MAHATRANSCO
Maharashtra State Electricity Transmission Co. Ltd.

**MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO.LTD.**

**CIN NO. U40109MH2005SGC153646**

**Maharashtra State Load Dispatch Center**

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**Office of The Chief Engineer**
**Maharashtra State Load Despatch Center**
Thane-Belapur Road, P.O. Airoli
Navi Mumbai Pin – 400 708.

RIGHT TO INFORMATI

**Ref.** No. CE/MSLDC/ Op./ No 02154

**Date:** 17 OCT 2024

To,

As per mailing list

**Sub:** Agenda for the 8th Operation Co-ordination Committee (OCC) meeting.

**Ref.:** a) 7th OCC MOM Circulated vide CE/MSLDC/TECH/Op/OCC/812 Dated. 03.05.2024
b) 8th OCC Agenda request through E-mail dtd. 12.08.2024
Reminder sent on 28.08.2024 and 11.10.2024

Dear Sir,

In reference to the above subject, the 7th Operation Co-ordination Committee (OCC) meeting was convened on 14th February 2024, Minutes of the same are circulated vide letter under reference 1.

Vide letter under reference no. 2, the undersigned, Member Convener of the OCC had requested all the members of the OCC to submit agenda items for 8th OCC meeting.

Please find enclosed the agenda for the 8th OCC meeting scheduled on **21.10.2024 at 14:30 hrs** at SLDC, Kalwa **through hybrid mode i.e., physical and video conferencing.**

It is requested to kindly make it convenient to attend the meeting with relevant information.

Encl: As above.

**Yours sincerely,**

**Superintending Engineer(Op), MSLDC**
**(Member Convener of OCC)**

**Copy s.w.rs. to:**
The Director (Operations), MSETCL, Prakashganga, Mumbai.
The Executive Director, MSLDC, Airoli, Navi Mumbai.

**All OCC members as per list**

| Sr. No | Name of Organiza-tion | Name of Nominee | Designation | Committee constituent | Contact No. | E-mail ID |
|---|---|---|---|---|---|---|
| 1 | SLDC | Shri Shashank Jewalikar | ED, MSLDC | Chairperson | 022-27301931 | edmsebholding@gmail.com |
| 2 a | MSETCL | VACANT | ED, Tr O&M MSETCL | Member | | |
| 2 b | MSETCL | Shri Mahendra Walke | CE, Tr O&M MSETCL | Invitee | 9769213955 | ceoandm@mahatransco.in |
| 2 c | MSETCL | Shri Jayant Kulkarni | CE, ACI &P MSETCL | Invitee | 7030964900 | ceaci@mahatransco.in |
| 3 | SLDC | Shri Girish Pantoji | CE (I/c), MSLDC | Member | 9822414154 | cesldc@mahasldc.in |
| 4 | STU/ MSETCL | Shri. Peeyush Sharma | CE, STU | Member | 9769213865 | cestu@mahatransco.in |
| 5 | MSEDCL | Shri Pravin Annachatre | S.E (LM), MSEDCL | Member | 9833980238 | selmkalwa@gmail.com |
| 6 | MSPGCL | Shri. Anil Kathoye | CE, (Works) MSPGCL | Member | 022-69522006985353 5 Ext. 3519 | cegw@mahagenco.in |
| 7 | TPCL | Shri Kiran Desale | Head Trans. TPCL | Member | 9223553342 | desalekv@tatapower.com |
| | | Shri Milind Gole | Head (PSCC), TPCL | Member | 9820868264 | pscc@tatapower.com |
| 8 | AEML | Shri Mahesh Andhari | Head O&M AEML Transmission | Member | 9323549996 | mahesh.andhari@adani.com |
| 9 | AEML | Shri Ranjeet Sawardekar | Assistant VP, AEML Distribution | Member | 9324818009 | ranjeet.sawardekar@adani.com |
| 10 | ATIL | Shri Abhishek Kukreja | Associate Manager-O&M | Member | 6359956492 | Abjishek.Kukreja@adani.com |
| 11 | MEGPTCL | Shri Rakesh Bhalerao | Associate Manager-Business Development | Member | 7045953823 | rakesh.bhalerao@adani.com |
| 12 | JPTL | Shri Vaibhav D Sansare | Associate Manager-Transmission | Member | 9552577122 | Vaibhav.sansare@jsw.in |
| 13 | APTCL | Shri Rajiv Nimje | AGM, APTCL | Member | 9422308883 | Rajiv.nimje@rattanindia.com |
| 14 | VIPL | Shri Pankaj Ranteke | Dy.GM | Member | 8975122333 | pnkjramteke@gmail.com |
| 15 | JSWEL | Shri Harshal Joshi | Manager (OSTS Dept, JSW) | Member | 9552577131 | harshal.joshi@jsw.in |

| | | | | | | |
|---|---|---|---|---|---|---|
| 16 | ADTPS | Shri Vijay Dalli | VP-Operations ADTPS | Member | 9325119741 | Vijay.Dali@adani.com |
| 17 | RIPL | Shri Amit Panchalwar | DGM, RIPL | Member | 9503229333 | amit.panchalwar@rattanindia.com |
| 18 | APML, Tiroda | Shri Manoj Taunk | Associate VP-Protection & Metering | Member | 9099005517 | Manoj.Taunk@adani.com |
| | | Shri Akshay Mathur | | Member | 9870663062 | Akkshayv.Mathur@adani.com |
| 19 | SWPGL Wardha. | Shri Dinesh B Mewade | DGM, SWPGL | Member | 7387007010 | Dinesh.m@saiwardha.com |
| | | Shri Prabhjit Singh Samra | GM (BDG – Operations), SWPGL | Member | 9177025554 | bdg.operations@saiwardha.com |
| 20 | M/S. Lalpur wind Energy | Mr. Mahesh Sakure | | Member (Wind) | 9730300469 | mahesh.sakure@ilfsindia.com srimay.pattnaik@windworld.com |
| 21 | JBM Solar Energy Maharashtra Pvt. Ltd. | Mr Sandeep Mittal | | Member (Solar) | 8826664545 | sandeep.mittal@jbmgroup.com |
| 22 | SLDC | Shri Girish Pantoji | SE(OP), MSLDC | Member-Convener | 9822414154 | seop@mahasldc.in |

**Agenda for 8th Operation Co-ordination Committee meeting scheduled on 21th October 2024 at 14:30 Hrs. through hybrid mode i.e. physical and video conferencing.**

**Agenda Points: -**

1. Confirmation of the minutes of the 7th OCC held on 14.02.2024 through hybrid mode and circulated vide CE/MSLDC/TECH/Op/OCC/812 Dated. 03.05.2024.

2. Presentation on Maharashtra system Grid performance from January 2024-September 2024.

**3. MSLDC Agenda:**

**3.1 Resource Adequacy Regulations, 2024 and its timelines for submission of demand forecasts to SLDC.**

The objective of these Regulations is to enable the implementation of Resource Adequacy framework by outlining a mechanism for planning of generation and transmission resources for reliably meeting the projected demand in compliance with specified reliability standards for serving the load with an optimum generation mix.

The Resource Adequacy framework shall cover a mechanism for demand assessment and forecasting, generation resource planning, procurement planning, and monitoring and compliance.

These Regulations shall apply to the generating companies, distribution licensees, State Load Despatch Centre, State Transmission Utility, full transmission Open Access participants, and other grid connected entities and stakeholders within Maharashtra. Provided that distribution licensees shall consider demand of partial open access consumers while forecasting their demand for RA planning.

The timelines for submission of Short term Resource Adequacy Plan (ST-DRAP) and Medium term Resource Adequacy Plans (MT-DRAP) along with associated activities for implementation of the Resource Adequacy Framework in the State of Maharashtra are mentioned below :

| Regulation Clause No | Activity | Execution Responsibility | Submission to | Regular Timelines | Timeline for this FY 2025-26 |
|---|---|---|---|---|---|
| NLDC 8.1 | Publish one year look ahead ST-NRAP | NLDC | | 31st July | |
| MERC 12.8 | Based on the allocated share in national peak provided in LT-NRAP for the State, STU/MSLDC shall allocate each distribution licensee's share in the state peak | STU/SLDC | DL | within 15 days of the publication of LT-NRAP by NLDC. | |
| MERC 6.3/21.1 | Previous financial years the category wise consumption data | Distribution licensees | STU/MSLDC | 21st April | 14th August 2024 |
| MERC 7.4 | Hourly 1-year ST & 5-year MT Demand forecasts on rolling basis | Distribution licensees | MSLDC | 30th April | 14th August 2024 |
| MERC 21.2 | aggregate and submit state-level forecasts | MSLDC | RLDC/NLDC | 31st May of each year | 30th September 2024 |
| MERC 12.4/21.3 | Perform MT-DRAP and ST-DRAP exercise | Distribution licensees | MSLDC | 31st August of each year | 30th September 2024 |
| MERC 21.4 | State-aggregated capacity shortfall | STU and MSLDC | Commission | 15th September of each year. | 15th October 2024 |
| MERC 12.14/21.5 | Approve RA plans | Commission | | 30th September of each year | 31st October 2024 |
| MERC 15.11 | DL to contract capacities to short fall/surplus & submit annual rolling plan | DL | STU/MSLDC | 31st December of each year | 31st December 2024 |
| NLDC 7.1 | Details of the contracted capacities for the ensuing financial year for meeting RAR of national peak | MSLDC | RLDC | 15th February. | |
| NLDC 7.2 | Aggregate the capacities at the regional level and submit the information | RLDC | NLDC | 28th February | |
| NLDC 7.3 | NLDC shall aggregate the capacities at national level & check compliance with ST NRAP | NLDC | | 15th March | |
| MERC 21.6 | State-level aggregated plan | MSETCL and MSLDC | RLDC/NLDC | 31st January of each year. | Feb-25 |
| NLDC 8.2 | Publish the details of any short fall in capacities based on contracted capacities received from SLDCs on its website | NLDC | | 15th March | |

*All DLs and Gencos to submit data adhering to the above timelines.*

*Members may like to discuss.*

**3.2 High quantum of Partial Outages in MSPGCL units:**

In WRPC OCCM (582nd) meeting, Member Secretary WRPC highlighted the high quantum of partial outage in MSPGCL thermal units due to coal quality and coal mill issues**.**

Also, in the various meetings conducted by MoP/CEA, MSPGCL was advised to minimize partial outages by opting for imported coal blending**.**

MSPGCL is requested to submit a long-term plan to mitigate the high quantum of partial outages due to coal quality and coal mill issues.

*Members may like to discuss*

**3.3 Submission of Frequency response data for the FRC event status:**

*All the SLDCs shall work out FRC for all the intra-state entities (for events indicated by the Regional Load Despatch Centres) based on the HDR available at their respective SLDCs and submit the same to respective RLDC within six (6) working days after the event. (Format as per Table). (sub-clause (a(v)) of clause (9) of IEGC Regulation Annexure-2)*

**Timeline for FRC and FRP computation during events**

| Particulars | Stipulated Timeline* |
|---|---|
| Submission of high-resolution data by regional entity generating stations and state control to RLDC's | 2 working days after the event |
| FRC and FRP computation by NLDC | 3 working days after the event |
| FRC and FRP computation by RLDC, SLDC and Generating Units | 6 working days after the event |

*** Timeline for data submission and FRC computation are excluding the day of event.**

**It is observed that MSPGCL & JSW are not submitting the FRC data as per the timeline mentioned above.**

*Members may like to discuss*

**3.4 Periodic Testing of Power System Elements in compliance to Regulations 40 of IEGC 2023:**

CERC has notified IEGC 2023 Regulations on dtd. 29.05.2023 effective from 01.10.2023. As per Regulation 40 of IEGC 2023, all synchronous generators are mandated for periodic testing of power system elements:

The regulation 40 of IEGC 2023 is reproduced as below: -

***Quote,***

"40. PERIODIC TESTING

(1) There shall be periodic tests, as required under clause (3) of this Regulation, carried out on power system elements for ascertaining the correctness of mathematical models used for simulation studies as well as ensuring desired performance during an event in the system*:*

(2) General provisions

(a) The owner of the power system element shall be responsible for carrying out tests as specified in these regulations and for submitting reports to NLDC, RLDCs, CEA and CTU for all elements and to STUs and SLDCs for intra-State elements.

(b) All equipment owners shall submit a testing plan for the next year to the concerned RPC by 31st October to ensure proper coordination during testing as per the schedule. In case of any change in the schedule, the owners shall inform the concerned RPC in advance.

(c) The tests shall be performed once every five (5) years or whenever major retrofitting is done. If any adverse performance is observed during any grid event, then the tests shall be carried out even earlier, if so advised by SLDC or RLDC or NLDC or RPC, as the case may be.

(d) The owners of the power system elements shall implement the recommendations, if any, suggested in the test reports in consultation with NLDC, RLDC, CEA, RPC and CTU.

(3) Testing requirements:

The following tests shall be carried out on the respective power system elements i.e. for Synchronous Generators:
(1) Real and Reactive Power Capability assessment
(2) Assessment of Reactive Power Control Capability as per CEA Technical Standards for Connectivity
(3) Model Validation and verification test for the complete Generator and Excitation System model including PSS.
(4) Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions.
(5) Testing of Governor performance and Automatic Generation Control.

The copy of the said Tests required for Power System Elements is attached herewith as **ANNEXURE-1** for ready reference***.***

***Unquote,***

NLDC in consultation with stakeholders has prepared Guidelines for Periodic testing which contains detailed guidelines on testing procedures and data and report formats. The Guidelines can be downloaded from the following link.

**https://posoco.in/wp-content/uploads/2023/09/Final-Procedure-of-Periodic-Testing-for-Power-System-Elements-submitted-to-CERC.pdf**

WRPC has already taken the as agenda in 579$^{th}$ meeting of OCCM regarding the periodic testing of power system elements. Accordingly, on dt. 21.05.2024 MSLDC has sent a letter to all intra state generators and requested to adhere the NLDC procedure and:

1) Inform about any testing done in compliance to these regulations since implementation of IEGC-2023.

2) Share the Testing plan for FY 2024-25 if any to MSLDC for onwards submission to WRPC and WRLDC

Information is yet to be received from the intra state generators regarding the periodic testing of power system elements.

*Members may like to discuss.*

**3.5 Regarding implementation of FGMO in intra state generating units in compliance to MEGC 2020 and IEGC 2023:**

As per clause 30.3 of MERC (State Grid Code) Regulations, 2020 all intra state generating units shall operate in FGMO and FGMO should be implemented within one year from the date of notification of these Regulations. Further, in Oct,2023, as per Guidelines under IEGC 2023, the generating stations and units with governors shall operate in Free Governor Mode of Operation.

The MEGC 2020 and IEGC 2023 regulations are reproduced here: -

Clause 30.3 & 30.5 of MERC (State Grid Code) Regulations, 2020.

**Clause 30.3 of MEGC, 2020**.

***Quote,***

*"All coal/lignite based thermal generating units of 200 MW and above, open cycle gas turbine/combined cycle generating stations having gas turbines of capacity more than 50 MW each and all hydro units of capacity more than 25 MW, which are synchronised with grid, irrespective of their ownership, shall have their governors in operation at all times in accordance with the following provisions:*

***Governor Action**:*

A) *Following thermal and hydro generating units shall be operated under free governor mode of operation (FGMO).*

   i. *Coal/Lignite based thermal generating units of 200 MW and above;*

   ii. *Open Cycle Gas Turbine/Combined Cycle generating stations having gas turbines of capacity more than 50 MW each;*

   iii. *Hydro units of capacity more than 25 MW.*

   ***Provided that the generators presently operating under restricted governor mode of operation (RGMO) shall be operated in FGMO within one year from the date of notification of these Regulations.***

**Clause 30.5 of MEGC, 2020**

*"……. Provided that periodic check-ups by third party should be conducted at regular interval once in two years through independent agencies selected by SLDC. The cost of such tests shall be*

*recovered from the Generators by the SLDC. If deemed necessary by SLDC, the test may be conducted more than once in two years."*

B) **IEGC 2023 (sub-clause (d) of clause (10) of regulation 30**: -

*"All SLDC, RLDC and the generating stations shall ensure that all units shall have electronically controlled governing systems or frequency controllers in accordance with the CEA Technical Standards for Connectivity. The generating stations and units with governors shall be under Free Governor Mode of Operation*."

***Unquote,***

Hence, in accordance with the above regulations all intra state generating units are requested to implement FGMO to all applicable generating units. If units are still operating under RGMO needs to be converted to FGMO at an earliest.

In this regard MSLDC already sent a letter to all intra state generating units on 24th Feb 2022 & 07th Mar 2024 respectively.

Further as per MEGC 2020 Primary frequency response test to be conducted on all generating units of Maharashtra. However, the primary response test was not done on MSPGCL and RIPL units till the date.

Below is the list of InSGS generators whose Governors are still operating under RGMO mode.

List of the generators their Governors are still operating under RGMO mode

| Generating Station | Unit Capacity (MW) | Governor mode | Remarks |
|---|---|---|---|
| IPP AND PRIVATE GENERATORS | | | |
| APML, Tirora | 5x660 | RGMO | PFR Test done as per MEGC 2020/IEGC 2017 (5th amendment) |
| Tata Power Trombay | U5 (1x500) | RGMO | |
| | U7 (1x120) | | |
| | U8 (1x250) | | |
| Tata Power Bhira | U1 to U6 (6x25) | RGMO | |
| | BPSU (1x150) | | |
| RattanIndia, Amravati | 5x270 | RGMO | PFR test not done |
| IEPL | 1x270 | RGMO | |
| MSPGCL GENERATORS | | | |
| BHUSAWAL U3 | 1x210 | FGMO/RGMO | PFR test not done in any of the units of MSPGCL till date. |
| BHUSAWAL U4, U5 | 2x500 | RGMO | |
| CHANDRAPUR U3, U4 | 2x210 | RGMO | |
| CHANDRAPUR U5 TO U9 | 5x500 | RGMO | |
| KORADI U6 | 1x228 | RGMO | |
| KORADI U8 TO U10 | 3x660 | RGMO | |
| KHAPERKHEDA U1 TO U4 | 4x210 | RGMO | |
| KHAPERKHEDA U5 | 1x500 | FGMO/RGMO | |
| NASIK U3 to 5 | 1x210 | RGMO | |
| PARALI U6 TO U7 | 2x250 | FGMO/RGMO | |
| PARALI U8 | 1x250 | RGMO | |
| PARAS U3, U4 | 2x250 | RGMO | |
| KOYNA STAGE-4 U1 TO 4 | 4x250 | RGMO | |
| GHATGHAR U1, U2 | 2x125 | Not Available | PO for implementation of RGMO/FGMO is already placed. |
| VAITARNA | 1x60 | Not Available | Upgradation is proposed under DPR in FY 2024-25 |
| TILLARI | 1x60 | Not Available | Procurement for replacement of Goverenor is in process through DPR. After replacement of new governing scheme, unit operation may be in FGMO/ RGMO mode. |
| BHIRA (TR) | 2x40 | Not Available | Procurement for replacement of Goverenor is in process through DPR |

*Members may like to discuss.*

### 3.6 Procedure to recover 'Increment in Generation (VSE)' charges while availing outages proposed for Third party ORC work in Maharashtra Grid:

During major outages for ORC (Outright Contract) works in Mumbai/MMR & Pune area, due to any system constraints, the costlier Mumbai embedded generation, Nasik generation & Koyna hydro is required to be picked up as per requirement to maintain system 'N-1' compliant and to resolve the system constraints. This causes additional burden on the DSM pool. In this respect, MSLDC enquired with such stake holders whether such additional burden needs to be shared by the agency carrying out such ORC works. This scenario is similar to the charges levied by Indian Railways to transmission/distribution licensees for granting power/ traffic blocks.

The subject was discussed in 6$^{th}$ OCC meeting dtd 18.08.2023, the procedure for the same is being formulated in accordance with the Regulation No. 28.2 (f) of the MEGC, 2020 and directives of GCC.

*Members may like to discuss*

## 3.7 Procedure to consider 'Deemed availability of grid element under the act of God or under the force majeure during the calculation of Transmission Availability'

As per the clause 6 (i) of Annexure II of MERC MYT Regulations, 2019, which is reproduced below:
6. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration:

i. Outage of elements due to **force majeure events** beyond the control of the Transmission Licensee. However, onus of satisfying the MSLDC that element outage was due to aforesaid events and not due to design failure shall rest with the Transmission Licensee. A reasonable restoration time for the element shall be considered and any additional time taken by the Transmission Licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the Transmission Licensee. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.

The objective of this procedure is to clarify the events to consider any tripping/outage of the grid element as deemed available under the act of God or under the force majeure while calculating Transmission system availability by Transmission Licensee / issuing the Transmission system availability certificate at MSLDC.

The procedure for the same is being formulated in accordance with the Regulation No. 28.2 (f) of the MEGC, 2020.

At present, three events, 2 Nos of M/s AEML & 1 No of MEGPTCL are required to be discussed as both the transmission licensees are requested to consider the following events under the Clause 6 (i) of Annexure II of MERC MYT Regulations, 2019 & exclude the same from availability calculations.

*Members may like to discuss*

### 3.8 Events in AEML & MEGPTCL Network:

**AEML Network:**

1. **Event 1: Delayed 220kV Aarey – Saki 2 cable UG cable fault repairs due to heavy dust storm & pouring rains:**
   220kV Aarey – Saki 2 feeder tripped on 7th May 2024 at 21:47 Hrs due to cable fault. Typical fault repair time of any EHV underground cable is around 14 days. But, due to unpredicted heavy rains & storm on 14.05.2024 & 15.05.2024, joint pit, & trenching excavation for civil work of jointing bay was completely washed out & M/s AEML had to redo it after the complete stoppage of rains. After the normal weather, M/s AEML initiated the works and restored the line on 23rd May 2024 at 17:35 Hrs

   M/s AEML requested MSLDC to consider the above events under the Clause 6 (i) of Annexure II of MERC MYT Regulations, 2019 & exclude the same from availability calculations.

2. **Event 2: 220kV Gorai Busbar flashover & Link Box Failure of Gorai MSETCL Borivali line 1 & 2 at AEML Gorai EHV substation**
   Gorai 220kV GIS Bus-1 & Bus-2 tripped simultaneously on 28.05.2024 at 17:59 hrs, resulted in station blackout & total loss of 99 MW load in area. M/s AEML charged 220kV Main Bus-2 along with the associated equipment by 20:30 Hrs on same day except Bus 1, 220kV Gorai – MSETCL Borivali 1 & 2 feeders & 125 MVA Power Transformer 2.

This tripping has experienced fault current of magnitude of 58.6 kA and heavy voltage dip in transmission system which was never experienced by Transmission system in past. Such passage of abnormal fault current of 58.6kA, resulted into damage of link boxes on 220kV Gorai – MSETCL Borivali 1 & 2 feeders.

After the occurrence, M/s AEML has immediately contacted to OEM & requested them to initiate repairs activity. As per OEM assessment, repairs require 220kV GIS module with special consumables which needs to be manufactured and imported from M/s Hitachi, China factory. After rigorous follow up, material has reached site on 20th July 2024. After the restoration of damaged link box, both the feeders were taken into service on 02.06.2024 & 04.06.2024 respectively.

In view of above, M/s AEML requested to MSLDC to exclude the abnormal restoration time requiring to repair the damage which is caused due to abnormal fault current of magnitude of 58.6kA, which was never expected & hence beyond the control of M/s AEML.

*Members may like to discuss*

**MEGPTCL Network:**

On 26th May 2024 at 18:10 hrs, 4 Nos of Tower collapsed of 765kV Akola 2 – Ektuni ckt 2 due to sporadic heavy whirl wind followed by heavy localized cyclonic storm.

At the time of incident weather condition was stormy with heavy rain. Prima facie it appeared that a strong localized Whirl wind engulfed the tower under reference. The windstorm was so strong that it has damaged the 3 nos of towers and due to this 1 Nos of tower were completely got collapsed.
Line restoration on the original co-ordinates was initiated as foundation of tower was intact and no damages were observed. Restoration work was started from 27th May,2023 and line has been again successfully charged on 12th Jun,2024.

M/s MEGPTCL requested MSLDC to consider the above events under the Clause 6 (i) of Annexure II of MERC MYT Regulations, 2019 as force majeure & exclude the same from availability calculations.

*Members may like to discuss*

**3.9 Regarding proposals of Project related outages: -**

At present, there are various project works are going on in Mumbai, Pune & Nashik area for Metro, DFCCIL, NHSRCL, PGCIL work etc. It is observed that, project related outages are submitted in Outage Management system of MSLDC on day ahead basis or through POST OCC without any discussion. It becomes very difficult to decide the priority of the work from the multiple outages due to lack of information.

It is to inform that, in project related outages various things are involved like First time charging approval for the element from SLDC/WRLDC, Scada visibility, Protection co-ordination, Load flow studies etc. and these processes can not be completed in short period of time. It results into deferment of outages by SLDC.
To avoid such things, it is requested to submit the project related outage proposals before the 15-20 days to SLDC and to arrange a meeting physically or virtually with the stakeholders

along with the SLDC team to discuss the outage details. It will be easy to SLDC to plan such outages with related/required approvals in feasible time period. It will be helpful to field officers also to complete the project works at the earliest without any hurdles. Same is convened in the MOCM meetings also.

*Members may like to discuss*

**3.10 Updation of SCADA SLDs / Elements of Mumbai network for safe operation at SLDC: -**

It is seen that; SCADA data is not updated for the Mumbai network. It causes difficulties to shift engineers while giving the outages in the Mumbai network.

It is proposed that TPCL, AEML and MSETCL (Vashi Zone) to depute authorized representatives to SCADA department and update all elements of Mumbai & MMR grid, for safe Grid operations. It is proposed to complete the updation latest by 30-11-2024 positively.

*Members may like to discuss*

**3.11 EHV Cables and its accessories in MMR and Mumbai region installed in Important Grid Lines:**

It is seen that many EHV Cables and its accessories in MMR and Mumbai region installed in important 220 kV Grid Lines.

The following tripping due to EHV Cables has made Mumbai and MMR grid unstable.

1. 220 kV PDG (Gigaplex) – NTT Neon DC-13 line is under outage from 30-09-2024.
2. 220 kV Ulwe – Waghivali (M) ckt-2 is under outage from 25-06-2024.

With the commissioning of 220 kV APTA ckt-1 & 2 from Navi Mumbai PG on 15-10-2024, the loading of 220 kV Ulwe – Waghivali (M) ckt-1 goes beyond 800 – 850 A. This creates a transmission constraint in MMR.

Also, due to absence of 220 kV PDG – NTT Neon line, for second source for 220 kV Bapgaon ss – 220 kV AKP – Nashik is bunched with 220 kV NTT – Bapgaon line. This bunching has created transmission constraint in MMR. And, further to control high loadings of 220 kv Nashik Babhleshwar D/C, the Nashik Support through these lines is withdrawn.

Hence, in conclusion, EHV Cables in Mumbai / MMR important grid lines are to be maintained with ample spares. The ampacity of the lines, should not be affected due to these EHV cables. There should be bunching facility available on CTT, so that the Grid lines will be intact, even after any cable issue.

*Members may like to discuss.*

### 3.12 New Targets of the relief quantum at each stage of AUFLS for Maharashtra State.

As per minutes of 158th Protection Committee meeting held on 24th July 2024, NPC Secretariat, CEA has communicated the new relief quantum for each region (based on Regional Peak Demand Met during the previous year) for implementation in the upcoming Financial Year (FY).

Existing target of the relief quantum at each stage of AUFLS for Maharashtra is given below:

| UFR settings & **Existing** Target Quantum (in MW) | | | | | |
|---|---|---|---|---|---|
| Utility | 49.40 Hz | 49.20 Hz | 49.00 Hz | 48.80 Hz | Total |
| Maharashtra | 805 | 810 | 815 | 820 | 3250 |

WRPC have calculated the distribution of new targets based on the above WR quantum among the states for different stages based on the peak demand met by states in the Financial Year 2023-24 and the new targets of the relief quantum at each stage of AUFLS for Maharashtra are as given below:

| UFR settings & **New** Target Quantum (in MW) | | | | | | |
|---|---|---|---|---|---|---|
| | State Peak Demand (MW) | **49.40 Hz** | **49.20 Hz** | **49.00 Hz** | **48.80 Hz** | Total |
| **Maharashtra** | 28969 | **1313** | **1576** | **1839** | **1839** | 6567 |

Based on the above, the additional quantum required to be wired up under each stage of AUFLS is as follows:

| Hence, Additional quantum (MW) over existing quantum required to be wired up under each stage of AUFLS | | | | | |
|---|---|---|---|---|---|
| | **49.40 Hz** | **49.20 Hz** | **49.00 Hz** | **48.80 Hz** | Total |
| Maharashtra | 508 | 766 | 1024 | 1019 | 3317 |

For the implementation of additional AUFLS quantum, additional feeders need to be identified and additional under-frequency relays may be procured, if required. The criteria for identification of feeders is mentioned in the MoM of WRPC 158th PCM held on 24.07.2024 (enclosed).

Correspondence in this regard was done by this office vide L. no. 1728 dtd 28.08.2024 to inform the implementation plan along with the present status to wire up the additional quantum.

ACI& P has communicated MSEDCL vide letter no.744 dtd. 03.10.2024 the substation wise HV feeders (33/22/11kV) data and have requested to confirm zone wise and stage wise HV feeders other than already connected to existing AUFLS to be included for implementation of additional AUFLS quantum as per WRPC guidelines.

*Members may like to discuss*

### 3.13 Co-ordination between Projects/Construction division and O&M division for rigorous compliance of SoP dated 17.01.2022:-

Hon'ble MERC has notified the MERC (Deviation and Settlement Mechanism and Related Matters) Regulations 2019 on 01.03.2019.

For computation of deviations of Buyers and Sellers SEMs are installed at all interface points. The meter data recorded and communicated by these SEMs to MSLDC is of utmost importance for computing the DSM bill. As such, a Standard Operating Procedure (SoP) for (a) Addition of new interface location; (b) Replacement of ABT meter (SEM); (c) Change in CT/PT Ratio and Polarity at substation was devised and circulated from office of Director Operations to all the field offices so that there should not be any miss out of interface location and/or any mismatch in CT/PT ratio in order to issue error free weekly DSM bills.

In this context, it is to appraise that even after the SoP has been circulated to all the field offices through email dated 18.01.2022; it is not being scrupulously followed.
One major observation is that in certain cases Projects/Construction division doesn't hands over the substation to O&M and the charging process gets completed. As such the information with regard to addition of new interface location (as per SoP) for DSM software is not sent to SLDC on time. This results in issuance of incorrect weekly DSM Bills to utilities and thereby, gives rise to undesired commercial implications. Moreover, this also results in incorrect computation of the Monthly Transmission Loss.

In order to tackle this issue, it is necessary that Projects/Construction division should co- ordinate with O&M division and share necessary information so that timely intimation can be passed on to SLDC for DSM Billing.

*Members may like to discuss*

## 4. TPCL Agenda:

### 4.1 SCADA Visibility of KVTL Vikhroli and MSETCL Waghivli :

SLDC has provided MMR lines and 400KV input line real time data through ICCP. Additionally, similar real time data is required for all connected elements of KVTL Vikhroli and MSETCL Waghivli for real time monitoring of Mumbai Power System. (Data requirement point list has already shared with SLDC).

### 4.2 Voltage fluctuations on account of tripping in MSETCL network:

Important and critical consumers in Mumbai like Refineries, RCF and Data centres experienced voltage fluctuations on 50 occasions since April 2024, due to tripping in MSETCL / Grid network. OCC members may discuss about measures of prevention of tripping of Grid element.

### 4.3 Tripping of 220 KV Kalwa – Salsette-4 & Kalwa – Mulund-2 lines at MSETCL Kalwa for fault on 220 KV Kalwa – Salsette-3 line

At 1448 hrs on 11th August 2024, 220 KV Kalwa- Salsette-3 line tripped & auto reclosed due to failure of A phase LA at Kalwa. At the same time, Kalwa – Salsette-4 and Kalwa – Mulund -2 lines tripped and auto reclosed at Kalwa which is not a desired tripping.

MSETCL to look into the matter.

### 4.4 Non consideration of TPC D contracted wind generation embedded in MSEDCL for DSM Bills

Since May-23, TPC D contracted wind generation, embedded in MSEDCL is not being considered in DSM Bills.
This is impacting TPC-D Commercially. Also, this will lead to multiple revisions in DSM Bills.
TPC-D request to consider the same in DSM Bills.

### 4.5 Zero Scheduling of Trombay Unit-8

TPC-D had requested MSLDC for zero schedule for Trombay Unit-8 on 29th June and 3rd August 2024 due to various reasons such as,

- Drop in demand.
- Increase in contracted wind generation.
- Rising lake levels and must run hydro generation for controlling flood situations.

However, SLDC has not permitted the same. It caused commercial implications to DISCOMs.
SLDC needs to allow zero schedule request of any unit by DISCOM and device suitable mechanism for running the unit under zero schedule to address any Transmission constraint issue.

### 5.4 Revision of Intra state RE Generation

At present, revision of intra state RE is happening at 4th time block. As different PSS schedules are revised in different blocks, eventually the revisions are taking place in almost every time block. DISCOMs are not in a position to buy/sale for shortage / surplus as real time market window closes before 6-time blocks. Hence RE power revisions also needs to be effected as applicable in Interstate RE revisions.

## 6. MSEDCL Agenda:

### Missing PENCH schedule in WBSES / MSLDC website.

MSEDCL has contracted capacity of 160 MW i.e. 33.75% in PENCH hydro plant (80*2 = 160 MW) and Madhya Pradesh is another beneficiary having 66.25 % in PENCH hydro. But the schedule data in r/o PENCH hydro is neither available on WRLDC nor on MSLDC website though PENCH hydro is always on bar. WRPC issues regional weekly DSM bills which includes schedule / injection data from PENCH as allotted to MSEDCL. But the same is not reflected in MSEDCL's drawal schedule while computing DSM / ADSM charges in r/o MSEDCL since 11th

October 2021. This results into not only incorrect weekly DSM bills for MSEDCL but also financial loss to MSEDCL. MSEDCL has pointed out this discrepancy to the Energy account section of MSLDC but they have neither reverted on this issue nor taken any step so that the issue will be taken on WRPC forum.

**7. ADTPS Agenda:**

7.1 Revised DSM bill issues: Changes are noticed in SG data of revised Bills received. Correctios escalated are still pending.

7.2 ADTPS Unit-1 Annual Overhauling dates confirmation (From 11$^{th}$ Dec-24 to 20$^{th}$ Jan-25) as communicated via email dated 20 June 2024.

**8. Any other points raised by committee members with permission of Chair.**

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## Annexure-1

TABLE 8: TESTS REQUIRED FOR POWER SYSTEM ELEMENTS

| Power System Elements | Tests | Applicability |
|---|---|---|
| Synchronous Generator | (1) Real and Reactive Power Capability assessment.<br>(2) Assessment.of Reactive Power Control Capability as per CEA Technical Standards for Connectivity<br>(3) Model Validation and verification test for the complete Generator and Excitation System model including PSS.<br>(4) Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions.<br>(5) Testing of Governor performance and Automatic Generation Control. | Individual Unit of rating 100MW and above for Coal/lignite, 50MW and above gas turbine and 25 MW and above for Hydro. |
| Non synchronous Generator (Solar/Wind) | (1) Real and Reactive Power Capability for Generator<br>(2) Power Plant Controller Function Test<br>(3) Frequency Response Test<br>(4) Active Power Set Point change test.<br>(5) Reactive Power (Voltage / Power Factor / Q) Set Point change test | Applicable as per CEA Technical Standards for Connectivity. |
| HVDC/FACTS Devices | (1) Reactive Power Controller (RPC) Capability for HVDC/FACTS<br>(2) Filter bank adequacy assessment based on present grid condition, in consultation with NLDC.<br>(3) Validation of response by FACTS devices as per settings. | To all ISTS HVDC as well as Intra-State HVDC/FACTS, as applicable |