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In the matter of

Removal of Difficulty in the process of implementation of MERC (Deviation Settlement Mechanism and related matters) Regulations, 2019

Order

Date: 6 May 2021

1. The MERC (Deviation Settlement Mechanism and related matters) Regulations, 2019 (**DSM Regulations**) were notified on 1 March 2019. In accordance with first proviso to Regulation 1(2) of these Regulations, the Commission is required to notify the date separately through Order, for coming into force of Commercial Arrangements specified under Clause (9) and (10) of these Regulations and the related provisions regarding Deviation Charges and Additional Charge for Deviation. Such date for coming into effect of Commercial Arrangement was decided not to be later than 1 April 2020.

2. Around 12 months' time had been envisaged for commercial implementation which included following key activities:

   i. Formulation and approval of related Procedures (Scheduling and Dispatch Code, DSM Accounting Procedure and Metering Code)

   ii. Establishment of Interface Metering, Automatic Meter Reading (**AMR**) facilities and communication infrastructure

   iii. Development of Software for Deviation Energy Accounting framework

3. In order to facilitate and guide implementation, address difficulties, if any, and to monitor progress of several implementation activities related to the DSM Regulations, the Commission constituted the Working Group on 7 January 2019. The Working Group has been monitoring the progress of the DSM Software development and interacting with Maharashtra State Load Dispatch Centre (**MSLDC**) and other stakeholders for understanding their difficulties or concerns related to implementation of the DSM Regulations.

4. Subsequently, on two occasions (on 24 March and 5 June 2020), MSLDC conveyed the difficulties in commencement of commercial implementation of DSM Regulations citing mainly non-readiness of DSM software modules and other issues. Accordingly, considering the request of MSLDC and also the then prevailing situation of outbreak of COVID 19 and related difficulties, the Commission, through its Orders dated 28 March and 5 June 2020, deferred the commercial implementation of DSM Regulations till 1 June 2020 and 5 October 2020 respectively.

5. In the meantime, on 22 June 2020, integrated testing of the DSM software (including shifting of the application from development server to production server) was completed and the mock trial run operation of DSM Regulation got commenced from 00.00 Hrs of 24 June 2020.

6. Vide Order dated 28 October 2020, the Commission directed that the date of commencement of commercial implementation of the DSM Regulations shall be 28 December 2020. The extension was needed, as during the mock trial run which commenced from 22 June 2020, various issues/errors were noticed in software modules (mainly the scheduling module) deployed for DSM Regulations and these software modules required multiple revisions, subsequent testing and re-deployment by the IT implementation partner in consultation with MSLDC and the stakeholders. Subsequently, MSLDC vide its letter dated 4 November 2020 informed that it has deployed upgraded version of scheduling module after resolving the issues pertaining to decentralized and centralized operation on the production server and commenced fresh trial run operation using upgraded scheduling module from 14 October 2020. MSLDC also provided specific timeline and action plan for completion of various activities for commencement of DSM Regulations by 31 December 2020.

7. In the meantime, three Petitions had been filed before the Commission related to implementation of DSM Regulations wherein the Petitioners, citing their respective difficulties, had sought relaxation from certain provisions of the DSM Regulations.

8. Case No. 110 of 2020 had been filed by the Co-generation Association of India seeking exemption from the DSM Regulations. The Petitioner, inter alia, had claimed that although installed capacity of most of the Co-Generation plants was more than 25 MW (threshold limit of applicability for getting covered under the DSM Regulations), due to substantial amount of captive consumption within the plant, out of the total generation of electricity, exportable capacity of most of the plants is less than 25 MW and hence, most of these plants would not fall under the applicability clause of DSM Regulations. The Commission acknowledged the submission of the Petitioner that significant quantum of generated electricity is utilized for plant processes and the plant consumption in case of these cogeneration plants. The Commission also observed that as far as the impact on grid and its security is concerned, only surplus/exportable capacity would matter, and installed capacity has no relevance unless the cogeneration plant does not consume any electricity within the plant and schedules entire generated electricity for injection into grid.

Accordingly, the Commission partly allowed the Petition vide its Order dated 9 November 2020 holding that the DSM applicability for the Co-Generation plants shall be based on exportable capacity of the Generating Unit instead of installed capacity.

9. Case No. 114 of 2020 had been filed by the Tata Power Company Ltd.-Distribution (**TPC-D**) citing the difficulties in adhering to the stringent volume limits and requesting the Commission to allow the Additional Deviation Charges as pass through in Annual Revenue Requirement (**ARR**) for the Distribution Licensees. The Commission observed that if the Additional Deviation Charges are allowed as pass through in ARR for the Distribution Licensees, the whole purpose of grid discipline to be followed by the Distribution Licensees as envisaged in DSM Regulations would get defeated as there would not be any dis-incentive for Distribution Licensees to breach their respective drawal schedules. Accordingly, vide its Order dated 29 November 2020, the Commission rejected the Petition. However, the Commission observed that the trial run results and also the commercial operations, thereafter, would indicate the actual impact of the Volume Limits and the Additional Deviations Charges on the Distribution Licensees, which can be considered (if necessary) for revision in the Volume Limit for Intra-State Entities in future.

10. Adani Electricity Mumbai Ltd. (**AEML-D**) had filed its Petition in Case No. 58 of 2020 raising various issues (mainly related to the applicability of Additional Deviation Charges) related to implementation of the DSM Regulations. According to AEML-D, this provision was stringent and was likely to have an adverse impact on AEML-D if not relaxed or suitably modified. AEML-D had also stated that phased implementation of the DSM Regulations was necessary in order to ensure smooth and effective transition from the prevailing Final Balancing Settlement Mechanism (**FBSM**) to the DSM Mechanism. AEML-D had also suggested that there should be shadow mode of operation to address the transition management issues and operational difficulties that may arise after transition. As per AEML-D, the issue related to deviation on account of changeover consumers also needed to be resolved, else it would be treated as AEML-D's deviations impacting AEML-D. The Commission acknowledged the issue raised by AEML-D regarding the impact on account of the deviation of changeover consumers and partly allowed the Petition vide its Order dated 9 December 2020 holding that the deviation volume limit allowed to supply licensee (TPC-D) on account of changeover consumers' demand would require to be given to network licensee (AEML-D).

11. Considering the concerns raised by the Distribution Licensees about volume limit, the Commission, in its Order dated 9 December 2020 in Case No. 58 of 2020, had also directed the DSM Working Group to examine the impact of Volume Limit during the trial run period and submit its recommendations/ report within fifteen days of the Order. The relevant extract of the Orde is as follows:

> *"3. The Working Group constituted by the Commission on 7 January 2019, is directed to monitor the trial run operations of the MERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2019 closely, evaluate its results,*

address the difficulties being faced by the State Entities and also by the Maharashtra State Load Despatch Centre. The Working Group should also analyze the Additional Deviation Charges vis-a-vis the State's liability towards the Regional charges and appraise the Commission of the outcome of the analysis suggesting its recommendations/inputs which would be considered by the Commission while approving the volume limit of the buyers. The Working Group shall provide its recommendations/input within fifteen days of the Order."

12. Accordingly, as per the aforesaid directions, the DSM Working Group presented its interim report on 21 December 2020 along with analysis of DSM bills during period of 7 December to 13 December 2020 and its recommendations on the implementation of the Regulations. The DSM Working Group also appraised the Commission on preparedness of the commencement of commercial implementation of the DSM Regulations. Further based on the subsequent review, on 27 December 2020, the DSM Working Group apprised the Commission about status of preparedness of stakeholders and suggested that the Commission should extend the trial operation period by another three months i.e. upto 31 March 2021 for commencement of DSM commercial implementation.

13. In the meantime, aggrieved by the Commission's Order dated 9 December 2020 in Case No. 58 of 2020, TPC-D has filed an Appeal before the Hon'ble Appellate Tribunal for Electricity (**ATE**) inter alia, claiming that through the aforesaid Order, the Commission has amended the DSM Regulations which is not permissible under the law. The Hon'ble ATE vide its Daily Order dated 23 December 2020, has directed not to implement DSM Regulations till further orders.

14. Keeping in view the directions as contained in the Order dated 23 December 2020 of the Hon'ble ATE in Appeal No. 5 of 2021 and in view of the recommendations of the DSM Working Group about the preparedness for the DSM implementation as well as to address the concerns the stakeholders during the process of stakeholders' consultation with DSM Working Group, the Commission vide letter dated 27 December 2020 addressed to MSLDC deferred the commercial implementation of the DSM Regulations till further Orders.

15. During extended mock trial run period, the DSM Working Group continued its regular interactions with MSLDC and other stakeholders, including IT implementation partner to address various implementation aspects such as rectification in DSM software errors observed during trial run period, making software more user friendly to stakeholders, deliberations on clarifications required in the DSM Procedures, suggestions on stabilisation period etc.

16. The DSM Working Group also carried out analysis of DSM bills issued during mock trial operation period for the weekly period of 24 June to 1 November 2020, 2 November to 29 November 2020 and more specifically DSM bills for trial period from 7 December 2020

to 13 December 2020, 25 January to 31 January 2021 as the DSM scheduling module logic was updated by MSLDC based on stakeholder's feedback. The DSM Working Group presented its progress report to the Commission on 7 April 2021 covering the overview and status of the implementation of the DSM Regulations.

17. The key points of the Report submitted by the DSM Working Group are as under:

i. Out of total 6046 new Interface Energy Meters (IEM) (main and standby meters) for Automatic Meter Reading (**AMR**) activity, 5864 (97%) meters have been installed and 5784 (96%) meters have been commissioned. IEM commissioning at balance locations would be completed by 15 May 2021 depending upon the availability of outages. Integration of these AMR Meters with Meter Data Acquisitions System (**MDAS**) is in final stage.

ii. The five core modules for DSM such as State Entity Registration, Web Portal and Meter Data Management, Scheduling, DSM and Fees & Charges have been completed, tested and are operating in a stable manner except for the Scheduling module which is showing some errors intermittently such as schedule revision of previous time blocks data changing in intra-day for central sector and RE schedule, incorrect fetching of schedule for inter-state etc. and needs further close monitoring for necessary corrective actions.

iii. Out of the rest of the four non-core modules, two modules viz. Transmission Loss accounting and MIS have been deployed and under further revision based on feedback of stakeholders, whereas other two modules viz. Reactive Energy Accounting and Big Data Analysis are only partially completed, and the IT implementation partner is yet to undertake necessary modifications as suggested by MSLDC.

iv. Although, DSM Software mock trial run operation started on 22 June 2020, the software came to stable version from the beta version after addressing comments from stakeholders during the integration testing. Integrated testing of software (including shifting of application from development server to production server) was completed and trial run was commenced. Trial run for updated scheduling module commenced from 00.00 Hrs of 2 November 2020 (day ahead schedule for 3 November 2020).

v. Major issue of de-centralized MOD in scheduling module resolved on 10 December 2020.

vi. DSM Working Group has undertaken Analysis of bills issued by Western Region Power Committee (**WRPC**) during the period 7 December 2020 to 31 January 2021 and the mock trial run DSM bills issued to the State entities (buyers/sellers) by MSLDC.

vii. The above analysis indicated that during this period, the State was receivable as it had underdrawn for most of the time-blocks during this period. However, significant amount of Deviation Charges (**DSM charges**) and Additional Deviation Charges (**ADSM charges**) were computed for the Buyers and Sellers. This was on account of the fact that in case of Sellers, the scheduling for trial run was as per de-centralized mode as envisaged under the DSM Regulations, however, the actual dispatch in real time was under centralized mode only, as the Final Balancing Settlement Mechanism (**FBSM**) mechanism as centralised principle is still continuing. In case of Buyers, it was observed that buyers were unable to restrict their respective deviations within the volume limit computed as per formulation given in the DSM Regulations.

viii. As per the comments received from stakeholders, the computation of DSM charges and ADSM charges were correctly levied as per the DSM Regulations.

ix. As per the feedback received from stakeholders, certain issues such as treatment of standby power, treatment of energy consumed by generating plants during reserve shutdown/zero schedule of the Generation Plant, consideration of Gas based generating Unit (TPC-G Unit 7) under Merit Order Dispatch (**MOD**) when fired with expensive Re-gasified Liquefied Natural Gas (**RLNG**) etc. needed clarity for deviation accounting.

x. The stakeholders also stated that there is significant change in the operational and energy accounting philosophy from the existing FBSM mechanism to DSM mechanism and accordingly, there is a need for a stabilization period during initial period of commercial implementation of the DSM Regulations to get experience in handling the deviations in real time (particularly Sellers) and managing it within the stringent applicable volume limit.

xi. Based on stakeholders' consultations, the DSM Working group has explored four options for the stabilization period viz. (i) continuation of mock trial run period with scheduling in Decentralised mode (ii) Waiver of ADSM charges (iii) Relaxation in Volume Limits and (iv) Partial waiver of ADSM charges through increase in numbers of time-blocks from existing six time-blocks. The Working Group has presented the pros and cons for each of four options.

xii. The DSM mechanism needs to be aligned with certain recent amendments made on the DSM Regulations notified by the Central Electricity Regulations Commission (**CERC**).

xiii. In terms of the provisions of DSM Accounting procedure, the Commission is required to approve the volume limit for intra-State Entities computed and proposed by MSLDC.

18. After undertaking analysis of mock trial run bills and after interacting with stakeholders, the DSM Working Group has provided its recommendation on the following issues:

i. Applicable Rate for ADSM Charges for over-drawals and under-injections at the frequency "below 49.85 Hz" need to be notified.

ii. Applicability of ADSM Charges for the frequency above 50.05 Hz and below 50.10 Hz in line with the CERC DSM Regulations to be adopted.

iii. Consideration of Gas based Generating Station under MOD, when operated under RLNG or Non-APM Gas.

iv. Treatment to negative injection by Generators to meet the Plant consumption during zero schedule/reserve shut down to be clarified.

v. Treatment to Standby Power requested by Mumbai Distribution Licensees for DSM Charges computation to be clarified.

vi. Provision for declaration of suspension of DSM framework by MSLDC during specific conditions to be clarified.

vii. Approval of Volume Limits for State Entities and Transition arrangement during initial period of DSM implementation.

19. The Commission notes that all the aforesaid issues were raised by the stakeholders and the Working Group has deliberated these issues from time to time with the stakeholders through their periodic interactions. Also, by and large, all the aforesaid issues are of clarificatory in nature, the clarification of which would be in interest to all the stakeholders and which would facilitate in smooth implementation of DSM Regulations. The Commission also notes that as per the provisions of DSM Procedure, the Commission is required to approve the volume limit for State Entities on annual basis. MSLDC, vide its email dated 6 April 2021, has submitted the volume limit computations for FY 2021-22 for approval of the Commission. Accordingly, while approving the volume limit for FY 2021-22 for State Entities, the Commission deems it fit to provide clarifications on some of the issues raised by the stakeholders so that the aforesaid issues are resolved during the ongoing extended mock trial run itself and before commencement of commercial implementation of DSM Regulations. **Accordingly, in exercise of powers conferred under Regulation 19 of powers to removal of difficulty and under Regulation 20 of powers to relax under DSM Regulations, the Commission finds it appropriate to direct as follows for adoption during the extended mock trial run period for finalization of mechanism and procedures while addressing the genuine concerns of stakeholders before commencement of commercial operations of DSM Regulations**.

20. ***Issue No.1: Applicable Rate for ADSM Charges for over-drawls and under-injections at the frequency "below 49.85 Hz" need to be specified.***

Description of the Issue

20.1 The Regulation 10(I) of the DSM Regulations provides an enabling clause for the Commission to specify the rate applicable for ADSM Charges for over-drawl and under-injection and for range of frequencies "below 49.85 Hz". The Regulation reads as under:

"10. Limits on Deviation Volume and Consequences of Crossing Limits.—

……

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

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

20.2 MSLDC during interaction with the Working Group requested to clarify the rate to be considered by MSLDC in the DSM software for ADSM Charges in case of over-drawals and under-injections for different ranges of frequencies "below 49.85 Hz" in the absence of applicable rate for ADSM Charges for this range of frequencies.

Recommendations of the DSM Working Group

20.3 The CERC DSM Regulations and its amendments specify the treatment for ADSM Charges for over-drawals and under-injections for the range of frequencies "below 49.85 Hz" as given below. The relevant Regulation reads as under:

"(6) In addition to Charges for Deviation as stipulated under Regulation 5 of these Regulations, Additional Charge for Deviation shall be applicable for over-drawal or under-injection of electricity when grid frequency is "below 49.70 Hz" in accordance with the methodology specified in clause (8) of this regulation and the ***same shall be equivalent to 100% of the Charge for Deviation of 824.04 Paise/kWh corresponding to the grid frequency of "below 49.70 Hz.***

Provided further that Additional Charge for Deviation for under-injection of electricity by a seller, during the time-block when grid frequency is "below 49.70 Hz", by the generating stations regulated by CERC using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel in accordance with the methodology specified in clause 8 of this regulation shall be equivalent to 100% of the Cap Rate for Deviations of 303.04 Paise/kWh."

20.4 Vide subsequent amendment to the CERC DSM Regulations, the DSM Charge of Rs. 8.24 per Unit has been revised to Rs. 8.00 per Unit and lower range of frequency band has been revised from 49.70 Hz to 49.85 Hz.

20.5 Considering this amendment to the CERC DSM Regulations, the Commission may consider to notify similar treatment for ADSM Charges for over-drawls and under-injections at range of frequencies "below 49.85 Hz".

Commission's Analysis and Ruling

20.6 In absence of DSM rates for over-drawal and under-injection at frequencies below 49.85 Hz, MSLDC will find it difficult to undertake the computation of DSM at these frequencies. The Commission has noted the recommendation of DSM Working Group and also noted the provisions of the CERC DSM Regulations as reproduced above. As per the stipulations under proviso of the Regulation 10(I) of MERC DSM Regulations, the Commission needs to specify the different rates for Additional Charges for Deviation of over-drawals and under-injections for different ranges of frequencies "below 49.85 Hz". Accordingly, the Commission finds it appropriate to direct that, ADSM Charges for over-drawals and under-injections at range of frequencies "below 49.85 Hz" shall be equivalent to 100% of the DSM Charges of 800.00 Paise/kWh in case of over-drawal by Buyers and 100% of Cap Rate in case of under-injection by Sellers corresponding to the grid frequency of "below 49.85 Hz" in line with CERC DSM Regulations and its amendments.

20.7 The Commission further directs that, in case the CERC specifies the different percentage for ADSM Charges to the regional entities governed by the CERC DSM Regulations, the same shall be deemed to be applicable to the state entities as well, governed by DSM Regulations from the date of applicability of the corresponding CERC Regulations. However, MSLDC shall ensure that such change is intimated to the Commission and implemented only after formal communication to all the stakeholders.

21. ***Issue- 2: Applicability of ADSM Charges for the frequency above 50.05 Hz and below 50.10 Hz in line with the CERC DSM Regulations to be adopted.***

Description of the Issue

21.1 The Regulation 10(F) of the DSM Regulations provides that for over-injection/under-drawal at frequencies of 50.05 Hz and above, the ADSM Charges shall be levied at the rates equivalent to the charges of deviation corresponding to the grid frequency of "below 50.01 Hz but not below 50.0 Hz" (i.e. the Area Clearing Price). The Regulation reads as under:

"10 Limits on Deviation Volume and Consequences of Crossing Limits.—

.....

(F) In addition to the Charges for Deviation as stipulated under Regulation 9 of these Regulations, Additional Charges for Deviation shall be applicable for over-injection/under-drawal of electricity for each time block by a Seller or Buyer, as the

case may be; when grid frequency is 50.05 Hz and above" at the rates equivalent to the charges of deviation corresponding to the grid frequency of "below 50.01 Hz but not below 50.0 Hz".

21.2 However, the CERC DSM Regulations specify the frequency limits of 50.10 Hz for applicability of ADSM Charges for over-injection/under-drawal of electricity for each time block by a buyer/seller instead of frequency limit of 50.05 Hz as stipulated under the DSM Regulations.

Recommendations of the DSM Working Group

21.3 As per the DSM Regulations, the DSM charges are zero at frequency 50.05 Hz and frequency above 50.05 Hz, ADSM Charges are applicable for over-injection/under-drawal for each time block by a Seller or Buyer, as the case may be. However, as per the CERC DSM Regulations, the ADSM Charges are applicable for over-injection/under-drawal for frequency at 50.10 Hz and above. Accordingly, the ADSM Charges applicable to the State by WRPC are also at 50.10 Hz and above. For frequency between 50.05 Hz and 50.10 Hz, no ADSM Charges are applicable for regional entities

21.4 Hence, the Commission may consider to adopt the identical provision to align price vector and DSM charges related provisions of the MERC DSM Regulations consistent with the CERC DSM Regulation as the Commission has already adopted the price vector specified in the CERC DSM for determination of DSM rates under the DSM Regulations for different range of frequencies.

Commission's Analysis and Ruling

21.5 The Commission notes that the pricing of deviation of Buyers/Sellers under the DSM Regulations has been specified in accordance with the price vector of the CERC Regulations. Accordingly, the recommendations of the Working Group to make the ADSM charges applicable for over-injection and under-drawal at frequency "50.10 Hz and above" instead of existing "50.05 Hz and above" seems to have merit as it would ensure consistency with the price vector specified in the CERC DSM Regulations.

21.6 Accordingly, it is clarified that the reference to frequency "50.05 Hz and above" as specified under the Regulation 10(F) of DSM Regulations shall be read as "50.10 Hz and above". Thus, the Regulation 10 (F) of DSM Regulations shall be read as under:

*"(F) In addition to the Charges for Deviation as stipulated under Regulation 9 of these Regulations, Additional Charges for Deviation shall be applicable for over-injection/under-drawal of electricity for each time block by a Seller or Buyer, as the case may be; when grid frequency is "**50.10 Hz and above**" at the rates equivalent to the charges of deviation corresponding to the grid frequency of "below 50.01 Hz but not below 50.0 Hz".*

21.7 Accordingly, MSLDC is directed to suitably substitute the relevant clause of the DSM Procedures in accordance with this direction and incorporate appropriate revision in the DSM software under mock trial run operation.

22. ***Issue No.3: Consideration of Gas based generating station under Merit Order Despatch, when operated under RLNG or Non-APM Gas.***

Description of the Issue

22.1 The gas based generating stations operate on natural gas available either under Administrative Price Mechanism (**APM**) or market based Non-APM i.e. RLNG. The cost of RLNG is high as compared to APM gas. Further, there are certain APM gas contracts which contain the provisions of minimum guaranteed off-take making the APM Gas based generating station as a constrained resource for scheduling purpose.

22.2 During the trial run operation of DSM Software, the stakeholders submitted that, presently all the gas based generating stations (APM and non-APM) are getting despatched as constrained stations. However, Gas based generating station when operated on RLNG has higher energy charge as compared to most of the coal based generating stations which increases the power purchase cost of the Distribution Licensees during the period in which the RLNG is used by the Generating Station. The stakeholders suggested that the Gas based generating stations using Non-APM (i.e. RLNG) need to be considered under MOD Stack based on its Energy Charge and such stations need to be subjected to MOD operations.

Recommendations of the DSM Working Group:

22.3 The Commission in its Order dated 17 May 2007 in Case No. 42 of 2006 (Order for introduction of Availability Based Tariff in the State) had stipulated the following principles for least cost despatch:

> ***"4.7 Premises for Least Cost Despatch***
>
> **…….**
>
> *(f) For the purpose of Merit Order Stack, the Must run generating stations,* ***constrained generating stations*** *such as hydro stations linked to irrigation shall be ranked earliest in the Merit Order Stack."*

22.4 MSLDC, while preparing the MOD stack under FBSM framework is considering Gas based generating stations as constrained generation stations and is placing these Stations lower in the MOD Stack similar to hydro stations.

22.5 However, the Commission in its MYT Order dated 30 March 2020 for TPC-G in Case No. 300 has directed as follows:

> *"7.17.16 The Commission notes that Energy Charge Rate for use of RLNG is very high. In response to the Commission's query regarding use of RLNG, TPC-G submitted that RLNG is used only when APM gas availability from GAIL*

drops below the minimum requirement for Combined Cycle operation coupled with load requirement from MSLDC. With respect to use of RLNG in Unit 5, it is clarified that Unit 5 is multi fired unit and can use Oil for generation. However, the use of oil in case of Unit 5 is limited to minimum necessary for smooth operation of the Unit, similar to Unit 8.

7.17.17The Commission notes that Unit 5 is multi fired unit. It is desired that Unit 5 shall run on primary fuel i.e., Coal. The use of RLNG and Oil shall be made minimal. Similarly, Energy Charges for Unit 7 for APM are much lesser than for RLNG. Hence, use of RLNG shall also be made minimal in Unit 7.

7.17.18 In view of the above, the Commission views that the use of RLNG shall be done after duly considering the economic despatch. Hence, the use of RLNG in Unit 5 and Unit 7 shall be done only in consultation with MSLDC.*"*

22.6 Accordingly, the Commission may consider to clarify that the gas based generating stations when operated on Non-APM Gas (RLNG) shall be considered under MOD stack as per its Energy Charge rate approved by the Commission for such fuel source.

Commission's Analysis and Ruling

22.7 The Commission notes that the Scheduling and Dispatch Code, which was in force before implementation of MERC (State Grid Code) Regulations, 2020, has stipulated the following priority of dispatch in case the generation availability exceeds the demand estimate:

*" **9. Scheduling and Despatch procedure***

*b) **If the generation availability for any 15 minute time block exceeds the demand estimate, the drawal schedule shall be prepared in the following order**:*

i. Generation from run-of-river hydro stations;

***ii. Generation from 'must run' Gas Stations**, CPPs and Nuclear Stations.*

iii. CGS, ISGS, InSGS, firm commitments against bi-lateral contracts based on merit order

iv. Generation from other hydel-stations for peaking requirement;

v. Generation against Firm off-take commitment

vi. Generation from InSTS Thermal /Gas generating stations according to variable cost and above the minimum technical limit of the respective unit.

vii. Generation from CPPs according to variable cost"

22.8 In accordance with the aforesaid provision, MSLDC has been treating the gas based Generating Stations as must run stations and therefore these Units were getting dispatched

irrespective of their energy charges. The issue of APM/Non-APM is primarily pertaining to Unit 7 of TPC-G which mainly runs on APM gas. However, in case of any shortfall of APM gas, the unit is kept running on RLNG till the APM gas becomes available. Although such operations of high cost RLNG are only for limited periods, it has cost implications on the Distribution Licensees.

22.9 In the MYT Order dated 30 March 2020 for TPC-G, the Commission has directed the use of RLNG for Unit 7 only after duly considering the economic despatch and only in consultation with MSLDC. The economic dispatch principle optimizes the power purchase cost of the Distribution Licensees and benefits the consumers in terms of reduction in Tariff payable. Thus, the stakeholders' suggestions and also the recommendations of the Working Group are in the interest of consumers and hence, the Commission finds its appropriate to accept the recommendations of the DSM Working Group to issue clarification on this issue.

22.10 Accordingly, the Commission clarifies and directs that the gas based generating stations/units of TPC Unit-7, when operated on Non-APM Gas (RLNG) shall be considered under MOD stack in accordance with the MOD principles specified in the Grid Code Regulations. However, when the gas based generating stations/units of MSPGCL Uran GTPS and TPC Unit-7 are operated using APM Gas, the same shall be treated as constrained generating stations and shall be placed earliest in the MOD stack.

22.11 Accordingly, the Commission also directs MSLDC to revise the formulation of the scheduling module under DSM software, to consider the gas based generating stations under MOD when operated on RLNG.

23. ***Issue No. 4: Treatment to negative injection by Generators to meet the Plant consumption during zero schedule/reserve shut down to be clarified.***

Description of the Issue

23.1 In case of Zero schedule or Reserve Shut Down of Generating Station (Seller), the Generating Station draws some power from grid to meet its station auxiliary consumption. This power will be reflected as drawal by the Generating Station or negative injection by Generating Station in the grid export meter. Since the Generating Station (Seller) is expected to provide time-block wise Declared Capacity (DC) for injection of energy into the grid, the treatment to the energy drawn by the Generating Station needs to be clarified in the DSM procedure. Such drawal is not scheduled by the Generating Station. Also, during zero schedule/reserve shutdown, no generation is scheduled. Hence, the drawal by the Generating Station would result in accounting of such negative injection as 100% deviation by the Generating Station for time-blocks under consideration.

Recommendations of the DSM Working Group:

23.2 The issue of negative injection by the Generating Station which results in 100% deviation by the Generating Station was raised by the Sellers during stakeholders' consultation with DSM Working Group. The DSM Working Group asked MSLDC to prepare note suggesting a treatment on this issue which can be discussed with stakeholders.

23.3 Accordingly, MSLDC prepared the suggestive approach on this issue and same was discussed by the Working Group with stakeholders. Based on the stakeholders' consultation, the DSM Working Group proposes the following treatment to negative injection by the Generating Station:

i. Energy drawal by the Generating Station to meet its plant consumption is expected to be net off with energy generated by that Generating Station during normal operating conditions.

ii. In case of shutdown or planned outage/ zero schedule of the Generating Station, the energy drawn by the Generating Station to meet its plant consumption shall be considered as the energy drawal of Distribution Licensee(s) with whom the Generating Station has contractual off-take arrangement.

iii. Since the energy drawn by the Generating Station is considered in the drawal of the contracted Distribution Licensee or Buyer, no separate deviation shall be computed for such energy drawn by the Generating Station to meet its Station consumption.

23.4 The Commission may consider to direct MSLDC to adopt aforesaid treatment in case of negative injection by the Generating Stations.

Commission's Analysis and Ruling

23.5 During the shutdown, the generating plant does not generate any electricity, however there are various auxiliaries /loads like control system, water pumping system, battery charging system, safety equipment, various air and oil pressure systems which are in operation during plant shutdown also, apart from the station lighting loads. In case of shutdown of single unit out of the multiple units in the Generating Station, the consumption of that unit can be met through the generation of other units, however in case of plant shutdown, the plant needs to draw power form grid. The power drawn by the generating plant in such case shall be recorded in the SEM meter as drawal by the generating station for which generating station, being a Seller entity, has not given schedule. This difference in actual and schedule would be treated as deviation (negative injection with zero schedule and some amount of energy drawal) and the generating station would be required to pay deviation charges. The stakeholders have raised this issue and the Working Group has suggested that the Energy drawn by Generator under these conditions of shutdown, should be considered as the drawal of the contracted Distribution Licensee or Buyer and hence no separate Deviation need to be computed for such energy drawn by the Generator to meet its plant consumption.

23.6 In the State of Maharashtra, MSPGCL's startup power is netted off with the power supplied to MSEDCL as per the PPA between them under Section 62 of the EA. Due to netting off, the energy drawn during startup is getting settled and thus there is no need for computation of deviation charges for such start up consumption. In the same manner, the plant consumption during plant shutdown is being netted off and hence there is no need of computation of separate deviation charges for such consumption.

23.7 In view of the above, the Commission finds merits in the recommendations of the Working Group and directs MSLDC to follow the following methodology in case of the Generating Station which is located in the same Distribution Licensee's area of supply with whom the Generating Station has the PPA under Section 62 of the EA:

i. During normal operating conditions, energy drawal by such Generating Station to meet its plant consumption under shutdown, would get netted off with energy generated by that Generating Station and supplied to the contracted Distribution Licensee.

ii. Accordingly, no separate deviation shall be computed for such energy drawn by the Generating Station (negative injection) to meet its station consumption during the time-block under consideration.

23.8 However, the aforesaid treatment would not be applicable in case of the Generating Station located in the Distribution Licensee's area other than the Distribution Licensee with whom it has a contractual arrangement or the Generating Station having PPA under Section 63 of the EA since in such cases, no netting off is permitted and there is a requirement of either a separate connection or a separate agreement for start-up power as per the principles laid down by the Commission in its relevant Tariff Orders.

23.9 Similarly, this dispensation shall not be applicable to the generating stations operating as merchant generators or captive generators as well and the principles laid down by the Commission in Case No. 48 of 2016, 161 of 2018 and 232 of 2019 would be applicable to such Generating Stations.

23.10 The Commission also directs MSLDC to ensure that, such energy drawn by generator to meet its plant consumptions under shutdown conditions is properly accounted in the state energy account.

24. ***Issue No.5: Treatment to Standby Power requested by Mumbai Distribution Licensees for DSM Charges computation to be clarified.***

Description of Issue

24.1 In case of outage or partial loss of any of the contracted generators of Mumbai Discoms, such licensees can avail stand-by power from MSEDCL. The Commission, in the past, has passed various Orders as regards stand-by arrangement and the stand-by charges to be paid by Mumbai Discoms (including Railways) to MSEDCL. As per the Orders of the Commission, the stand-by power shall be allocated by MSEDCL against that contracted

generating source to the utilities in the proportion of their share in such contracted generating source, subject to certain conditions.

24.2 Under FBSM, energy transactions between generator and the contracted Distribution Licensees are settled on actual generation basis, however under the DSM regime, such settlement occurs on scheduled generation basis. In case of tripping of the generating unit, the actual generation becomes zero, however, the schedule gets revised only after three time-blocks i.e. in fourth time block. Hence, on account of difference between scheduled generation and actual generation during first three time-block under such circumstances, the accounting of energy and deviations of concerned state entities availing standby power supply under standby arrangement requires different accounting treatment under DSM framework.

Recommendations of the DSM Working Group:

24.3 The issue of deviation settlement in case of Standby power was raised by Mumbai Utilities before the DSM Working Group during trial run operation period. The Mumbai Utilities highlighted that the existing DSM Procedure does not deal with settlement of energy scheduled under standby arrangement. Further, if Standby power is scheduled under DSM regime, the Mumbai Discom will require to pay energy charges (scheduled energy basis) to the contracted generator of Mumbai Discom for first three-time blocks against which standby power is requisitioned. At the same time, Mumbai Discom shall also have to pay to MSEDCL for Standby power as the standby power will be available to Mumbai Discoms from the same time block. Hence practically, Mumbai Discom shall have to pay to its own contracted generator against whom Standby is requisitioned (as energy charge payment of generator is on schedule basis and schedule of generator under tripping /partial depletion of capacity will be zero from fourth time block) and the also to MSEDCL for same first three time-blocks. This would amount to double payment and it will result in additional burden on Mumbai Discoms under DSM framework. Further, the Mumbai Utilities also submitted that, existing Stand-by arrangement needs to be continued in the DSM framework without any additional commercial impact on Mumbai Utilities.

24.4 While finalising the DSM Regulations, TPC-D and BEST had submitted the comments on standby arrangement that, the DSM framework should not be applicable for Standby Power arrangement between MSEDCL and Mumbai Discoms. The Commission in its Statement of Reasons for DSM Regulations had clarified that, the existing Standby power arrangement between Mumbai Discoms and MSEDCL shall be governed by the respective Orders of the Commission.

24.5 The issue highlighted by Mumbai Utilities is limited to first three time-blocks of standby power scheduling from fourth time-block, the schedule of contracted generator of Mumbai Discom shall become zero. The issue of double payment by Mumbai Discoms for first three time-blocks needs to be addressed by providing necessary clarifications/directions to MSLDC and other stakeholders by revising the existing DSM procedure.

24.6 Based on stakeholder consultation, the following treatment can be covered and suggested as part of DSM Procedures for the purpose of Energy Accounting and Deviation Accounting for operationalisation of standby power for Mumbai utilities under DSM framework.

i. In case of scheduling of power under standby arrangement for concerned Mumbai Distribution Licensees/Buyer, standby power shall become effective from the 1st time-block in which such standby support is requested by Mumbai Discom.

ii. Upon triggering of standby arrangement, the schedule entitlement of contracted Generators of MSEDCL on bar shall be reduced to the extent of approved standby power and the availability entitlement of concerned Mumbai distribution licensee(s)/Buyer shall be enhanced by the quantum of consented standby power. In case the standby power is requested by multiple Mumbai Discoms, the standby power will be scheduled as requested by respective Discoms or in proportion to their respective share in the standby power as specified by the Orders of the Commission from time to time whichever is lower.

iii. Drawal schedule of MSEDCL shall be subjected to revision from 1st time block counting the time-block in which standby power supply is requisitioned by Mumbai Discom as the first time-block. If MSEDCL's contracted generators have surplus availability, equivalent additional generation shall be scheduled for MSEDCL under De-Centralised MOD operation, which shall become effective from the 4th time block.

iv. The schedule of contracted generator (under outage or partial loss of contracted source as scheduled) by Mumbai Distribution Licensees/Buyer shall be replaced with actual and the same shall become effective from the immediate 1st time block from which Mumbai Discom has requested for Standby power. Such contracted generator (under outage or partial loss of contracted source) will share the deviation charges including ADSM charges, if any suffered by MSEDCL for the first, second and third time block due to provisioning of standby power to Mumbai Discoms, on proportionate basis.

v. MSLDC shall maintain the record of events of activation and de-activation of standby power, duration of standby power supply as well as provide account of quantum of power scheduled for Mumbai distribution licensees/Buyer under standby power supply arrangement to all concerned stakeholders along with Weekly/Monthly Energy Account Statements.

Commission's Analysis and Ruling

24.7 The Commission has noted the suggestions of DSM Working Group and treatment proposed for Energy Accounting and Deviation accounting of concerned State Entities as per the existing stand-by arrangement to be implemented under the DSM framework. The Commission has also noted that, the stand-by arrangement is the specific arrangement for providing uninterrupted supply to Mumbai. The existing principles and modalities of scheduling like applicability of scheduled revision from 4th time block, applicability of

deviation for 1st three time-blocks need certain adjustment for accommodating the stand-by arrangement under the DSM framework.

24.8 The Commission, in its Statement of Reasons, while finalising DSM Regulations had already clarified that, the existing Standby power arrangement between Mumbai Discoms and MSEDCL shall be governed by the respective Orders of the Commission. The Commission is of the view that considering necessity of continuing the stand-by power arrangement, it would be appropriate to provide the clarification on the concerns raised by all stakeholders on operational framework of standby arrangement in the DSM regime in line with the provisions of relevant Orders of the Commission.

24.9 Accordingly, the Commission finds it appropriate to consider the suggestions of the DSM Working Group on the revision in the existing stand-by arrangement in DSM framework. The Commission has also noted that, the proposed accounting treatment of Stand-by arrangement was discussed by DSM Working Group with the stakeholders.

24.10 In view of the above, the Commission directs MSLDC to consider following revisions in DSM Procedure for clarifying the treatment of Energy Accounting and Deviation Accounting for operationalisation of standby power arrangement between MSEDCL and Mumbai utilities (incl. Railways) under DSM framework:

i. In case of scheduling of power under standby arrangement for concerned Mumbai Discom/Buyer, standby power shall become effective from 1st time block in which such standby support is requested by Mumbai Discom/Buyer.

ii. Upon triggering of standby arrangement, the schedule entitlement of contracted Generators of MSEDCL on bar shall be reduced to the extent of approved standby power and the availability entitlement of concerned Mumbai distribution licensee(s)/Buyer shall be enhanced by the quantum of consented standby power.

Provided that, in case the standby power is requested by multiple Mumbai Discoms, the standby power will be scheduled as requested by respective Discoms or in proportion to their respective share in the standby power as specified by the Orders of the Commission from time to time whichever is lower.

iii. Drawal schedule of MSEDCL shall be subject to revision from 1st time block counting the time block as a first in which standby power supply is requisitioned by Mumbai Discom.

Provided that, if MSEDCL's contracted generators have surplus availability, equivalent additional generation shall be scheduled for MSEDCL under De-Centralised MoD operation, which shall become effective from the 4th time block.

iv. The schedule of contracted generator (under outage or partial loss of contracted source as scheduled) by Mumbai Distribution Licensees/Buyer shall be replaced with actual and the same shall become effective from the immediate 1st time block from which Mumbai Discom has requested for Standby power.

Provided that, such contracted generator (under outage or partial loss of contracted source) will share the deviation charges including ADSM charges, if any suffered by MSEDCL for the first, second and third time block due to provisioning of standby power to Mumbai Discoms, on proportionate basis.

v. MSLDC shall maintain the record of events of activation and de-activation of standby power, duration of standby power supply as well as provide account of quantum of power scheduled for Mumbai distribution licensees/Buyer under standby power supply arrangement to all concerned stakeholders along with Weekly/Monthly Energy Account Statements.

24.11 The Commission also directs DSM Working Group to monitor the implementation of stand-by arrangement during mock trial run operations as well as during Stabilisation Period.

25. ***Issue No. 6: Provision for declaration of suspension of DSM framework by MSLDC during specific conditions to be clarified.***

Description of Issue

25.1 The stakeholders, during interaction with DSM Working Group, have highlighted that the present DSM Regulations or DSM procedure does not include a provision which deals with treatment of deviations during grid disturbance as occurred recently on 12th October 2020. The stakeholders suggested that there should not be levy of any deviation charges on State Entities during grid disturbances and explicit provision should be made in the DSM procedure for market suspension during such disturbances.

Recommendations of the DSM Working Group:

25.2 The definition of "Force Majeure" event as given in the MERC (State Grid Code) Regulations, 2020 (**Grid Code Regulations)** includes the grid failure event also. The definition reads as under:

> *"44) "Force Majeure" means any event which is beyond the control of the persons involved which they could not foresee or with a reasonable amount of diligence which could not be foreseen or which could not be prevented, and which substantially affect the performance by STU, SLDC, Generator, User, licensee or any person and includes but not limited to:-*
>
> > *i) Acts of God, natural phenomena, including but not limited to floods, droughts, earthquakes, and epidemics;*
> >
> > *ii) Acts of any Government domestic or foreign, including but not limited to the war declared or undeclared, hostilities, priorities, quarantines, embargoes;*
> >
> > *iii) Riot or Civil Commotion;*
> >
> > ***iv) Grid's failure not attributable to persons involved;*** *"*

25.3 Further, the Regulation 53.2.6 of the Grid Code Regulations provide the treatment to be given to the schedule of generators and the beneficiaries during the grid disturbances. The Regulation reads as under:

> *"53.2.6 As per the provision of these Regulations or IEGC,* ***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 SLDC as the case may be.***
>
> *A notice to this effect shall be posted at RLDC/SLDC website. The issue of notice at RLDC/SLDC website shall be considered as declaration of disturbance by RLDC/SLDC. 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 SLDC."*

25.4 In view of the above, the Commission may consider to issue an appropriate clarification for the benefits of stakeholders, regarding the force majeure event to be certified by MSLDC in case of Grid failure and may direct MSLDC to incorporate similar provision in the DSM Procedure.

Commission's Analysis and Ruling

25.5 The Commission has noted the relevant provisions of the Grid Code Regulations referred by the Working Group. As specified in the Regulation 53.2.6 of Grid Code Regulations, in case of any grid disturbance, the scheduled generation of all the generating stations and scheduled drawal of all the beneficiaries is deemed to have been revised to be equal to their actual generation/drawal for all the time blocks of the grid disturbance event, meaning thereby that the deviation of state entities shall be zero during grid disturbance period. Also, the exact duration and certification of such grid disturbance requires to be declared by Western Region Load Dispatch Centre (**WRLDC**) or MSLDC, as the case may be. A notice to this effect requires to be posted on website of WRLDC/MSLDC.

25.6 The Commission notes that the recommendations of the Working Group are consistent with the aforesaid provisions of Grid Code Regulations. The issue of notice on website of MSLDC shall be considered as declaration of grid disturbance by MSLDC which all the state entities may take note of, to take appropriate action at their end.

25.7 MSLDC, in co-ordination with WRLDC, is empowered to declare the grid disturbance event as per the relevant provisions of Grid Code Regulations. Accordingly, the Commission directs MSLDC to refer the aforesaid provisions of Grid Code Regulations

and to incorporate necessary provisions in the DSM procedure, consistent with the Grid Code Regulations for providing better clarity for the benefit of the stakeholders.

26. ***Issue No. 7: Approval of Volume Limits for State Entities and Transition Arrangement during initial period of DSM implementation***

Description of the Issue

26.1 On 11 November 2019, the Commission has approved the DSM Procedure for implementation of the DSM Regulations. As per the DSM Regulations and DSM Procedure, the State Entities have to adhere to the prescribed Volume Limits, beyond which ADSM Charges shall be applicable. The relevant provision of DSM Procedure reads as under:

> *"10.4.1 Buyer to ensure that it do not deviate from its implemented schedule and remain within limits of 12% schedule or [X] MW, when frequency is between the range of '49.85 Hz and above to below 50.05 Hz.', where [X] for a Buyer is as defined under;*
>
> *Minimum of (12% of schedule, (Peak Demand of Distribution Licensee or Buyer / "NCPD) x State Volume Limit).*
>
> *Where, NCPD (Non-Coincident Peak Demand) represents the sum of Peak Demand of Distribution Licensee(s) and Buyer(s) and peak Demand of the Distribution Licensee(s) and Buyer(s) shall be recorded Peak Demand in the previous Calendar Year or Projected Peak Demand of Distribution Licensee(s) or Buyer(s) in ensuing, Calendar Year whichever is higher.*
>
> ***Provided that, the MSLDC shall prepare the details of applicable Volume Limits for Buyers for next financial year, considering data of previous Calendar Year and submit to the Commission for Approval by end of January of that year."***

26.2 As per the above provision of DSM procedure, the Commission is required to approve the Volume Limits for the Buyers for FY 2021-22.

26.3 For FY 2020-21, MSLDC had computed the applicable Volume Limits for the buyers considering the peak demand of the buyers and non-coincident peak demand of the State of the ensuing calendar year and sought the comments of the stakeholders vide its email dated 18 March 2020. The comments received from the stakeholders were compiled by MSLDC and vide its letter dated 5 May 2020, the proposed volume limits were submitted for the approval of the Commission.

Recommendations of the DSM Working Group:

26.4 MSLDC had submitted the applicable Volume Limits considering the data of calendar year 2019. However, for approval of Volume Limits for FY 2021-22, the data of calendar year 2020 is required to be considered. Accordingly, the DSM Working Group suggested MSLDC to prepare the revised computation of volume limits based on the NCPD data of

calendar year 2020. MSLDC prepared the revised computation of Volume Limits for FY 2021-22 considering the data of calendar year 2020 and vide its email dated 6 April 2021, MSLDC submitted the following Volume Limits for approval of the Commission.

Table No.1: Volume Limits for Buyers as submitted by MSLDC

Volume Limit Table for DSM Computation for FY 2021-22 as submitted by MSLDC					
Utility	**Peak demand of Utility during Calendar Year 2020**	**∑NCPD**	**Peak demand of Utility/∑NCPD**	**(Peak demand of Utility/∑NCPD)*250**	**Deviation limit (Approximated)**
	A	**B**	**A/B**	**A/B*250**	**MW**
MSEDCL	20085.34	23439.60	0.8569	214.22	214
TPCL-D	733.04	23439.60	0.0313	7.82	8
AEML-D	1402.69	23439.60	0.0598	14.96	15
BEST	771.00	23439.60	0.0329	8.22	9
Indian Railways	403.25	23439.60	0.0172	4.30	5
Mindspace (SEZ)	14.33	23439.60	0.0006	0.15	2
Gigaplex (SEZ)	5.93	23439.60	0.0003	0.06	1
MADC (SEZ)	12.66	23439.60	0.0005	0.14	2
Eon Kharadi (SEZ)	5.83	23439.60	0.0002	0.062	1
Nidar Utilities (SEZ)	2.77	23439.60	0.0001	0.03	1
KRCIPPL (SEZ)	2.75	23439.60	0.0001	0.03	1
Total in MW					**259**

26.5 The volume limits proposed by MSLDC for FY 2021-22 are in line with the DSM Regulations and DSM Procedure. The NCPD data of buyers considered by MSLDC for calendar year 2020 is based on the month-wise actual data for the period January 2020 to December 2020.

26.6 During the ongoing mock trial run operation of DSM, MSLDC is considering the similar volume limits which have been computed based on the DSM Regulations and based on demand data of calendar year 2019. The DSM trial run bills have been prepared based on these volume limits based on demand data for calendar year 2019.

26.7 The DSM Working Group has carried out analysis of sample DSM bills issued by MSLDC for Intra-State entities during trial run period. The analysis of DSM bills for the week 7 December to 13 December 2020 and for another week 25 January to 31 January 2021

was carried out by the DSM Working Group. Discussions were held with the stakeholders and their feedbacks were also sought.

26.8 During interaction with DSM Working Group, stakeholders raised concerns about significant change in practices of scheduling, imbalance management, metering, energy and deviation accounting and commercial settlement required to be followed under DSM regime as against those prevalent under FBSM regime. It was also brought out to the notice of the Working Group that the intra-state generators would be commercially responsible for their deviation management under DSM regime for the first time.

26.9 The DSM Working Group presented the analysis of sample DSM bills, feedback of the stakeholders on the DSM trial run bills and their concerns on preparedness for the DSM implementation, to the Commission on 21 December 2020 and on 7 April 2021. Based on the analysis of sample DSM trial run bills, interaction with stakeholders and their concerns, the DSM Working Group apprised the Commission that the concerns of the stakeholders for initial period of DSM regime may be required to be addressed by enabling transition period with few relaxations in certain provisions of DSM Regulations during transition period and suggested that the Commission may consider an extension of mock trial run period and also allow certain stabilization period for smooth transition to DSM regime as envisaged under DSM Regulations.

26.10 To address the concerns of the stakeholders, the DSM Working Group, during its presentation to the Commission presented following four options for smooth implementation of DSM Regulations with Stabilisation Period as summarized in the following table:

Option	Pros / Cons of Option as analysed by DSM Working Group	View/recommendation of DSM Working Group
• **Option-1 Continuation of trial period with scheduling in Decentralised mode** • Decentralised mode of operation for scheduling & despatch, however commercial settlement as per FBSM	• Generators/Buyers will get feel for actual DSM operations for extended period, without commercial implications. • Generators settlement on 'actual energy' to continue • Commercial settlement for DISCOMs to continue under FBSM. • However, based on Decentralised schedule and actual meter data, DSM bills would be prepared separately for state entities to understand likely impact under DSM Regime.	• Need to decide the period of extension. • Amendment to FBSM Order (Case 42 of 2006) may be required as principles of centralised MOD operation will not be adhered to. • The Option 1 may not be viable as it would not serve the purpose of introduction of DSM framework and regulatory process for amendment to FBSM Order will be time extensive.

Option	Pros / Cons of Option as analysed by DSM Working Group	View/recommendation of DSM Working Group
Option-2 **Waiver of ADSM charges during stabilisation period** No levy of ADSM charges during Stabilisation period	• Commencement of DSM Regulations without levy of ADSM charges. (MSLDC would compute the ADSM Charges but would not be levied during stabilisation period.) • Commercial Settlement of Buyers and Sellers on 'schedule energy' basis. Only DSM charges would be levied for deviations and no ADSM charges shall be levied for stipulated period. • De-centralised MoD operations for DISCOMs can be operationalised • Centralised Operation and VSE operation by MSLDC as specified in the Regulations and Procedure.	• Stabilisation period need to be decided (say 3 months) • This option would require exercising the Powers to relax under Regulation 20 of the DSM Regulations. • Waiver of ADSM charges completely would not serve the purpose of introducing the Volume Limits under DSM framework. • The extreme deviations in either direction may continue to depend upon the frequency as DSM charges varies with frequency. (possibility of gaming) • The Option 2 may not be considered.
Option-3 **Relaxation in Applicable Volume Limits** • Existing Volume Limit for Generators, is 30 MW and for DISCOMs, it is linked to NCPD. • Increase Volume Limit for Sellers by (+20 MW) and Buyers by [10 MW], MSEDCL by [20 MW] during stabilisation period	• Commencement of DSM Regulations with application of relaxed volume limit (to be tightened with predefined trajectory). • De-centralised MOD operations for DISCOMs can be operationalised. • Commercial settlement for Buyers and Sellers on 'schedule energy' and levy of DSM as well as ADSM charges (with relaxed Volume Limits). • Dampens impact of levy of DSM and ADSM charges for Buyers and Sellers. • However, incremental Volume Limit will not be in proportion. Besides, periphery condition +/-250 MW need to be adhered to.	• Stabilisation period need to be decided (say 3 or 6 months) • Volume Limit conditions can be tightened upon gaining operational experience in steps. • The trajectory for reinstating the volume limits as per the DSM Regulations may be specified by the Commission. • The provision of Powers to relax under Regulation 20 of the DSM Regulations may be exercised. • The Option 3 is recommended as it does not require major changes in the DSM framework and with predefined trajectory to reinstate the volume limit after stabilisation period would serve the purpose of providing the stabilisation period and the concerns of the stakeholders for additional commercial burden during initial period would also be addressed to large extent. • No major changes in the DSM software required.

Option	Pros / Cons of Option as analysed by DSM Working Group	View/recommendation of DSM Working Group
Option-4 **Partial waiver of ADSM through increase in no. of Time Blocks (TB)** • Presently, waiver of ADSM upto 6TB. • Increase waiver upto 12 TB during stabilisation period	• Commencement of DSM Regulations with waiver of ADSM levy for higher no. of TBs (to be tightened in stages). • Commercial settlement for Buyers and Sellers on 'schedule energy' and deviations with Base DSM levy and ADSM charges (with waiver upto 12 TB). • Does not fully address concerns of all stakeholders.	• Stabilisation period need to decided (say, 3 or 6 month) • TB waiver conditions can be tightened upon gaining operational experience in steps. • The provision of Powers to relax under Regulation 20 of MERC DSM Regulations may be exercised. • The analysis of DSM Working with increasing waiver for 12 no. of time blocks has not shown significant benefit to Stakeholders. It varies on case-to-case basis. • The Option 4 may not be considered.

26.11 Based on the above option analysis, the DSM Working Group proposes that, to facilitate smooth transition from existing FBSM regime to DSM regime and for allowing stakeholders to gain sufficient operational experience through this transition, the Commission may consider relaxation of applicable volume limit condition (Option-3 amongst four options discussed above) which could mitigate implications of ADSM Charges to some extent. For such transition management, stabilization period may be stipulated, till such time, the State Entities gain sufficient experience of forecasting, scheduling, managing the deviations and undertaking control/corrective/preparatory actions to manage deviations, while facilitating grid operations. At the same time, there should be clear roadmap/trajectory to be laid out for withdrawal of such relaxed conditions, in stages, upon periodic review of performance of stakeholders as well as based on system conditions, as necessary.

Suggested Treatment for Volume Limit during extended mock trial run and Stabilization Period

26.12 Applicability of ADSM Charges is linked with Volume Limits specified in the Regulation 10 (A), (B) and (C) of the DSM Regulations. As discussed in preceding part of the Order, the Volume Limits for Buyers are linked with 12% of the schedule or NCPD of the Buyer whichever is lower and volume limits of Sellers are linked with 12% of the schedule of seller or 30MW whichever is lower.

26.13 The stakeholders, during interaction with DSM Working Group, have raised the concerns that, during the initial phase of implementation, they may not be able to strictly adhere to the volume limits computed based on the Regulations as processes associated with scheduling, imbalance management and deviation control/preparatory action would be required to be streamlined. There would be aspects such as operator training, capacity

building and communication/ coordination difficulties to be ironed out and hence stringent applicable volume limit conditions may end up in paying higher ADSM Charges, which will be required to be borne by the State Entities. The stakeholders are in the process of developing the framework/dashboard for monitoring and maintaining the deviations within limits during real operation, however it would take 2 to 3 months' time.

26.14 The DSM Working Group apprised the Commission that stakeholders, mainly generators who would be commercially responsible for their deviation management under DSM regime for the first time, would require some time to update/upgrade processes and train operating staff, build their capacities and gain learning experience to operate under DSM regime, which is significantly different from existing operations under FBSM regime. This experience was expected during trial run operation of DSM framework. However, since the real time scheduling for generators and also the settlement is being undertaken under existing FBSM framework, the generators in real time are operating as per the schedule generated by scheduling software under FBSM framework. Hence, there are limitations for operational experience to the Sellers during DSM mock trial run period.

26.15 Accordingly, the Commission may consider to allow relaxation in applicable Volume Limit during initial period of DSM implementation. For Sellers, an incremental Volume Limit of 20 MW in addition to stipulated Volume Limit of 30 MW may be allowed, so that, Sellers would be entitled to Volume Limit of 50 MW during stabilization period. Similarly, for Buyers (except Deemed Licensees with Peak Demand upto 100 MW) an incremental Volume Limit of 10 MW and for MSEDCL, an incremental volume limit of 20 MW, may be allowed during stabilization period. In case of Deemed Distribution Licensees (with Peak Demand upto 100 MW), the Commission may allow Volume Limit as higher of 12% of schedule or the minimum volume limit specified under the DSM Regulations.

26.16 Further, the incremental Volume Limit allowed during stabilization period, may be gradually reduced over a period to reach upto Volume Limit as per formulation specified under the DSM Regulations, in time bound manner, upon periodic review of operational experience and based on system conditions. The relaxation in of Volume Limit may be operationalized in following two stages:

- **Stage-1: Extension of Mock Trial Run Period:** The trial run period operations under DSM Regulations may be extended upto 15th August 2021 (Sunday). Mock trial operations as per DSM regime including scheduling, metering, energy accounting will continue through this period. However, deviation accounting and mock trial run DSM bills generation will operate in following manner/phases/parts:
    - **Part-A**: Mock trial run DSM bills upto 16 May 2021 (Sunday) may be generated as per current volume limits as per existing DSM procedure approved on 11 November 2019.

- **Part-B**: MSLDC shall update the DSM procedures incorporating incremental/relaxed volume limit and other conditions stipulated under this Order and shall also modify DSM software and deviation accounting/billing formulation to reflect the incremental volume limit for each State Entity, within 10 days from date of issuance of this Order.
- **Part-C**: Extension of Mock-trial run operations for another three months' period with incremental volume limit (i.e. from17 May 2021 to 15 August 2021 or such further period): Mock-trial run operation and mock trial run DSM bill generation shall be continued for another 3 months (with relaxed conditions) for period from 17 May 2021 (Monday) to 15 August 2021 (Sunday) or such other date to be notified separately by the Commission for commercial operation, subject to outcome of proceedings before the Hon'ble ATE in Appeal No. 5 of 2021 and depending upon review of operational experience during extended mock trial operations.

- **Stage-2 Stabilisation Period:** Depending upon the outcome of the Appeal No. 5 of 2021, subject to the directions of the Hon'ble ATE therein and also upon review of operational experience during extended mock trial operations, the Commission may consider to commence the commercial implementation of the DSM Regulations (to be notified separately through an Order), only with relaxed conditions of Volume Limits (i.e. Stabilisation Period) to allow the stakeholders to gain experience of DSM mechanism during notified initial period of DSM implementation. During this period, the relaxed conditions with incremental volume limit as approved under this Order shall continue. Stabilisation period would mark commencement of the commercial operation of the DSM Regulations. It may be clarified that the stabilization period, in first instance, shall be of six months from the notified date of commercial operation depending upon the outcome of the Hon'ble ATE Appeal. The Commission may consider to decide to modify duration of the Stabilisation Period as well as to initiate gradual removal of relaxed conditions (i.e. removal of allowance of incremental volume limit in stages) upon quarterly review.

Commission's Analysis and Ruling

26.17 The Commission notes that, as per the provisions of the DSM Regulations, it has to approve the volumes limits for Buyers for each year. Accordingly, the Commission is required to approve the volume limits for FY 2021-22 based on MSLDC's computation.

26.18 The Commission has noted the suggestions/recommendations of Working Group on the concerns expressed by the stakeholders and also difficulties highlighted by stakeholders for implementation of DSM framework. The Commission has noted the analysis of mock trial run operations/bills and has gone through the recommendations of the DSM Working Group regarding extension of the mock trial run for say, another three months' period subject to outcome of the Appeal No. 5 of 2021 and the need for relaxation during mock

trial run as well as during initial period of commercial implementation of these Regulations, termed as Stabilization period by the Working Group.

26.19 The Commission notes that under present FBSM mechanism, the Generating Stations or Sellers are not pool participants and therefore presently, their deviations are being borne by the Distribution Licensees which are the pool participants. Accordingly, intra-state generators would be commercially responsible for their deviation management under DSM regime for the first time. Further, although mock trial run of the DSM Regulations is underway, the real time scheduling of the generators is still as per FBSM mechanism. Unless and until the DSM mechanism is deployed on commercial basis and there is complete shift from present FBSM mechanism to DSM Mechanism (though in relaxed/ graded manner), the generators would not be able to get experience of the DSM mechanism. Thus, there are limitations for operational experience to the Sellers during mock trial run period.

26.20 Further certain operations such as Virtual State Entity (**VSE**) operation (centralized operation by MSLDC under violation of system boundary conditions) would be operationalized only after commencement of commercial implementation of the DSM Regulations and cannot be tested under the ongoing mock trial run operations. The Commission also notes that the DSM software although deployed, will take some time to getting stabilized and the corrective action needs to be taken immediately whenever any error/discrepancy is reported in mock trial run period. Incorrect schedule preparation, incorrect MOD operations or incorrect deviation computation will certainly have unnecessary financial implications on the stakeholders. Hence, the Commission is in agreement with the suggestions of the Working Group that there is a need for additional period for mock trial run operations for smooth transition to DSM framework. The Commission also accepts the fact that whenever the commercial implementation of the DSM Regulations begins, it needs to ensure that same shall begin with some relaxation or graded manner during the initial period and based on operational reviews, the original conditions as specified under DSM Regulations could be restored.

26.21 The Commission has examined the option analysis undertaken by the Working Group and finds that for adopting Option 1 (Continuation of trial run period with scheduling in Decentralised mode**)**, an amendment would be required in the existing FBSM principles which have been stipulated under the Order in Case No. 42 of 2006. As regards Option 2 (Waiver of ADSM charges during stabilization period), the Commission notes that waiver of ADSM charges would make the Volume Limit redundant and there will be no disincentive for the State Entities to breach their respective drawal schedules. Thus the objective of the DSM Regulations will not be achieved. As per analysis of the Working Group, with Option 4 (Partial waiver of ADSM through increase in number of time-blocks from existing six time-blocks), no significant relaxation would result to the State Entities.

26.22 Option 3 (Relaxation in Applicable Volume Limits) appears to be a reasonable option to start with, as the stakeholders will be able to get operational experience of the DSM

mechanism in initial period with some relaxed conditions and at the same time, overall objective of introduction of DSM mechanism will not be defeated. In the initial period of DSM implementation, all the stakeholders would get the confidence of scheduling and managing their deviation within the permissible limit. The stakeholders may be able to improve upon forecasting, scheduling techniques and managing the deviation with relaxed applicable volume limits without commercially suffering under burden of stringent volume limits in the initial period of implementation.

26.23 The Regulation 20 of the DSM Regulation empowers the Commission to grant relaxation of any of the provisions of the DSM Regulations which reads as follows:

> *" 20. Power to Relax.—The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected by grant of relaxation, may relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person."*

26.24 The DSM Working Group has undertaken deliberation with the stakeholders. Also, with proposed relaxation, it is unlikely that any stakeholders would be adversely affected. Accordingly, the Commission is inclined to exercise its power under Regulation 20 of the DSM Regulations to consider the suggestions of the DSM Working Group to provide relaxation in the Volume Limits (determined on the basis of formulation given in the DSM Regulations) during extended mock trial run period and stabilization period (as and when notified) which would help smooth transition of intra-state entities into DSM framework.

26.25 The Commission also notes that TPC-D has filed an Appeal before the Hon'ble ATE challenging the Commission's Order dated 9 December 2020 in Case No. 58 of 2020. TPC-D is aggrieved by the Commission's direction of revision in Volume Limit on account of deviations of the changeover consumers. The Hon'ble ATE vide its Daily Order dated 23 December 2020, has directed not to implement DSM Regulations till further orders. Accordingly, the commercial implementation of the DSM Regulations has been deferred till further Orders. However, considering the fact that the revision in Volume Limits is sub-judice before the Hon'ble ATE, the Commission is of the view that it would be appropriate to approve the Volume Limits for FY 2021-22 based on the formulations provided in the DSM Regulations without any revision in the volume limit for the purpose of extended mock trial run operation and stabilization period. The Commission is of view that the State Entities would get some relief from stringent volume limits due to the relaxed volume limits being considered under the present Order.

26.26 In view of the above, the Commission approves following Volume Limits for Buyers during the extended mock trial run operation which would be applicable during the Stabilization Period also, as and when same is notified for commencement.

Table No.2: Volume Limits for Buyers approved by the Commission for extended mock trial period and the Stabilisation Period during FY 2021-22

Volume Limit Table for Buyers for Additional DSM Charges Computation for extended mock trial period and stabilization period during FY 2021-22							
Utility	**Peak demand of Utility during Calendar Year 2020**	**12% of the Peak Demand**	**∑NCPD**	**Peak demand of Utility/ ∑NCPD**	**(Peak demand of Utility/ ∑NCPD)*250**	**Applicable Volume Limit as per DSM Regulations**	**Revised Applicable Volume Limit approved by the Commission during stabilization period**
	A	**B**	**C**	**D= A/C**	**E= D*250**	**F**	**G**
	MW	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**
MSEDCL	20085.34	2410.24	23439.60	0.8569	214.22	214	234
TPCL-D	733.04	87.97	23439.60	0.0313	7.82	8	18
AEML-D	1402.69	168.32	23439.60	0.0598	14.96	15	25
BEST	771.00	92.52	23439.60	0.0329	8.22	9	19
Indian Railways	403.25	48.39	23439.60	0.0172	4.30	5	15
Mindspace (SEZ)	14.33	1.72	23439.60	0.0006	0.15	2*	Higher of the 12% of schedule or Volume Limit provided in Column F
Gigaplex (SEZ)	5.93	0.71	23439.60	0.0003	0.06	1*	
MADC (SEZ)	12.66	1.52	23439.60	0.0005	0.14	2*	
Eon Phase-1 Kharadi (SEZ)	5.83	0.70	23439.60	0.0002	0.062	1*	
Nidar Utilities (SEZ)	2.77	0.33	23439.60	0.0001	0.03	1*	
KRCIPPL (SEZ)	2.75	0.33	23439.60	0.0001	0.03	1*	
* Minimum Volume Limit provided as per Cl. No. 11.4.4 of DSM Procedure						**259**	**319 (considering column F)**

26.27 Further, as regards future addition of Buyer (State Entity), the Applicable Volume Limit for such new Buyer/State Entity shall be guided by the principles outlined under DSM Regulations read along with conditions stipulated under this Order. Upon registration of such new Buyer/State Entity, MSLDC shall submit revised computation of Volume Limits as per principles stipulated under this Order and shall seek prior approval of the Commission for incorporation of such new Buyer/State Entity for the purpose of Deviation Accounting and DSM bill generation.

26.28 Similarly, the Commission also considers the suggestion of DSM Working Group to enhance the volume limit for Sellers during extended mock trial run period and Stabilization Period as and when notified for commencement. Accordingly, the Commission allows an incremental Volume Limit of 20 MW (in addition to stipulated Volume Limit of 30 MW) for Sellers so that, Sellers would be entitled to Volume Limit of 50 MW during extended mock trial run period and for stabilization period during FY 2021-

22. The provisions of DSM Regulations and DSM procedure related to Schedule/Volume Limit for Seller with schedule below 40 MW shall remain unchanged.

26.29 The Commission hereby approves the applicable conditions with respect to operationalization of extended mock trial run operation and stabilization period of DSM Regulations as under:

i. MSLDC shall update the DSM procedure incorporating incremental volume limit and other conditions stipulated under this Order and shall also modify DSM software and deviation accounting/billing formulation to reflect the incremental volume limit for each state entity, within 10 days from the date of issuance of this Order

ii. The extended Mock trial run period shall commence from 17 May 2021 (Monday) for at least three months (or such further period as may be notified by the Commission)

iii. The Deviation Accounting and DSM bill charges computation during extended mock trial run period shall be based on the revised Approved/Applicable Volume Limits approved by the Commission in this Order.

iv. Depending upon the outcome of the Appeal No. 5 of 2021, subject to the directions of the Hon'ble ATE therein and also upon review of operational experience during extended mock trial run operations, the Commission shall separately notify the date of commencement of commercial operation of the DSM Regulations with relaxed conditions of Volume Limits (i.e. Stabilisation Period)

v. During Stabilisation Period, the relaxed conditions with incremental volume limit as approved under this Order shall continue. It is clarified that the stabilization period, in first instance, shall be six months from the notified date of commercial operation depending upon the outcome of the Hon'ble ATE Appeal or any other Order passed by the Hon'ble ATE during the pendency of the said matter. The Commission may decide to modify duration of the Stabilisation Period as well as to initiate gradual removal of relaxed conditions (i.e. removal of allowance of incremental volume limit in stages) upon quarterly review.

27. **The Commission directs the DSM Working Group to closely monitor the implementation of DSM framework with MSLDC and Stakeholders and guide them during extended mock trial run period of DSM Regulations. The Commission shall undertake review of progress and analysis of extended mock trial run period operations, at least two weeks prior to end of extended mock trial run period to decide further course. The Working Group shall provide its recommendations to the Commission based on analysis of trial run bills issued during the extended mock trial run period, feedback received from the stakeholders and review of operational experience during extended mock trial run operations based on the directions issued in this Order.**

28. **The Commission also directs MSLDC to undertake analysis of the WRPC charges payable by the State vis-à-vis the DSM/ADSM mock bills / deviation statements issued to the State Entities during extended mock trial period so that the impact of relaxation of the volume limits can be examined for further review and decision. Accordingly, mock DSM bills during extended trial period shall be analyzed to study implications of allowing incremental Volume Limits for Sellers and Buyers.**

29. **MSLDC is also directed to ensure the deployment of balance DSM software modules such as Reactive Energy Accounting, MIS and Big Data Analysis by the IT implementation partner. Big Data Analysis modules is expected to provide analysis on various DSM parameters during extended mock trial run operation which would help in further corrective/review steps. The feedback received from the stakeholders on the DSM Software related issues should be resolved in time bound manner, at the earliest preferably within three days of the reporting. MSLDC shall evolve a complaint recording and addressal mechanism at their end for proper recording the feedbacks/issues reported to MSLDC on DSM software, getting the same resolved expeditiously from IT implementation partner and informing resolution of issue to the concerned stakeholder.**

Sd/-	**Sd/-**	**Sd/-**
(Mukesh Khullar)	**(I. M. Bohari)**	**(Sanjay Kumar)**
Member	**Member**	**Chairperson**

(Abhijit Deshpande)
Secretary