operation of power system in that State. Every licensee, generating company, generating station, substation and any other person connected with InSTS shall comply with the directions issued by the MSLDC under subsection (1) of Section 33 of the Act. The MSLDC shall comply with the directions of the RLDC.

- 6.1.2. In case of Inter-State bilateral and collective transactions having a State utility or an Intra-State Entity as a Buyer or Seller, MSLDC shall accord concurrence or no objection certificate or a prior standing clearance, as the case may be, in accordance with the Central Electricity Regulatory Commission (Open Access for inter-State Transmission) Regulations, & MERC (Transmission Open Access) Regulations, 2016 and MERC (Distribution Open Access) Regulations, 2016 notified from time to time.
- 6.1.3. MSLDC is responsible for coordinating the scheduling of a Buyers and Sellers, within its control area. MSLDC shall also be responsible for
- i. Preparation of Merit Order Stack for Day Ahead scheduling process for each month considering the principles specified in the MERC DSM Regulations and MoD Principle specified by the Commission in State Grid Code as amended from time to time.
 - ii. real-time monitoring of the Seller's/Buyer's operation,
 - iii. checking that there is no gaming in its declared capacity or drawal schedule,
 - iv. revision of declared capacity and injection schedule,
 - v. revision of drawal schedule
 - vi. switching instructions,
 - vii. outage planning etc.
- 6.1.4. MSLDC shall take all decisions regarding the despatch of generating stations after evaluating all the possible network parameters, constraints, congestions in the transmission network and in the eventuality of any such network condition. Instructions of MSLDC relating to despatch and drawal shall be binding on all State Entities.
- 6.1.5. MSLDC shall periodically review the actual deviation from despatch and net drawal schedule being issued, to check whether any of the Buyer or Seller is indulging in unfair gaming or collusion. In case any such practice is detected, the matter shall be treated in accordance with the provisions of MERC DSM Regulations, 2019 and its amendments thereof.
- 6.1.6. MSLDC shall be responsible for time block-wise computation of deviation for concerned State Entities, based on the actual meter readings made available by STU and the implemented schedule for the State Entities and preparation of State DSM Pool Account and State Energy Account.
- 6.1.7. MSLDC shall issue procedure/guidelines to all State Entities in respect of manner & timing of submission of day ahead, drawal/ injection schedules along with such other information as may be required, for consolidating the same and issue the drawal/despatch schedules for the next day starting at 00:00 Hrs.

6.1.8. MSLDC shall also responsible for preparation of State Periphery ‘Deviation Pool Account’ for Regional Pool Account Settlement.

6.2. Roles and Responsibilities of State Entities

A) Sellers:

- 6.2.1. Provisions of MERC DSM Regulations,2019 and its amendments thereof and this scheduling and despatch code shall be applicable to all Seller(s) having installed generating capacity above 25 MW (or such other threshold capacity), including renewable energy generators but excluding wind and solar generating stations(s), open access generators, captive generators (excluding in-situ captive generators) connected to intra-State transmission system. In case of Wind and Solar generating station, provisions of MERC (F&S) Regulations and the procedure framed therein shall be applicable.
- 6.2.2. The provisions of the Scheduling and Despatch Code shall be also applicable to all RE Generating stations (except Wind and Solar Generators) having installed capacity less than 25 MW connected to InSTS for scheduling purpose as per the detailed procedure specified in this Code.
- 6.2.3. Captive generating stations or Unit connected to InSTS shall submit its Schedule separately for its own captive consumption and schedule for injection of energy into the grid as per the Scheduling Process detailed out in this code.
- 6.2.4. Captive Consumers with in-situ Captive Generating Stations having installed capacity 1MW and above shall provide Net Schedule of their consumption to Distribution Licensee(s) to facilitate Distribution Licensees plan their demand forecast and schedule of power requirement accordingly.
- 6.2.5. Sellers shall operate their generating stations in a manner that is consistent with the provisions of the Indian Electricity Grid Code and the State Grid Code as amended from time to time.
- 6.2.6. Sellers shall be responsible for power generation/power injection as per the time block wise schedules finalised by MSLDC in accordance with the provisions of the MERC DSM Regulations, 2019, State Grid Code, MERC F&S Regulations,2018 and its amendments thereof, and procedure formulated therein as applicable.
- 6.2.7. Sellers shall inform to MSLDC, details of all contracts they have entered into for exchange of energy.
- 6.2.8. Sellers would normally be expected to generate power according to the daily schedules advised to them. The Sellers may deviate from the given schedules within the limits specified in the MERC DSM regulations, as amended from time to time, depending on the generating unit and system conditions. In particular, they may be allowed to generate beyond the given schedule under deficit conditions, as long as such deviations do not cause system parameters to

deteriorate beyond permissible limits and/or do not lead to unacceptable line loading. Deviations, if any, from the ex-power plant generation schedules shall be appropriately priced in accordance with MERC DSM Regulations. In addition, deviations from schedules causing congestion shall also be priced in accordance with the Congestion Charge Regulations of CERC.

- 6.2.9. The Seller shall make an advance declaration of ex-power plant MW and MWh capabilities foreseen for the next day, i.e., from 0000 hrs to 2400 hrs. The seller while making Ex-power plant foreseen generation capability in MW & MWh is also required take into account availability of fuel & water along with foreseen Day ahead capability. During fuel shortage condition, in case of thermal stations, they may specify minimum MW, maximum MW, MWh capability and declaration of fuel shortage”.
- 6.2.10. The Sellers shall also declare the possible ramping up / ramping down in a block. In case of a gas turbine generating station or combined cycle generating station, the generating station shall declare the capacity for units and modules on APM gas, RLNG and liquid fuel separately, and these shall be scheduled separately.
- 6.2.11. While making or revising its declaration of capability, except in case of run-off-river (with up to three-hour pondage) hydro stations, the SGS/ISGS shall ensure that the declared capability during peak hours is not less than that during other hours. However, exception to this rule shall be allowed in case of tripping/re-synchronization of units as a result of forced outage of units. It shall be incumbent upon the generating station to declare the plant capabilities faithfully; i.e., according to their best assessment. In case, it is suspected that they have deliberately over/under declared the 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 MSLDC may ask the generating station to explain the situation with necessary back-up data.

B) Buyers:

- 6.2.12. Provisions of MERC DSM Regulations and its amendments thereof and this scheduling and despatch code shall be applicable for all Buyer(s) including distribution licensee(s), deemed distribution licensee(s), located in the State, and full open access consumers connected to Intra-State transmission system.
- 6.2.13. Buyers shall operate their Loads in a manner consistent with the provisions of the Indian Electricity Grid Code and the State Grid Code as amended from time to time.
- 6.2.14. Buyers shall be responsible for drawal as per the time block wise schedules finalised by MSLDC in accordance with the provisions of the MERC DSM Regulations, 2019, State Grid Code and its amendments thereof, and this procedure formulated therein as applicable.

- 6.2.15. Buyers shall enter into Connection Agreement/Open Access Agreement with the concerned transmission licensee, which shall specify physical and operational requirements for reliable operation and gain physical access and connection to the Intra-State transmission system (InSTS) or enter into Connection Agreement/Open Access Agreement with concerned Distribution Licensee for use of distribution system, as the case may be in accordance with MERC (Transmission Open Access) Regulations, 2016 and its amendments thereof and MERC(Distribution Open Access) Regulations, 2016, and its amendment thereof.
- 6.2.16. Buyers shall inform to MSLDC, details of all contracts they have entered into for exchange of energy.

6.3. Roles and Responsibilities of STU

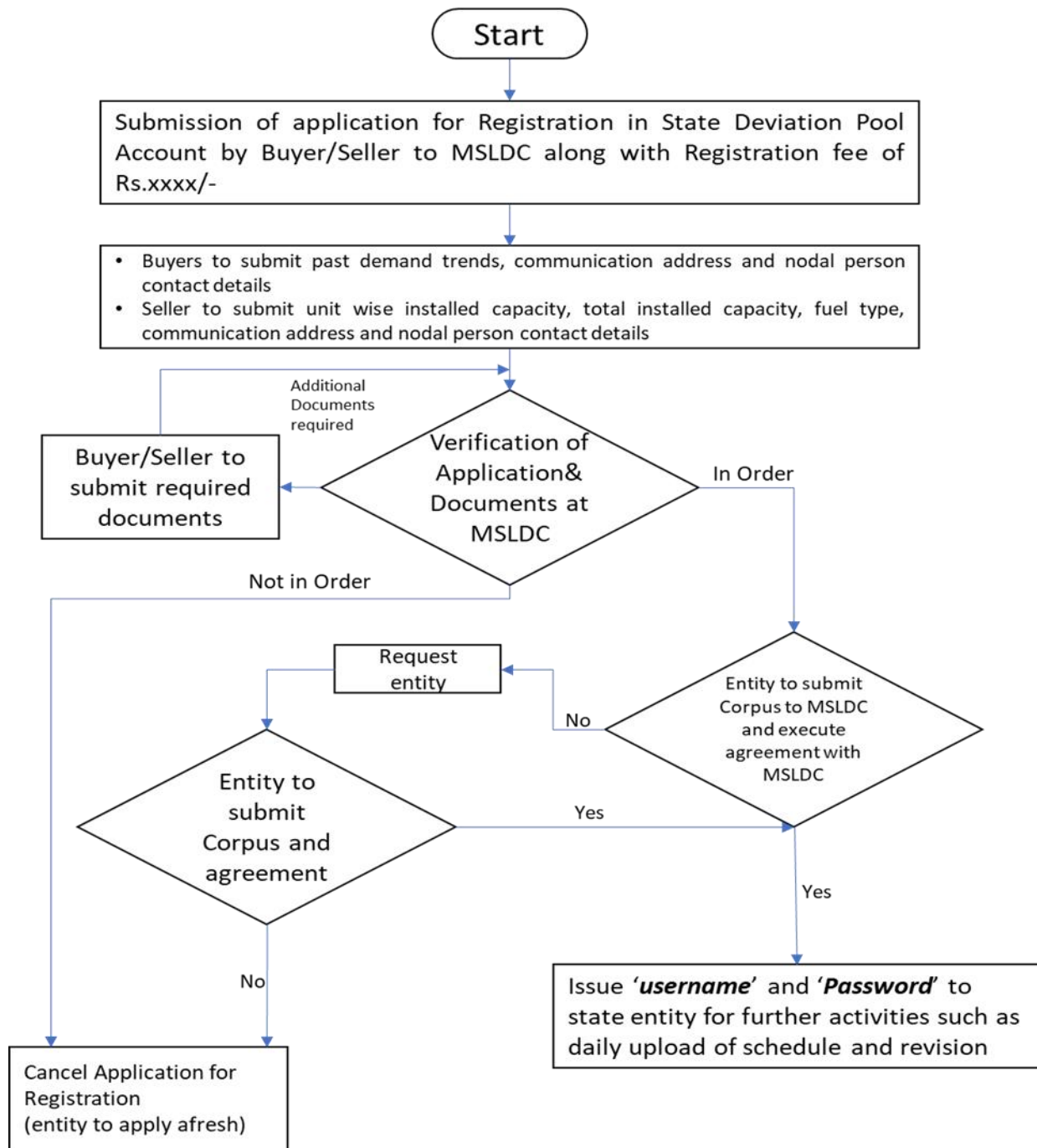
- 6.3.1. STU shall install special energy meters including Automated Meter Reading (AMR) facilities on all inter connections between the State Entities and other identified points for recording of actual MWh interchanges and MVArh drawals. Installation, operation and maintenance of special energy meters shall be in accordance with the State Metering code prevailing/approved by the Commission time to time.
- 6.3.2. State Transmission Utility (STU) shall make necessary arrangements for putting up suitable meters, capable of recording energy flows at 15-minute intervals or any other time interval as specified by the Commission, at the points of injection and drawal. The time synchronisation of metering system shall be through Global Positioning System with counter check from the State Energy Accounting Centre at MSLDC.
- 6.3.3. STU shall register all the interface points and interface meters in the MDAS software and share the meter data with MSLDC registry for DSM computation. No any change in the interface metering infrastructure shall be carried out by STU without prior approval of the MSLDC and suitable modifications in the records of the registry in the MDAS software.
- 6.3.4. STU shall be responsible for installation and maintenance of the metering infrastructure, AMR facilities and Communication infrastructure.

6.4. Registration of State Entities for Scheduling

- i. The application for registration for Scheduling and Re-scheduling process should be online through MSLDC's web based software.
- ii. A Seller shall submit separate application for each of its Generating Stations or units, where the Commission is determining Unit Wise Tariff, or where Captive Generating Plant or Open Access Generating plant where there is unit wise sale or wheeling arrangement in place for scheduling.

- iii. The application of Registration shall be made as per the application format for registration (in Annexure) and shall contain details such as:
- Location of Generation in case of Seller
 - Total capacity of Generation and inter-connection arrangements with InSTS
 - Demand profile in case of a Buyer
 - Communication arrangements with MSLDC
 - Communication details of Nodal person responsible to coordinate with MSLDC
- iv. The Registration process shall be accompanied by non-refundable processing fee as approved by the Commission and as stipulated under **Table No. 2 of Annexure-1**.
- v. The scanned copy of form/required document shall be uploaded.
- vi. Once submitted online, printed copy of the documents signed and sealed by competent authority shall be sent to MSLDC.
- vii. An incomplete Application form not found in conformity with these Procedures would not be considered by MSLDC for processing.
- viii. The verification of documents of State Entity shall be completed by MSLDC within one week from the date of receipt of complete documents.
- ix. After verification of documents the State Entity shall submit an Undertaking to MSLDC that it shall undertake all operational and commercial responsibilities as mentioned in MERC DSM Regulations, 2019.
- x. The State Entity shall deposit a corpus amount as stipulated under **Table No. 2 of Annexure 1**, within one week from the date of agreement with MSLDC.
- xi. Once the State Entity executes agreement with MSLDC and deposit corpus amount, MSLDC shall register the State entity within 1 week and issue 'username' and 'password' for accessing the website for further activities such as uploading day ahead/intraday schedule.

Proposed procedure for State Entity registration for Scheduling and Re-scheduling purposes



7. MSLDC Fees and Charges

MSLDC fees and charges including scheduling and rescheduling charges shall be paid by the State Entity as approved by the Commission from time to time. The other charges shall be applicable as per relevant Orders/Regulations of the Commission. The prevalent charges are provided under **Table No.2 of Annexure No. 1** with this Scheduling and Despatch Code.

8. General Principles of Scheduling and Despatch Procedure

8.1. General Principles:

- 8.1.1. Each State Entity including Buyers and Sellers in the State shall nominate a dedicated person/cell to coordinate and communicate with MSLDC for the purpose of Scheduling and Despatch. The name, designation, contact address and contact telephone numbers of such nominated person shall be informed to MSLDC and all concerned.
- 8.1.2. Following matters shall be governed by the IEGC and procedure laid down there-under
 - a. Declared capacity of ISGS
 - b. Entitlement of beneficiaries in ISGS
 - c. Drawal schedule of ISGS by beneficiary
 - d. Inter-State and inter-regional bilateral exchange
 - e. Weekly Regional Transmission Losses
 - f. ISGS Surplus
 - g. Collective transactions
 - h. Any instructions issued by WRLDC in the interest of grid operation
- 8.1.3. Inter-State Open Access injection/ drawal schedule or any other matter affecting regional power system or matter between two or more States, MSLDC shall comply with procedures and instructions of WRLDC.
- 8.1.4. The generation availability of ISGS generating stations are on ex-power plant basis. The transmission loss of regional system shall be taken into account as per WRLDC procedure for working out ex-power plant generation schedule of ISGS. MSLDC shall develop and maintain a dynamic web based application for the purpose of day ahead scheduling, revision of schedules and display of real-time information.
- 8.1.5. The scheduling period shall comprise of 96-time blocks, each of 15-minute duration starting from 00:00 hours (IST) ending with 24:00 hours (IST). The first time block of scheduling period shall commence from 00:00 hours (IST) to 00:15 hours (IST), second time block of scheduling period shall commence from 00:15

hours (IST) to 00:30 hours (IST) and so on or any such other period as specified by the Commission.

- 8.1.6. The entitlements, requisitions, and schedules shall be rounded off to the nearest three decimal, to have a resolution of 0.001kW or kWh for Buyers and Sellers and reference frequency shall be rounded off to the nearest two decimal to have resolution of 0.01 Hz, further ISGS schedule will be rounded off as per WRLDC practices.
- 8.1.7. MSLDC shall prepare Buyer wise Merit Order Stack for Day ahead scheduling process for each month in **Form -5B** and Centralised Merit Order Stack for Intra-Day operation in **Form -6B** considering the principles specified in the MERC DSM Regulations and MoD principles specified by the Commission under State Grid Code.
- 8.1.8. In case, the Sellers/Buyer fails to furnish schedule within the prescribed time limits to MSLDC, the MSLDC shall treat forecasted schedule of Sellers/Buyers of the previous day (d-1) as the schedule for the following day (d+1). For example, for schedule of 3rd September, if Sellers/Buyer fails to submit the schedule on 2nd September, MSLDC shall consider the forecasted schedule of 2nd September submitted by Sellers/Buyer on 1st September. Such schedule as considered by MSLDC in the event of non-availability of schedule from Sellers/Buyers shall be construed as the schedule of the Seller/Buyer and the concerned Seller/Buyer shall be responsible for adhering to such schedule.
- 8.1.9. In case of reduction of availability of contracted sources of Mumbai utilities /Deemed Distribution Licensee having standby power arrangement /agreement with any other utility, the requisition submitted by Mumbai Utilities /Deemed Distribution Licensee, and duly consented by concerned utility the stand-by power shall be scheduled to the respective utilities by MSLDC and as per the orders of the Commission.

8.2. Principles of Day Ahead Scheduling for Sellers:

- 8.2.1. All Sellers having generating unit/station size > 25 MW connected to InSTS, excluding solar/wind generating stations shall furnish their forecasted unit-wise availability forecasts on time block basis to MSLDC. Further, if Seller is having multiple contracts for Units within Generating Station or the multiple contract within same Unit, the Seller shall furnish their forecasted availability schedule for each contract separately to MSLDC on day-ahead basis. As regards to scheduling of solar/wind generators, MERC F&S Regulations, 2018 and procedure framed therein shall be applicable.
- 8.2.2. While furnishing the availability forecasts, the Seller shall take into consideration the load requirement of their 'captive consumers' and 'open access consumers' and submit the requirement separately so as to be despatched fully up to the contracted capacity. Such generators shall not be subjected to backing down

instructions (subject to system emergency and transmission constraint) up to the requirement of their OA transactions. However, generation beyond the load requirement of OA transactions shall be subjected to centralized MOD principles.

- 8.2.3. The Sellers shall forecast the availability in MW and MWh foreseen for the next day; i.e. from 00.00 hrs to 2400 hrs. on 15-minute time block basis or any other time block as may be specified by the Commission and inform to the Buyers with whom they have PPAs or any other power procurement arrangement and to the MSLDC.
- 8.2.4. Qualified Co-Ordinating Agencies (QCA) for each wind and/or solar pooling substation shall prepare 15-minute time block wise schedule and revision of schedules if any as per the provisions of the MERC (Forecasting, Scheduling and Deviation settlement related matters in respect of wind and solar generation) Regulations, 2018 and the procedure specified by MSLDC and submit to MSLDC.
- 8.2.5. RE generators having installed capacity more than 25 MW (excluding wind and/or solar generators) connected to the InSTS shall prepare 15-minute time block wise schedule considering their availability based on the generation sources like water, biomass, bagasse etc. and submit to the MSLDC with intimation to the concerned Buyers with whom they have PPAs or OA permission as the case may be.
- 8.2.6. RE generators having installed capacity less than 25 MW (excluding wind and/or solar generators) connected to the InSTS shall prepare 15-minute time block wise schedule considering their availability based on the generation sources like water, biomass, bagasse etc. and submit to the MSLDC with intimation to the concerned Buyers with whom they have PPAs or OA permission as the case may be. MSLDC shall consider the same while preparing Load-generation balance, however while computing deviation of such generators, schedule data shall be replaced with actual generation data made available through AMR facilities.
- 8.2.7. While preparing Despatch schedule, MSLDC shall consider the Ex-Power Plant Availability/schedule declared by the Sellers. Sellers shall consider the normative auxiliary consumption or any specific auxiliary consumption specified by the Commission through Regulations while declaring the Availability/schedule. In absence of the above, the auxiliary consumption as mentioned by the Seller on name plate details of the generator shall be considered.

Intra-State Generating Stations (InSGS) excluding Hydro Generating Station

- 8.2.8. All the InSGSs shall furnish their capability curve & droop-characteristics for each unit to MSLDC. InSGS shall operate within their capability curve. MSLDC may, based on system requirement, ask the concerned InSGS to regulate MVAR.

- 8.2.9. All the InSGS shall be required to demonstrate the declared capacity of its generating station as and when asked by the MSLDC as per the MoD principles and the procedure to be approved by the Commission from time to time.
- 8.2.10. The generation availability of InSGS shall be on ex-bus basis. The “Drawal Schedule” at T<>D interface shall be “grossed up” for InSTS losses as approved by the Commission to match with available “Ex-Bus Generation Schedule” to decide the Despatch Schedule of Generators.

Day Ahead Scheduling of Intra-State hydro Generating Stations

- 8.2.11. While declaring the availability, Intra-State hydro Generating Stations shall inform, month-wise water availability and all other parameters such as reservoir level, any other restrictions of GoMWRD, overall water quota available for generation along with unit availability to Distribution Licensee with whom it has PPA and also to MSLDC, for the next month before 21st day of the current month.
- 8.2.12. Concerned Distribution Licensee shall inform day-wise generation from hydro generating stations considering water availability to MSLDC for the next month before 25th day of the current month. Concerned distribution licensee shall also indicate the water requirement for irrigation (irrigation rotation schedule) if any specified by GoMWRD for hydro power plants.
- 8.2.13. In case there is any change in planning for utilisation of water during the month, same shall be informed by Generating Station or concerned Distribution Licensee to MSLDC in advance.
- 8.2.14. If day-wise monthly generation from hydro generating stations considering water availability for next month is not received from concerned Distribution Licensee to MSLDC latest by 27th day of the current month, MSLDC shall consider the current month’s forecasted schedule of that hydro generating station for the next month.
- 8.2.15. MSLDC shall be responsible for operating InSGS hydro on a daily basis considering the month-wise water availability and schedule provided by contracted Distribution Licensee of the respective Hydro Stations to MSLDC as specified above.
- 8.2.16. In order to meet system contingencies, MSLDC may keep hydro capacity equivalent to the capacity of largest thermal Unit as a spinning reserve.
- 8.2.17. MSLDC to ensure that the hydro capacity to be kept as spinning reserve should be a mix of hydro units from different generating stations of different generating companies (in proportion to contracted capacity of such hydro generating stations) instead of hydro units from single generating station or hydro units of one generating company.

8.2.18. For operation of Pumped storage hydro power plants (PSHPP), concerned distribution licensee shall indicate the daily schedule of PSHPP for the week. MSLDC shall operate the PSHPP as per the daily schedule indicated by concerned distribution licensee considering to the grid conditions such as frequency, voltage, reactive power requirement etc. and availability of off peak energy.

8.2.19. The Intra-State hydroelectric generating stations are expected to respond to grid frequency changes and inflow fluctuations. They would, therefore, be free to deviate from the given schedule as long as they do not cause a grid constraint. While computing the deviation of intra-state hydro generating stations, the schedule of hydro generating stations shall be replaced with actual generation.

8.3. Principles of Day Ahead Scheduling for Buyers:

A. Procurement from Inter-State Generating Station (ISGS)

8.3.1. MSLDC shall receive availability i.e. entitlement of ISGS for day ahead on 15-minute time block basis from the WRLDC, which MSLDC shall inform to beneficiaries in the State.

8.3.2. Beneficiaries shall submit their requisitions from respective ISGS to MSLDC. Considering drawal schedule submitted by respective Distribution Licensee & availability from all sources & decentralised load generation balance, MSLDC shall advise the drawal schedule for each of the ISGS to WRLDC.

8.3.3. MSLDC shall consider the schedule received from WRLDC while finalising schedule under decentralised MoD principles.

8.3.4. Transmission loss of Inter-State transmission system (ISTS) shall be taken into account as per WRLDC procedure for working out ex-power plant generation schedule of ISGS and net drawal schedule of beneficiaries at the periphery of the State.

B. Procurement from Intra-State Generating Stations (InSGS)

8.3.5. While preparing the Day ahead load forecast, the Buyers shall take into consideration the load requirements of the Open Access Users located within their licence area as well. While furnishing the overall Load forecast schedule to MSLDC, Buyers shall consider forecasted load requirement of 'Partial Open Access Users.'

8.3.6. Buyers including Distribution Licensees shall regularly carry out the necessary exercises regarding short-term Load estimation for their respective area, to enable them to plan in advance as to how they would meet their consumers' load without overdrawing from the grid.

8.3.7. Buyers including Distribution licensees shall furnish details of bilateral power they have contracted on short term, medium term and long-term basis.

- 8.3.8. Buyers shall furnish the details of their bi-lateral purchases and sources of power supply to MSLDC.
- 8.3.9. Buyers shall forecast the Load requirement for day ahead on 15-minute time block basis considering the availability declared by the Sellers with whom they have contractual arrangement.
- 8.3.10. Buyers shall submit their drawal schedule to MSLDC as per the time lines specified in the detailed scheduling procedure under this scheduling code.
- 8.3.11. Buyers with essential loads will separately identify non-essential components of such loads, which may be kept OFF during system contingencies. Buyers shall draw up an appropriate schedule with corresponding load blocks in each case. Buyers shall make separation and listing of “essential” and, “non-essential” loads, prepare their plan for relieving such loads and shall inform MSLDC accordingly. The non-essential loads can be put ON only when system normalcy is restored, as advised by MSLDC.
- 8.3.12. Wheeling transactions of captive and open access consumers shall be despatched subject to transmission constraints and system emergency conditions.
- 8.3.13. Buyers shall submit their revised drawal schedule to MSLDC, if they undertake any bilateral contracts or participate in the Power Exchange Transactions.

C. Collective Transaction through Power Exchanges

- 8.3.14. MSLDC shall receive details of collective transactions for the State if any from the NLDC/Power Exchanges.
- 8.3.15. MSLDC shall consider the collective transactions of Buyers and Sellers for preparation of Load-Generation balance.
- 8.3.16. For scheduling of collective transactions through power exchanges, the procedure specified by the NLDC shall be followed.

D. Bilateral Short Term Transactions

- 8.3.17. MSLDC shall consider the bilateral short term transactions/ contracts of Buyers and Sellers for preparation of Load-Generation balance.

8.4. Load Generation Balance during Day Ahead Scheduling

- 8.4.1. MSLDC shall follow the de-centralised MoD principles as specified by the Commission in the MERC DSM Regulation and State Grid Code, for respective buyers while preparing Load Generation balance during Day Ahead Scheduling.
- 8.4.2. MSLDC shall grossed up “Drawal Schedule” at T<>D interface for Intra-State Transmission losses to match with available “Ex-Bus Generation Schedule” while preparing targeted Ex-Bus Generation Schedule of InSGS.

- 8.4.3. MSLDC shall prepare the separate Merit Order Stack for each Buyer considering the contracts of respective Buyer and least cost principles as specified in the MoD Principles of State Grid Code.
- 8.4.4. MSLDC shall prepare the Load Generation balance considering the Ex-Bus generation availability of the Sellers, entitlement of ISGS and Load forecast by the Buyers, Buyer-wise MoD principle (de-centralised MoD) and RE Generation forecasted as per the procedure under MERC F&S Regulations.
- 8.4.5. While giving the Schedule to Generators as per De-Centralised MoD Principles, the MSLDC shall maintain the spinning reserve margin in the Generator as and when specified by the Commission for management of ramp up as per the requirement of the Grid.
- 8.4.6. MSLDC shall prepare target despatch schedules for all Sellers, Wind and Solar Generators (QCA's), RE generators other than wind and Solar generators connected to InSTS, and target drawal schedule of Buyers at 50.00 Hz frequency and publish the same on MSLDC's website.
- 8.4.7. While preparing target despatch and target drawal schedule for the State as a whole, MSLDC shall consider all the relevant provisions of the IEGC and State Grid Code such as Transmission constraints.
- 8.4.8. MSLDC shall also publish information regarding the availability of surplus power or shortfall of power if any on MSLDC's website.
- 8.4.9. Based on the information furnished by MSLDC, Distribution Licensee being a deemed trader may undertake any short-term contracts or Inter-State trade transactions or may participate in the power exchange transactions to meet its drawal shortfall or optimise their power procurement cost, as the case may be.
- 8.4.10. As the Sellers have contracted their generation capacity through long term/medium term contract with Buyers, such exchange of available surplus capacity shall be effected inter-se amongst Buyers without need to amend existing PPAs with their respective Sellers.
- 8.4.11. MSLDC shall maintain and publish separate account of exchange of surplus power capacity if any amongst the Buyers/Distribution licensees.
- 8.4.12. Buyers shall submit their revised drawal schedule to MSLDC, if they undertake any bilateral contracts or participate in the Power Exchange Transactions.
- 8.4.13. Based on the revised information received from the Buyers and Sellers, MSLDC shall run revised Load-Generation balance for finalising the despatch schedules for all Sellers, Wind and Solar Generators (QCA's), RE generators connected to InSTS and drawal schedule of Buyers at frequency of 50 Hz and publish on the MSLDC's website.
- 8.4.14. MSLDC shall also publish information regarding the final availability of surplus power if any on the website.

8.5. Scheduling and Despatch Procedure and time lines for Day ahead Scheduling

- a) By 0600 hrs every day, the ISGS shall advise the WRLDC, the station-wise ex-power plant MW and MWh availability for the next day, i.e. from 0000 hrs to 2400 hrs of the following day on 15 minute time block as per WRLDC Procedure.
- b) By 0800 hrs every day, WRLDC shall advise (available on WRLDC website) the station-wise ex-power plant MW and MWh availability for the next day, i.e. from 0000 hrs to 2400 hrs of the following day on 15 minute time block to MSLDC for the Beneficiaries in the State as per WRLDC Procedure.
- c) By 0830 hrs every day, MSLDC shall advise the station-wise ex-power plant MW and MWh availability of ISGS for the next day, i.e. from 0000 hrs to 2400 hrs of the following day on 15 minute time block to Beneficiaries in the State.
- d) By 0900 hrs every day, each Seller connected to InSTS, shall furnish to MSLDC, its unit-wise generation availability in MW and MWh taking into consideration any outage of its generating unit for the next day, i.e., from 0000 hrs to 2400 hrs of the following day on 15 minute time block in **Form- 1S**.
- e) By 0900 hrs every day, Beneficiaries in the State shall inform their consent to the MSLDC for the ISGS capabilities.
- f) By 0930 hrs every day, MSLDC shall inform the consent of the Beneficiary to WRLDC for the ISGS capabilities.
- g) By 0945 hrs every day, WRLDC shall inform the consent of the Beneficiary to ISGS each day about the quantum and duration of power for next day for sale in the market.
- h) By 1000 hrs every day, Pooling Sub-Station wise QCAs, connected to InSTS, shall furnish to MSLDC, their generation availability in MW and MWh taking into consideration any outage of its generating unit for the next day, i.e., from 0000 hrs to 2400 hrs of the following day on 15 minute time block as per the F&S procedure under MERC F&S Regulations.
- i) By 1000 hrs every day, Distribution Licensees/Buyers shall furnish consolidated schedule of RE generators below 25 MW connected to InSTS, to MSLDC, availability in MW and MWh for the next day, i.e., from 0000 hrs to 2400 hrs of the following day on 15 minute time block in **Form- 1S**.
- j) By 1000 hrs every day each Buyer shall furnish its anticipated drawal schedule for next day, on 15-minute time block basis against their bilateral power and IPP requisitions they have contracted on short term and long term basis respectively for the next day i.e. from 0000 hrs to 2400 hrs of the following day on 15 minute time block. Buyers shall furnish their drawal schedule considering expected generation from all embedded generators connected to its distribution network, for next day, to MSLDC for all such generating stations in **Form- 1B**.

- k) By 1000 hrs every day all Full Transmission Open Access Consumers shall furnish to MSLDC their drawal schedules for next day i.e. from 0000 hrs to 2400 hrs of the following day on 15 minute time block in **Form-1B**.
- l) By 1100 hrs, MSLDC shall prepare the Load Generation Balance for the next day, from 0000 hrs to 2400 hrs of the following day on 15 minute time block as per De-Centralised (Buyer Wise) MoD principles specified by the Commission.
- m) By 11 hrs, MSLDC shall publish Target Despatch Schedule for the next day, from 0000 hrs to 2400 hrs of the following day on 15 minute time block for Sellers, QCAs, all RE Generators connected to InSTS and Drawal Schedule for Buyers on its website in **Form No. 2B for Buyers and Form- 2S for Sellers**.
- n) By 1400 hrs, MSLDC shall receive the revised ISGS drawal schedule from Buyers in MW and MWh for the next day, i.e. from 0000 hrs to 2400 hrs of the following day on 15 minute time block.
- o) By 1500 hrs, MSLDC shall finalize the drawal schedule from ISGSs and inform to WRLDC, MSLDC shall ensure that the step increase regarding the ISGS station-wise requisition is not more than 1% of the previous requisition.
- p) By 1800 hrs every day, WRLDC shall upload on its Website the “net drawal schedule” of the State in MW and MWh for the next day, i.e. from 0000 hrs to 2400 hrs of the following day on 15 minute time block. The summation of the station-wise ex-power plant drawal schedules for all ISGS and drawal from regional grid consequent to bilateral interchanges, after deducting the Inter-State transmission losses (estimated by WRLDC), shall constitute the State drawal schedule.
- q) By 2000 hrs every day, each Sellers connected to InSTS, shall furnish to MSLDC, its unit-wise generation revised availability in MW and MWh considering any outage of its generating unit for the next day, i.e., from 0000 hrs to 2400 hrs of the following day on 15 minute time block in **Form-2S**.
- r) By 2000 hrs every day, Discoms/Buyers shall furnish revised consolidated schedule of RE Generators connected to InSTS, to MSLDC, availability in MW and MWh taking into consideration any outage of its generating unit for the next day, i.e., from 0000 hrs to 2400 hrs of the following day on 15 minute time block in **Form- 2S**.
- s) By 2000 hrs every day each Buyer shall furnish its revised drawal schedule for next day, on 15-minute block basis against their STOA, MTOA,LTOA, Collective transactions and also considering expected generation from all embedded generators connected to its distribution network, in **Form – 2B** respectively.
- t) By 2000 hrs, MSLDC shall receive the revised ISGS drawal schedule from Buyers in MW and MWh for the next day, i.e. from 0000 hrs to 2400 hrs of the following day in 15 minute blocks.
- u) By 2200 hrs, MSLDC shall finalize the drawal schedule from ISGSs, MSLDC shall furnish to WRLDC revised drawal schedule from ISGS. MSLDC shall ensure that the

step increase regarding the ISGS station-wise requisition is not more than 1% of the previous requisition.

- v) By 2300 hrs, MSLDC shall prepare the final time block wise Load Generation Balance for next day, i.e. from 0000hrs to 2400hrs of the following day considering Buyer wise MoD principle and publish the same on MSLDC's website.
- w) By 2300 hrs, MSLDC shall release final despatch schedules on 15 minute time block basis to all Sellers, QCAs, RE Generators other than Wind and Solar generators connected to InSTS and drawal Schedules to Buyers for the next day, from 0000 hrs to 2400 hrs.

9. Principles of Intra-day operation

Sellers shall be responsible for power generation/power injection as per the time block wise schedules finalised by MSLDC. Buyers shall be responsible for drawal as per the time block wise schedules finalised by MSLDC. Buyer(s) or Seller(s) may request for revision of their schedule during intra-day operation in accordance with the procedure specified in subsequent paragraphs. MSLDC may also revise the Schedule in accordance with the principles specified in the subsequent paragraphs.

9.1. Intra-Day Operation of hydro generating stations

- i. MSLDC shall operate hydro generating stations to restore the Load generation balance at the State level, only after exhausting all the other options including ramping up of all thermal generating units up to the available capacity, however, full time generation may be scheduled for hydro stations where the reservoirs are overflowing.
- ii. Further, MSLDC shall operate the hydro units kept as spinning reserve in consultation with the respective distribution licensees, who have entered into contract with respective generating company for such hydro units.
- iii. MSLDC during real time operation may deviate from the daily estimated generation, however, it shall make efforts to maintain the month-wise water availability indicated by concerned Distribution Licensee.
- iv. The time block wise settlement of such power exchange account of such actions initiated by MSLDC shall be settled as per the provision of the MERC DSM Regulations and this procedure or as specified by the Commission from time to time.

9.2. Revision of Schedule as per WRLDC Instructions

- 9.2.1. In case of forced outage of a unit of ISGS for those stations who have a two part tariff based on capacity charge and energy charge for long term and medium term contracts, WRLDC shall revise the schedules on the basis of revised declared capability by ISGS. The revised declared capability and the revised schedules shall become effective from the fourth time block, counting the time block in which the revision is advised by the ISGS to be the first one.

- 9.2.2. In the event of bottleneck in evacuation of power due to any constraint, outage, failure or limitation in the transmission system, associated switchyard and substations owned by the Central Transmission Utility or any other transmission licensee involved in inter-state transmission (as certified by WRLDC) necessitating reduction in generation, the WRLDC shall revise the schedules which shall become effective from the 4th time block, counting the time block in which the bottleneck in evacuation of power has taken place to be the first one. Also, during the first, second and third time blocks of such an event, the scheduled generation of the ISGS shall be deemed to have been revised to be equal to actual generation, and the scheduled drawals of the beneficiaries shall be deemed to have been revised accordingly.
- 9.2.3. WRLDC shall permit the revision of declared capability by ISGS and drawal schedule of the State for the remaining period of the day/block with advance notice of four time blocks. Revised schedules/declared capability in such cases shall become effective from the 4th time block, counting the time block in which the request for revision has been received by WRLDC to be the first one.
- 9.2.4. WRLDC shall put all such revised schedule on its website and MSLDC shall consider every revision by WRLDC and if need be, modify/revise the Despatch schedule of InSGS or revise the drawal schedule of Distribution Licensees in the State and load shedding plan, based on the circumstances at that moment.
- 9.2.5. The Generation schedules and drawal schedules issued/revised by WRLDC shall become effective from designated time block irrespective of communication successes to inform all such revisions. The MSLDC will be vigilant regarding all revisions and developments in power supply position from time to time
- 9.2.6. As per the provision of IEGC or State Grid Code, in case of any grid disturbance, the scheduled generation of all the generating stations and scheduled drawal of all the beneficiaries shall be deemed to have been revised to be equal to their actual generation/drawal for all the time blocks affected by the grid disturbance. The exact duration and certification of such grid disturbance would be declared by WRLDC or MSLDC as the case may be.

A notice to this effect shall be posted at RLDC/MSLDC website. The issue of notice at RLDC/MSLDC website shall be considered as declaration of disturbance by RLDC/MSLDC. All state entity shall take note of the disturbance & take appropriate action at their end.

Provided, that, in case of partial backing down or loss of identified Unit due to operation of Special Protection Scheme (SPS), the declared capacity (D.C.) shall be deemed available for the event period as declared by MSLDC.

9.3. Revision of Schedule by MSLDC

- 9.3.1. The MSLDC shall operate the system within the operating parameters specified under the IEGC and State grid code from time to time.

9.3.2. MSLDC may revise the Despatch and Drawal schedule of State Entities on account of following:

- Depletion of Generating capacity in ISGS or InSGS due to tripping of units or de-rating caused by loss of auxiliaries or due to re-start restrictions of a Thermal unit following a grid disturbance
- Constraints in interstate or intrastate transmission system
- Hydro station constraints
- Transgression of system frequency outside the band of 49.85 Hz to 50.05 Hz.
- Volume limit for Deviation as specified by the MERC DSM Regulations.

Provided that, in case of generators having multiple PPAs, such revision of schedule by MSLDC shall be done in proportion to the schedules of the Beneficiaries for that particular time block subject to the maximum limit in proportion of their PPA ratio.

9.3.3. During real time operation, in case the grid parameters including frequency, voltage, transmission line loading, substation loading conditions or volume limits for the State specified under the CERC DSM Regulations deviate beyond permissible operating range, MSLDC shall take suitable measures in the interest of reliable and safe grid operations or to ensure compliance of WRLDC instructions in conformity with the provisions of the CERC DSM Regulations and the amendments thereof.

9.3.4. During real time operation, in case the grid parameters including frequency, voltage, transmission line loading, substation loading conditions or State volume limits (presently +/-250 MW) deviate beyond permissible operating range, MSLDC shall take suitable measures in the interest of reliable and safe grid operations and issue necessary despatch/curtailment instructions in accordance with Centralised MoD principles for the State as a whole.

9.3.5. Accordingly, MSLDC shall issue necessary despatch or curtailment instructions in accordance with Centralised MoD principles for the state as whole, considering the technical constraints such as Ramp rate of generators so as to maintain the Load-Generation balance and comply with conditions stipulated under IEGC and State Grid Code. In such cases, the revised schedules shall become effective from the 4th time block, counting the time block in which the revised schedule is issued by the MSLDC to be the first one. Also, during the first, second and third time blocks of such an event, the schedules shall be deemed to have been revised to be equal to actual generation or actual drawals as the case may be.

9.3.6. For any revision of scheduled generation, including post facto deemed revision, there shall be a corresponding revision of scheduled drawals of the beneficiaries.

9.3.7. Collective Transaction through Power Exchange(s) would normally be curtailed subsequent to the Short Term Bilateral Transaction(s).

- 9.3.8. The backing down of Thermal Generating Stations shall be as per MoD Principles specified by the Commission in the State Grid Code as amended from time to time and Orders issued by the Commission.
- 9.3.9. In the event of bottleneck in evacuation of power due to any constraint, outage, failure or limitation in the transmission system, associated switchyard and substations owned by the State Transmission Utility or any other transmission Licensee involved in Intra-State transmission (as certified by MSLDC) necessitating reduction in generation, the MSLDC shall revise the schedules which shall become effective from the 4th time block, counting the time block in which the bottleneck in evacuation of power has taken place to be the first one. Also, during the first, second and third time blocks of such an event, the scheduled generation of the Intra-State Generator shall be deemed to have been revised to be equal to actual generation, and the scheduled drawal of the beneficiaries shall be deemed to have been revised accordingly.
- 9.3.10. When for the reason of transmission constraints e.g. congestion or in the interest of grid security, it becomes necessary to curtail power flow on a transmission corridor, the transactions already scheduled may be curtailed by MSLDC.
- 9.3.11. The short-term Open Access transactions shall be curtailed first followed by the medium term Open Access transactions, followed by the long-term Open Access transactions and amongst the consumers of a particular category, curtailment shall be carried out on pro rata basis shall be as per the MERC TOA/DOA Regulations.
- 9.3.12. For Frequency management MSLDC shall,
- i. Monitor the system frequency and ensure proper balance between the supply and Demand by due revisions in generation schedules in the frequency band between 49.85 to 50.05 Hz or as specified by IEGC from time to time.
 - ii. Monitor bilateral interchanges and net drawal from the central pool and from the regional grid and ensure their conformity to the finalised schedule especially when the frequency is below 49.85 Hz or as specified by IEGC from time to time.
 - iii. In the event of frequency dropping below 49.85 Hz or as specified by IEGC from time to time, proceed to carry out requisite load shedding of respective Buyer as per the drawal schedule.
 - iv. Back down the generating units/stations as per the MoD principles specified by the Commission in case the frequency goes higher than 50.05 Hz or as specified by IEGC from time to time.
 - v. Revision of firm bilateral transaction day ahead/same day will be considered only if the request will be received with the consent of both Seller & Buyer and as per the provisions of the MERC Open Access Regulations.
- 9.3.13. MSLDC shall exercise all the possible measures to maintain Volume Limits at State Periphery as specified by CERC DSM Regulations. For maintaining the

Volume Limits at State Periphery, MSLDC shall issue necessary instructions including curtailment instructions to Buyers or backing down instructions to Sellers. Such instructions may be irrespective of the status of Volume Limit of individual State Entity. MSLDC's instructions shall be binding on all the State Entities and Users.

- 9.3.14. MSLDC shall maintain and publish separate account of such actions initiated by MSLDC in the interest of grid operation or in compliance of WRLDC instructions in conformity with CERC DSM Regulations. MSLDC shall publish monthly report of exchange of power capacity, if any, amongst the State Entities resulting on account of such MSLDC interventions.

9.4. Revision of Schedule by Sellers

- 9.4.1 Seller, as far as possible, shall generate electricity as per the day-ahead generation schedule finalized by MSLDC.
- 9.4.2 In case of forced outage of an Unit of Intra-State Generator for those stations who have two part tariff based on Capacity Charge and Energy Charge for long term and medium term contracts, MSLDC shall revise the schedules on the basis of revised declared capability of Intra-State Generators. The revised declared capability and the revised schedules shall become effective from the fourth time block, counting the time block in which the revision is advised by the Intra-State Generator to be the first one.
- 9.4.3 In case of forced outage of an Unit of Intra-State Generator (having generating capacity of more than 25MW) selling power under Short Term bilateral transaction (excluding collective transaction to power exchange), the generator or electricity trader or any other agency selling power from the unit of the generating station shall immediately intimate the same along with the requisition for revision of schedule and estimated time of restoration of the Unit to MSLDC as the case may be. The MSLDC shall revise the schedules on the basis of revised declared capability of Intra-State Generator. The revised declared capability and the revised schedules shall become effective from the fourth time block, counting the time block in which the revision is advised by the Intra-State Generator to be the first one. The corresponding schedule of the beneficiary of power from this generating unit shall be revised accordingly. The MSLDC, shall inform the revised schedule to the seller and the buyer. The original schedule shall become effective from the estimated time of restoration of the unit.
- 9.4.4 To discourage frivolous revisions, MSLDC may, at its sole discretion, refuse to accept schedule/capability changes of less than two (2) percent of previous schedule/capability. The schedule of thermal generating stations indicating fuel shortage while intimating the Declared Capacity to the MSLDC shall not be revised except in case of forced outage of generating unit.

Provided that, in case of gas based InSGS, for optimum utilization of gas, this shall be permitted, i.e. in case of tripping of a unit, this gas may be diverted to another unit using the same gas.

- 9.4.5 In case of Solar or Wind generating stations connected through InSTS, the QCA may revise schedule of Pooling Substation (excluding collective and inter-State bilateral transactions) by giving advance notice to MSLDC. For revision of schedule by wind and solar generation the provisions of MERC F&S Regulations, 2018 and the procedure framed therein shall be applicable. Such revision shall be effective from forth (4th) time block following the time block in which notice was given. There may be one (01) revision for each time slot of one and half hours starting from 0000 hrs of a particular day, subject to a maximum of sixteen (16) revisions during the day.
- 9.4.6 MSLDC shall permit the revision of generation schedule by Sellers for the remaining period of the day/block with advance notice of 4 time blocks. Revised generation schedules in such cases shall become effective from the 4th time block, counting the time block in which the request for revision has been received by MSLDC to be the first one.
- 9.4.7 The provision of Must Run status of generators shall be as per the relevant Regulations and the Orders of the Commission.

9.5. Revision of Schedules by Buyers

- 9.5.1 MSLDC shall permit the revision of drawal schedule of the Buyers for the remaining period of the day/block with advance notice of 4 time blocks. Revised drawal schedule in such cases shall become effective from the 4th time block, counting the time block in which the request for revision has been received by MSLDC to be the first one.
- 9.5.2 In case of bilateral transactions the revision of schedules, shall have to be confirmed by the other partner within a period of two time blocks. The revised schedules in such event would come in to effect from 4th time block.

10. Mechanism for Monitoring Compliance:

10.1. The event of breach or default of the procedure shall be as follows:

- i. Non-compliance of any of the terms/conditions/rules outlines under this procedure.
- ii. Non-compliance of any of the directives as per the provisions of this procedure issued by MSLDC.
- iii. Obtaining registration on the basis of false information or by suppressing material information.
- iv. State Entity fails to provide schedules continuously for 10 days.
- v. In case the State Entity has become insolvent
- vi. In case of continued default for statutory compliance leading to declaration of wilful defaulter by Competent Authority.

10.2. Consequences for event of default:

- 10.2.1 If schedule is not provided by State Entity then the previous day's schedule (d-1) for those non-submission days shall be considered and State Entity shall adhere with it.
- 10.2.2 In case of default for acts covered under this Code without prejudice to other actions as may be taken by MSLDC, the MSLDC may issue a notice of period not less than 15 days for revocation of registration of State Entity and non- scheduling of State Entity and adequate opportunity shall be given to State Entity to present its case before MSLDC.
- 10.2.3 In case State Entity fails to address/rectify the breach expressed by MSLDC in the Notice within stipulated time, the MSLDC shall approach the Commission with recommendation for revocation of registration of State Entity and disconnection from grid.

11. Grievance Redressal:

- 11.1 MSLDC shall refer the Complaints regarding unfair practices, delays, discrimination, lack of information, supply of wrong information or any other matters to the Commission for redressal.
- 11.2 Any disputes between State Entity(s) and MSLDC shall be resolved amicably, if not resolved shall be referred to the Commission for rederssal. Pending the decision of the Commission, the directions of the MSLDC shall be complied by the concerned State Entity(s).

12. Removal of Difficulties:

In case of any difficulty in implementation of this Code, MSLDC may approach the Commission for review or revision of the Code with requisite details.

13. General:

- i. All costs/expenses/charges associated with the application, including bank charges, Affidavits etc. shall be borne by the applicant.
- ii. The State Entities shall abide by the provisions of the Electricity Act, 2003, the MERC DSM Regulations and Indian Electricity Grid Code and MERC (State Grid Code), and applicable CERC and MERC regulations as amended from time to time.
- iii. This procedure aims at easy and pragmatic Scheduling and Despatch of Buyers and Sellers. However, some teething problems may still be experienced. The various implications would be known only after practical experience is gained by way of implementing these procedures. In order to resolve the same, this procedure shall be reviewed or revised by the MSLDC with prior approval of Commission.
- iv. After approval of procedure by the Commission, MSLDC shall undertake development of necessary Software for Scheduling and Despatch and Deviation Settlement for Buyers and Sellers. After go-live of Scheduling and Despatch and DSM software, there shall be trial run period upto two (2) months for ensuring implementation of DSM framework in the State as envisaged in the MERC DSM Regulation. Actual implementation of Scheduling and Despatch Code and commercial settlement under MERC DSM Regulations shall commence from the date to be notified by the Commission separately.

Table 1: Timelines for Scheduling and Despatch Procedure

Time Lines	Responsibility	From	To	Form No
By 0600	Station wise ex-power plant MW and MWh Capabilities foreseen for the next Day	ISGS	WRLDC	
By 0800	Availability of ISGS Station wise ex-power plant MW and MWh capabilities foreseen for the next Day	WRLDC	MSLDC	Available on WRLDCs Website
By 0830	Availability of ISGS Station wise ex-power plant MW and MWh capabilities foreseen for the next Day	MSLDC	Beneficiary	Available on WRLDCs Website
By 0900	Unit-wise ex-power plant generation availability in MW and MWh taking into consideration any outage of its generating unit for the next day.	Sellers including RE Generators connected to InSTS	MSLDC	Form 1S
By 0900	Consent for ISGS capacities by Beneficiaries	Beneficiary	MSLDC	
By 0930	Consent for ISGS capacities by Beneficiaries to WRLDC	MSLDC	WRLDC	
By 0945	Consent for Beneficiary to the ISGS for quantum and duration of power for next day for sale in the market	WRLDC	ISGS	
By 1000	QCA to upload Pooling Sub-Station wise and Buyer-wise day ahead Forecast and Available Capacity on 15-min time block basis.	QCA,	MSLDC	Form 1S
By 1000	Buyers to furnish MSLDC with detailed Drawal schedule on 15 minutes time block basis for next day in MW and MWh	Buyers	MSLDC	Form 1B
By 1000	Full Transmission Open Access Consumers furnish detailed Drawal schedule on 15 minutes time block basis for next day in MW and MWh	Full TOA consumers	MSLDC	Form 1B /Form 1S
By 1100	Preparation of Load Generation Balance and URS if any	MSLDC		On web site
By 1115	Target Despatch Schedule for Seller and Target Drawal Schedule for Buyers.	MSLDC	Buyers and Sellers	Form 3S
By 1400	ISGS drawal schedule of Beneficiaries	Beneficiaries	MSLDC	
By 1500	ISGS drawal schedule of beneficiaries	MSLDC	WRLDC	
By 1800	“Net drawal schedule” of the State in MW and MWh for the next day	WRLDC	MSLDC	Available on WRLDCs website

Time Lines	Responsibility	From	To	Form No
By 2000	Unit wise ex-bus generation revised availability in MW and MWh taking into consideration any outage of its generating unit for the next day	Sellers, QCAs connected to InSTS	MSLDC	Form 1S-R
By 2000	Revised drawal schedule for next day against bilateral power and IPP requisition they have contracted in short term and long term basis.	Buyers	MSLDC	Form 1B-R
By 2000	Revised ISGS Drawal Schedule by Beneficiaries	Beneficiaries	MSLDC	
By 2200	Revised ISGS Drawal Schedule by Beneficiaries	MSLDC	WRLDC	
By 2300	Final Load Generation Balance and URS available if any	MSLDC		MSLDC Website
By 2330	Final targeted despatch schedules for Sellers and targeted drawal Schedules for Buyers.	MSLDC	MSLDC Website	Form No 2S

14. Annexures and Forms:

Annexure – 1

Table 2: Proposed Charges payable by Buyer/Seller to MSLDC

Sr. No.	Type of Charges	Parameter	Amount (Rs.)	Details of Payment
1	Registration Charges	0.01 – 100 MW	20,000.00	<ul style="list-style-type: none"> • At the time of Application for Registration of Buyer/Seller • For each Buyer considering NCPD of recent Order of Commission. • For each Seller considering installed capacity of generating Station. (in case of generation station selling power Unit-wise or availing Open Access Unit-wise the Registration charges shall be paid Unit-wise)
		100.01 to 1000 MW	1,00,000.00	
		1000.01 to 10000 MW	2,00,000.00	
		>10000.01 MW	5,00,000.00	
2	Scheduling Charges	As approved by the Commission	2,250/-	For every day
3	Revision in Schedules if requested by Buyer/Seller	As approved by the Commission)	2,250/-	For every revision
4	Corpus fund for Seller		10,000/ per MW	During Registration and as and when installed capacity is added for Generating Station.
5	Corpus fund for Buyer		20,000/ per MW of NCPD	During Registration and as and when revised NCPD is approved by the Commission under InSTS Tariff Order. In case of Full OA and Captive consumers, the Capacity approved under OA shall be considered.
5	Top-up of Corpus		As required	In the event of reduction in Corpus
6	Any other charges		As required	As and when required

List of Forms

Sr.	Particulars	Annexure/Format No.
1	Registration Form for Sellers for Scheduling and Re-Scheduling	Form A
2	Registration Form for Buyer for Scheduling and Re Scheduling	Form B
3	Submission of Day Ahead Drawal at T<>D Periphery by Buyer	Form 1B
4	Submission of Unit wise Ex-bus Day Ahead Availability by Seller	Form 1S
5	Day Ahead Drawal Schedule of Buyer by MSLDC at T<>D periphery	Form 2B
6	Intra-day Drawal Revision at T<>D periphery by Buyer	Form 2B-R
7	Intra Day Declared Capacity of Seller unit wise (at Ex-bus periphery)	Form 2S-R
8	Final Drawal Schedule of Buyer at T<>D periphery	Form 3B-R
9	Combined Drawal Schedule of Buyers	Form - 4B
10	Day Ahead Ex-Bus Injection Schedule	Form 3S
11	Intra Day injection Schedule at G<>T periphery	Form 3S-R
12	Combined injection schedule at G<>T periphery	Form 4S
13	Buyer wise MoD Stack for Day ahead Scheduling and Revision of Schedule	Form 5B
14	Centralised MoD Stack for Intra-Day Operation by MSLDC	Form 6B

FORM-A

Registration form for State Entity -Seller under MERC DSM Framework

Sr.No.	Parameters	Information details
1	Type of generator	
2	Fuel Type	
3	Location of generator (Village, Tal, District)	
4	Total installed capacity of generating station	
5	Total number of units with details	
6	Name of sub-station and voltage level to which generator is connected	
7	Latitude & longitude of sub-station	
8	Schematic diagram of connectivity with the grid & metering arrangement	(Please attach)
9	Whether any PPA has been signed: (Y/N)	If yes, then please attach Notarized Affidavit indicating details
10	Metering details (G<>T interface metering details),	Meter No. 1. Main 2. Check 3. Standby
11	Contact details of the nodal person	Name: Designation: Landline number: Mobile number: E-Mail address:
12	Contact details of the alternate nodal person	Name: Designation: Landline number: Mobile number: E-Mail address:
13	Contact details of control room for communication on forecasting, scheduling, revisions, event of curtailments etc.	Landline number: Mobile number: E-Mail address:
14	Details of payment towards registration	
15	Technical data of generators (Ramp up/down rate, Technical minimum etc. Generators may enclose details as Annexure to the form.)	
16	Statement of PPAs	
17	Indemnity Bond (to submitted by Generator)	

We hereby confirms that, we shall undertake all operational and commercial responsibilities as mentioned in MERC DSM Regulations, 2019 and all the codes, procedures framed thereunder and State Grid Code and its amendment thereof and the abide by the directions issued by the MSLDC from time to time.

Date:
Place:

Sign:
Authorized Signatory
Name:
Designation:
Name of Seller and Seal

FORM- B

Registration form for State Entity -**Buyer** under MERC DSM Framework

Sr. No.	Parameters	Information details
1	Type of Buyer	
2	Address of Buyer for Communication	
3	Daily load curve data for each sample week of every quarter for last 3 years.	
4	Whether any PPA has been signed: (Y/N)	If yes, then please attach Notarized Affidavit indicating details
5	Metering details	Meter No. 1. Main 2. Check
6	Contact details of the concerned person	Name: Designation: Landline number: Mobile number: E-Mail address:
7	Contact details of the alternate concerned person	Name: Designation: Landline number: Mobile number: E-Mail address:
8	Details of payment towards registration	
9	Statement of PPAs	
10	Indemnity Bond	

We hereby confirms that, we shall undertake all operational and commercial responsibilities as mentioned in MERC DSM Regulations, 2019 and all the codes, procedures framed thereunder and State Grid Code and its amendment thereof and the abide by the directions issued by the MSLDC from time to time.

Date:
Place:

Sign:
Authorized Signatory
Name:
Designation:
Name of Buyer:
Seal:

Form 1B

Submission of Day Ahead Drawal Schedule at T<>D Periphery by Buyer to MSLDC

Format 1B	Day Ahead (D-1 day) Drawal of Buyer (At T<>D Periphery)							
Name of Entity								
Buyer code:								
Delivery Date:								
Time Block	Projected Demand		Short Term OA		Medium Term OA		Bilateral Contract	
	MW	MWh	MW	MWh	MW	MWh	MW	MWh
1								
2								
3								
96								
Average								
Min								
Max								

*Day Ahead- (D-1) where *D is Delivery Date.

In addition to above the Distribution Licensee having PPAs with Hydro power plants shall submit the all the details of monthly Water Availability, Lake Level, Monthly estimated generation from the hydro power plant as per the provisions of this Procedure.

Form 1B-R

Submission of Revised-Day Ahead Drawal Schedule at T<>D Periphery by Buyer to MSLDC

Format 1B-R	Revised-Day Ahead (D-1 day) Drawal of Buyer (At T<>D Periphery)							
Name of Entity								
Buyer code:								
Delivery Date:								
Time Block	Projected Demand		Short Term OA		Medium Term OA		Bilateral Contract	
	MW	MWh	MW	MWh	MW	MWh	MW	MWh
1								
2								
3								
96								
Average								
Min								
Max								

*Day Ahead- (D-1) where *D is Delivery Date.

In addition to above the Distribution Licensee having PPAs with Hydro power plants shall submit the all the details of monthly Water Availability, Lake Level, Monthly estimated generation from the hydro power plant as per the provisions of this Procedure.

Format 1S
Submission of Unit wise Ex-bus Day Ahead Availability by Seller

Format 1S		For Day Ahead (D-1 day) Declared Capacity at Ex-Bus wise Unit Wise (At Ex-Bus periphery)						
Name of Seller		Seller Code(Code will be generated Unit wise):						
Revision No:								
Delivery Date:								
Time Block	Day Ahead DC (MW)	LTOA (MW)		STOA (MW)		MTOA (MW)		Collective (MW)
		Intra-State		Intra-State		Intra-State		
		Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	
1								
2								
3								
96								
Average								
Min								
Max								
MWh								

*Day Ahead- (D-1) where *D is Delivery Date.

Format 1S (Hydro)

Submission of Unit wise Ex-bus Monthly Availability by Seller (Hydro) and Beneficiary of Hydro power plant

Format 1S (Hydro) For Day Ahead (D-1 day) Declared Capacity at Ex-Bus wise Unit Wise (At Ex-Bus periphery) to be submitted by Hydro Generators	
Name of Seller	
Seller Code(Code will be generated Unit wise):	
Revision No:	
Delivery Date:	
Month-wise Water Availability(In MCum and TMC)	
Lake Level (In Meter) as on date	
Statutory Restrictions of Tribunal/GoMWRD for water utilisation if any	
Consent of Beneficiary having PPA with Hydro plant	

Time Block	DC for days of the Month (MW)																															Remark			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
1																																			
2																																			
96																																			
Average																																			
Min																																			
Max																																			
MWh																																			
Water utilisation (MCum /TMC)																																			

- In case of Multiple Beneficiaries same form will be submitted separately for each Beneficiary by Seller.
- The Beneficiary shall provide its consent to the water utilisation and estimated generation as per the provision of this procedure.
- The MSLDC during real time operation may vary the estimated generation indicated the form.

Format 1S (Pumped Hydro)

Submission of Unit wise Ex-bus Monthly Availability by Seller (Pumped Hydro) and Beneficiary of Pumped Hydro power plant

Format 1S (Hydro) For Day Ahead (D-1 day) Declared Capacity at Ex-Bus wise Unit Wise (At Ex-Bus periphery) to be submitted by Pumped Hydro Generators

Name of Seller	
Seller Code(Code will be generated Unit wise):	
Revision No:	
Delivery Date:	
Month-wise Water Availability(In MCum and TMC)	
Lake Level (In Meter)	
Statutory Restrictions of Tribunal/GoMWRD for water utilisation if any	
Concurrence of Beneficiary having PPA with Hydro plant	

Time Block	DC for days of the Month (MW) / Pumping for the days of the Month (MW) (Pumping will be indicated negative)																															Remark		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
1																																		
2																																		
3																																		
96																																		
Average																																		
Min																																		
Max																																		
MWh																																		
Water utilisation (MCum /TMC)																																		

- In case of Multiple Beneficiaries same form will be submitted separately for each Beneficiary by Seller.
- The Beneficiary shall provide its consent to the water utilisation and estimated generation as per the provision of this procedure.

Form 2B
Day Ahead Drawal Schedule declaration based on MoD by MSLDC

Format-3B		Day Ahead Drawal Schedule of Buyer - ABCD (Based on De-centralised MoD at T<>D Periphery)				
Name of Buyer: _____					Buyer code:	
Delivery date:						
Time Block	Gen1	Gen2	Gen3	Gen4	Total Drawal	
1						
2						
3						
96						

FORM 2B-R
Intra-day Drawal Revision at T<>D periphery by Buyer

Format 2B- R	Intra day (D -Day) Drawal Revision (At T<>D Periphery)					
Name of Buyers						
Revision No:						
Delivery Date:						
Time Block	Day ahead Projected Demand(MW)	Revised Demand (MW)	LTA (MW)	STOA (MW)	MTOA (MW)	Bilateral (MW)
1						
2						
3						
96						
Average						
Min						
Max						
MWh						

*D is Delivery date

Form 2S-R
Intra Day Declared Capacity of Seller unit wise (at Ex-bus periphery)

Format 2S-R	For Intra Day (D-Day) Declared Capacity of Seller Unit Wise (At Ex-Bus)										
Name of Seller	Seller Code(Code will be generated Unit wise):										
Revision No:											
Delivery Date:											
Time Block	Day Ahead DC (MW)	Revised DC (MW)	STOA (MW)				MTOA (MW)				Collective Transaction
			Intra-State		Inter-State		Inter-State		Intra-State		
			Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	
1											
2											
3											
96											
Average											
Min											
Max											
MWHR											

*D is Delivery date

Form 3B-R
Final Drawal Schedule of Buyer at T<>D periphery

Format 3B-R		Final Drawal Schedule of Buyer (At T<>D Periphery)								
Name of Buyer: ABCD						Buyer code:				
Delivery Date: xxxx										
Time Block	Total Drawal In MW	InSGS Gen1 In MW	InSGS Solar In MW	InSGS Wind In MW	ISGS schedule In MW	STOA		MTOA		Power Exchange In MW
						Intra-State In MW	Inter-State In MW	Intra-State In MW	Inter-State In MW	
1										
2										
3										
96										

Form 4B
Combined Drawal Schedule of Buyers

Format 4B	Combined Drawal Schedules of Buyers												
Time Block	Buyer 1						Buyer 2						Total Drawal
	STOA		MTOA		LTA	PXs	STOA		MTOA		LTA	PXs	
	Intra-State In MW	Inter-State In MW	Intra-State in MW	Inter-State in MW	in MW	in MW	Intra-State in MW	Inter-State in Mw	Intra-State in MW	Inter-State in MW	in MW	In MW	In MW
1													
2													
3													
96													

Form 3S
For Day Ahead Ex-Bus Injection Schedule

Format 3S	Day Ahead Injection Schedule (MW) (at G<>T Periphery)								
Seller Name :									
Time Block	Code: Unit Wise								
1	STOA in MW			MTOA in MW		LTA inMW		PXs	
2	Intra State		Inter State	Intra-State		Inter-State	Intra-State	In MW	
3	Buyer 1	Buyer 2	Buyer 1	Buyer 1	Buyer 2	Buyer 1			
96									

Form 3S-R
Format 3S-R for Intra Day injection Schedule at G<>T periphery

Format 3S R										
Intra Day Injection Schedule (MW) (at G<>T Periphery)										
Seller Name:										
Delivery Date:										
Time Block	Code: Unit Wise									
1	STOA in MW				MTOA in MW				LTA in MW	PXs in MW
2	Intra- State		Inter-State		Intra-State		Inter-State			
3	Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2		
96										

Form 4S
Combined injection schedule at G<>T periphery

Format 4S - Combined Injection Schedule (MW) (Intra Day at G<>T Periphery)

Delivery Date:

Time Block	Seller 1								Seller X									
	STOA Bilateral in MW				MTOA Bilateral in MW				LTA in MW	STOA Bilateral in MW				MTOA Bilateral in MW				LTA in MW
1	Inter-State		Intra-State		Inter-State		Intra-State			2	Inter-State		Intra-State		Inter-State		Intra-State	
2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2		Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	Buyer 1	Buyer 2	
3																		
96																		

FORM -5B

Format for Buyer wise MoD Stack (De-Centralised MoD) for Day ahead Scheduling and Revision of Schedule

(This MoD Stack shall also be used during Intra-Day Operation subject to the Provisions of the MERC DSM Regulations, MoD Principles specified by the Commission and provisions of this Procedure)

MOD STACK OF VARIABLE CHARGES (VC) FOR (Month__) (R__) FOR BUYER

- _____
(Effective from _____ to _____)

S.no.	Generating Station	Installed Capacity/Share in ISGS (MW)	Type of Fuel	Month (R__) Rate(Rs)/kWh in Descending Order
1	Gen -1	xxx	Oil/Gas	xxxx
2	Gen -2	xxx	Gas	xxxx
3	Gen -3	xxx	Coal	xxxx
4	Gen -n	xxx	Coal	xxxx

FORM -6B

Form for State Wise MoD Stack (based on Centralised Principles) for Intra-Day Operation

(This MoD Stack shall also be used during Intra-Day Operation subject to the Provisions of the MERC DSM Regulations, MoD Principles specified by the Commission and provisions of this Procedure)

STATE WISE MOD STACK OF VARIABLE CHARGES(VC) FOR (Month__) (R__) (Effective from _____ to _____)				
S.no.	Generating Station	Installed Capacity/Share in ISGS (MW)	Type of Fuel	Month (R__) Rate(Rs)/kWh in Descending Order
1	Gen -1	xxx	Oil/Gas	xxxx
2	Gen -2	xxx	Gas	xxxx
3	Gen -3	xxx	Coal	xxxx
4	Gen -n	xxx	Coal	xxxx

ABBREVIATIONS

DSM	Deviation Settlement Mechanism
CERC	Central Electricity Regulatory Commission
CPP	Captive Power Producer
DC	Declared Capacity
Discom	Distribution Company
IC	Installed Capacity
IEGC	Indian Electricity Grid Code
IPP	Independent Power Producer
ISGS	Inter-State Generating Station
InSTS	Intra-State Transmission System
InSGS	Intra-State Generating Station
kV	Kilo Volt
MERC	Maharashtra Electricity Regulatory Commission
MoD	Merit Order Despatch
MVA	Mega Volt Ampere
MW	Mega Watt
OD	Operational Division
RE	Renewable Energy
STOA	Short Term Open Access
MTOA	Medium Term Open Access
LTA	Long Term Agreement