



MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LIMITED
(CIN NO U40109MH2005SGC153646)

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MSETCL/CO/STU/Sys/MTC/

No - 0879

Date:

31 JAN 2025

To,
As per mailing list

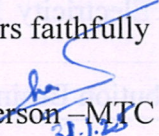
Sub: Minutes of 12th Maharashtra Transmission Committee (MTC) meeting held on 27 January, 2025.

Please find enclosed herewith minutes of the 12th Maharashtra Transmission Committee (MTC) meeting held on 27 January, 2025 at 11:00 Hrs. This meeting was hosted by MSLDC, Airoli.

It is to be noted that the minutes of above meeting are also available on website www.mahatransco.in in STU section.

Thanking you.

Yours faithfully


Chairperson - MTC And
Chief Engineer (STU)

Copy s.w.r. to:

- 1) The Director (Operations), CO, MSETCL, Mumbai

List of MTC Members

Sr. No.	Name of Organization	Name of Nominee & Designation	Committee position	Email ID
1	State Transmission Utility (STU)	Chief Engineer-STU	Chairperson	CESTU@mahatransco.in
2	State Transmission Utility (STU)	Superintending Engineer -STU	Member Convener	sesys@mahatransco.in
3	MSLDC	Chief Engineer-SLDC	Member	cesldc@mahatransco.in
4	MSETCL	Superintending Engineer (O&M)	Member	selom@mahatransco.in
5	MSEDCL	Chief Engineer (Distribution), CO, Mumbai	Member	cedist@mahadiscom.in
6	MSPGCL	Rahul Sohani (Superintending Engineer)	Member	cegw@mahagenco.in, seest1@mahagenco.in
7	Maharashtra eastern grid Power Transmission co ltd	Atul Sadaria	Member	atulj.sadaria@adani.com
8	Adani Electricity Mumbai Ltd. (Transmission Business)	Rakesh Raj (Head Planning – AEML Transmission)	Member	rakesh.raj2@adani.com
9	Tata Power Co. Ltd.- Mumbai- Transmission	Sh. Kiran Desale (Head-Transmission)	Member	desalekv@tatapower.com gstawre@tatapower.com
10	Central Railway	S.S.Parihar (M Chief Electrical Engineer/Electrical Energy Management/CR)	Member	dycectrderly@gmail.com
11	M/s Tata Power Company Ltd. (Distribution)	S. Savarkar	Member	svsavarkar@tatapower.com
12	Adani Electricity Mumbai Ltd. (Distribution Business)	Abaji Naralkar (Asst. Vice President)	Member	abaji.naralkar@adani.com
13	BEST Undertaking	Smt. Manisha Krupanand Daware.Divisional Engineer (Project)	Member	depro@bestundertaking.com
Additional Member:				
1	MSETCL	Superintending Engineer (Project Scheme-I)	Member	SE1prj@mahatransco.in

Minutes of the 12th Maharashtra Transmission Committee (MTC) Meeting held on 27 January, 2025 at MSLDC, Airoli

The 12th Maharashtra Transmission Committee (MTC) meeting was held on 27 January, 2025 at MSLDC, Airoli. The Chief Engineer (STU), Chairman of MTC, presided over the meeting. Representatives of MSLDC, MSETCL, MSEDCL, TPC-T, AEML-T, TATA Power, AEML – D, BEST representative attended meeting and Central Railway representative in this meeting through VC.

On the onset Member convener of MTC, welcomed all the MTC members present & other participants in the 12th MTC meeting. After brief introduction of the participants, Member convener of MTC, informed the agenda points of 12th MTC to presented Members.

Agenda Point No. 1:

Confirmation of minutes of the 11th MTC Meeting

Member convener of MTC, informed that minutes of the 11th MTC meeting held on 16 Oct, 2024 were circulated to all the members vide STU Letter No. 7609 Dated 29 Oct, 2024.

AEML-T submitted requested to STU for addition in 11th MTC MoM for Agenda No. 12, as : AEML raised concerns w.r.t. upcoming changes at/around upstream network of 400kV MSETCL Kudus S/s, in view of 1000 MW HVDC (Kudus – Aarey) Scheme, currently under execution and estimated to be commissioned by FY 2026. Committee advised STU to carry out joint load flow study, so as to avoid any adverse network development, which may impact power flow towards MMR in future.”

Chairman MTC, mentioned that the suggestions are noted and will be incorporated as MoM of 11th MTC.

Further, no more comments are received from other members, and Member Convener requested to conform the MOM of the 11th MTC Meeting.

With the consent of the members present the Minutes of 11th MTC meeting held on 16 Oct, 2024 are confirmed.

MSETCL Schemes

Agenda Point No. 2:

Scheme of enhancement of transformation capacity by replacement of existing 2x25 MVA, 220/33 kV T/Fs by 2x50MVA, 220/33 kV T/Fs at 220 kV Sawangi S/s under EHV (O&M) Circle CSN in EHV PC (O&M) zone, CSN.

MSETCL representative placed before the MTC a proposal for Scheme of enhancement of transformation capacity by replacement of existing 2x25 MVA, 220/33 kV T/Fs by 2x50MVA, 220/33 kV T/Fs at 220 kV Sawangi S/s under EHV (O&M) Circle CSN in EHV PC (O&M) zone, CSN. MSETCL representative highlighted that the 220kV Sawangi Substation is commissioned in the year 2007. Present installed capacity of 220kV Sawangi S/s is 50 MVA consisting of 2 nos of 2X25 MVA, 220/33 kV T/fs. This substation feeds the urban & rural load demand of CSN District. Average maximum loading reached on both the T/Fs are about 60 % of installed capacity. MSETCL representative explained that MSEDCL has informed that under the RDSS (Revamped Distribution Sector Scheme – reform-based and results-driven), the following 33/11 kV substations are proposed by MSEDCL: 33 kV Kachara Depot , 33 kV Filter Bed, 33 kV Bhagat Singh Nagar, 33 kV for 132 kV Harsool premises, 33 kV Zilla Parishad Ground.

Accordingly, an estimated additional load of 30–40 MW is expected to be added to the 220 kV Sawangi Substation in the near future. To handle this anticipated demand, capacity expansion at the 220 kV Sawangi Substation is require. MSETCL representative explained that land is not available at 220kV Sawangi sub-station for augmentation of Substation by addition of new 220/33kV, 25/50MVA power transformer. Hence, here in this case the augmentation of Substation is proposed by carrying out the replacement of existing 2x25MVA, 220/33kV by new 2x50MVA 220/33kV power transformers. Hence, there is no land constraint. During outage/tripping of any one of the T/F, load is not managed on other T/F i.e. not satisfying (N-1) criteria. Hence considering the present loading condition, future load demand of MSEDCL, outage constraints and to satisfy (N-1) criteria replacement of T/Fs is proposed at 220kV Sawangi S/s.

The Estimated cost of the scheme is **Rs. 2053.95 Lakh**. This scheme will be commissioned in **FY 2026-27**.

In order to meet the present & future load requirement, N-1 compliance & to enhance system reliability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda point no. 3:

Scheme of enhancement of transformation capacity by addition of 1x50 MVA, 132/33 kV T/F at 132 kV Majalgaon sub-station in EHV (O&M) Dn., Beed and replacement t of existing 2x25 MVA, 132/33 kV T/Fs by 2x50MVA, 132/33 kV T/Fs at 132 kV Niwali S/s under EHV (O&M) Dn., Latur in EHV PC (O&M) zone, CSN.

MSETCL representative proposed & presented the proposal for “Scheme of enhancement of transformation capacity by addition of 1x50 MVA, 132/33 kV T/F at 132 kV Majalgaon sub-station in EHV (O&M) Dn., Beed and replacement of existing 2x25 MVA, 132/33 kV T/Fs by 2x50MVA, 132/33 kV T/Fs at 132 kV Niwali S/s under EHV (O&M) Dn., Latur in EHV PC (O&M) zone, CSN”.

A) 132/33 kV Majalgaon S/s

MSETCL representative submitted that the 132kV Majalgaon Substation was commissioned in the year 1999. Present installed capacity of 132kV Majalgaon S/s is 100 MVA consisting of 2X50 MVA, 132/33 kV T/fs. The substation supplies power to rural, agricultural, and MIDC (Maharashtra Industrial Development Corporation) loads in Majalgaon and Wadwani Taluka of Beed District. MSETCL representative highlighted that average maximum loading reached on both the T/Fs are about 58 % of installed capacity. Under the RDSS scheme, MSEDCL has proposed the construction of new 33/11kV substations with a combined capacity of 30 MVA. These include 10 MVA MIDC Substation, 5 MVA Purshottampuri Substation, 5 MVA Roshanpur Substation, 5 MVA Kittiadgaon Substation, and 5 MVA Mangrual Substation. MSETCL representative mentioned that, as part of the RDSS scheme, plans include the installation of a new 5 MVA, 33/11kV transformer at the Mogra Substation and the augmentation of an existing 33/11kV transformer from 5 MVA to 10 MVA at the Majalgaon Substation, bringing the total additional capacity to 15 MVA.

The feasibility of the 33kV Lonisavangi Hydro Project with an 18 MVA load demand has been issued. MIDC has requested a new 132kV substation in Majalgaon vide L.No. eoffice/P76280 dtd 12.02.2024 to cater to a 25 MW load. This load can be managed through the proposed augmentation of the existing 132kV substation. Hence considering the present loading condition, future load demand of MSEDCL, outage constraints and to satisfy (N-1) criteria, addition of T/F is proposed at 132kV Majalgaon S/s by MSETCL.

B) 132/33 kV Niwali S/s

MSETCL representative submitted that the 132kV Niwali Substation is commissioned in the year 2012. Present installed capacity of 132kV Niwali S/s is 50 MVA consisting of 2 nos of 2X25 MVA, 132/33 kV T/fs. The 132/33 kV transformers supply part of Latur (Rural) Taluka, part of Dharashiv Taluka, and their surrounding areas. Load demand at the 33 kV level in these regions is steadily increasing, particularly during the Rabi season, due to factors like growing agricultural needs and urbanization. Average maximum loading reached on both the T/Fs are

about 75 % of installed capacity. MSETCL representative highlighted that during outage/tripping of any one of the T/F, load is not managed on other T/F i.e. not satisfying (N-1) criteria. Hence considering the present loading condition, future load, outage constraints and to satisfy (N-1) criteria replacement of T/Fs is proposed at 132 kV Niwali S/s, by MSETCL.

The Estimated cost of the scheme is **Rs. 2497.95 Lakh (132kV Majalgaon S/s.-Rs.933.28 Lakh & 132kV Niwali S/s-Rs.1564.68 Lakh)**. The scheduled commissioning year for work scheduled for Majalgaon S/s is **FY 2026-27** and for 132 kV Niwali S/s is **FY 2026-27**.

In order to meet the present & future load requirement, N-1 compliance & to enhance system reliability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 4:

Scheme of enhancement of transformation capacity by Addition and Replacement of Transformers at 07 Nos. of sub-stations under EHV O&M Circle Nashik under EHV PC (O&M) zone, Nashik (132 kV Kalwan, 132 kV Mhasrul, 132 kV Malegaon, 132 kV, Adgaon, 132 kV Taharbad, 132 kV Igatpuri and 132 kV Pimparkhed sub-stations)

MSETCL representative placed before the MTC a proposal for “Scheme of enhancement of transformation capacity by Addition and Replacement of Transformers at 07 Nos. of sub-stations under EHV O&M Circle Nashik under EHV PC (O&M) zone, Nashik (132 kV Kalwan, 132 kV Mhasrul, 132 kV Malegaon, 132 kV, Adgaon, 132 kV Taharbad, 132 kV Igatpuri and 132 kV Pimparkhed sub-stations)”.

A) Kalwan Sub-station:-

The 132kV Kalwan Substation is commissioned in the year 1988. 132kV Kalwan substation is feeding partly urban, rural and agricultural load under Nashik District. Maximum loading reached on T/F 1 & 2 are about 70 % of installed capacity. During outage/Breakdown of one of the T/F, load is not managed on other T/F i.e. not satisfying (N-1) criteria. Hence considering the present loading condition, outage constraints and to satisfy (N-1) criteria addition of T/F is proposed at 132kV Kalwan S/s

B) 132kV Mhasrul Substation

The 132kV Mhasrul Substation was commissioned in the year 2002. 132 kV Mhasrul substation is the substation feeding the load of area near Nashik district. Maximum loading reached on T/F

No.1 is above 85 % of installed capacity. Urban load also about 58%. During outage/Breakdown of either of the T/F, load is not managed on other T/F i.e. not satisfying (N-1) criteria. Hence considering the present loading condition, outage constraints and to satisfy N-1 criteria addition of T/F is proposed at 132kV Mhasrul S/s

C) Malegaon

The 132 kV Malegaon Substation was commissioned in 1978. The substation supplies power to a mix of industrial, urban, rural, and agricultural areas in Malegaon Taluka of Nashik district. Maximum loading on all the three T/Fs is about 75% of their installed capacity. Load growth in the region is steadily increasing, making it essential to ensure sufficient capacity at the 132 kV Malegaon Substation. Although space is available for three additional 33 kV feeders, future commissioning of these feeders could strain the substation's ability to meet demand. Therefore, the addition of a 50 MVA, 132/33 kV transformer is necessary. Over the next three years, a 10% increase in load is projected due to regional growth in industrial, urban, and rural sectors. Hence considering the future loading, outage constraints and to satisfy (N-1) criteria addition of T/F is proposed at 132kV Malegaon S/s.

D) Adgaon

The 132 kV Adgaon Substation was commissioned in the year 2003. Maximum load on both the T/Fs reaches to 63% of its MVA capacity. A load increase of approximately 10 MVA is expected in the next three years in the region, due to new major projects, including electric vehicle charging stations and the growth of industrial, urban, and rural areas. During the upcoming Kumbh Mela in 2026, there is likely to be an additional load increase in the Sadhugram area, which is supplied by the 132 kV Adgaon Substation. Hence considering the future loading, outage constraints and to satisfy (N-1) criteria addition of T/F is proposed at 132kV Adgaon S/s.

E) 132 kV Taharabad S/s

The 132 kV Taharabad Substation was commissioned in the year 2014. It supplies power to the Satana Taluka and area of Nashik District around the 132kV Taharabad Substation. The average maximum load on both transformers are about 55% of its installed capacity. Also MSEDCL has planned to add 33kV Gholwad (10 MVA), Dasawel (5 MVA) and Nitane (10 MVA) under RDSS scheme vide L.No. EE/NSKRD/T/DY (O)/1730 dated 21.03.2024. Hence considering the future loading, outage constraints and to satisfy (N-1) criteria replacement of T/Fs is proposed at 132kV Taharabad S/s.

F) 132 kV Igatpuri S/s

The 132 kV Igatpuri Substation was commissioned in the year 1965. It supplies power to the rural and agricultural areas of Nashik city and handles generation evacuation of approximately 106 MW from hydroelectric sources at 132kV level, as well as catering to central railway loads. The average maximum load on the 25 MVA, 132/33 kV Transformer 1 has exceeded 90% of its installed capacity. MSEDCL has proposed 33 kV feeders for Bhavali Dam (10 MVA), MSRDC Samruddhi Highway (10 MVA), and Waki (5 MVA) under RDSS scheme. Space constraints here, so replacement doing. Hence considering the future loading, outage constraints and to satisfy (N-1) criteria replacement of T/F is proposed at 132kV Igatpuri S/s.

G) 132 kV Pimparkhed S/s

The 132 kV Pimparkhed Substation was commissioned in the year 1994. This substation feeding supply to Important load of EHV Consumer i.e Railway and part of Nandgaon Tahasil including Nadgaon City & most of the load covered by SS is rural and agricultural load under Nandgaon taluka of Nashik. During outage/tripping of any one of the T/F, load is not managed on other T/F i.e. not satisfying (N-1) criteria. Hence considering the future loading, outage constraints and to satisfy (N-1) criteria replacement of T/F is proposed at 132kV Pimparkhed S/s.

The Estimated cost of the complete scheme is **Rs.7732.80 Lakh**. The scheduled commissioning year for the cited scheme is **FY 2026-27**.

In order to meet the present & future load requirement, N-1 compliance & to enhance system reliability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 5:

Establishment of 33 kV voltage level by providing additional 2 x 25 MVA, 220/33 kV transformers, along with 6 x 33 kV bays, 2 x 33 kV PT bays, a 33 kV bus with a bus sectionaliser bay, and a 220 kV bus extension at the 220 kV Warud substation, under the EHV PC O&M zone Amravati

MSETCL representative placed before the MTC a proposal for “Establishment of 33 kV voltage level by providing additional 2 x 25 MVA, 220/33 kV transformers, along with 6 x 33 kV bays, 2 x 33 kV PT bays, a 33 kV bus with a bus sectionaliser bay, and a 220 kV bus extension at the 220 kV Warud substation, under the EHV PC O&M zone Amravati

220kV Warud substation is commissioned in the year 2021 and presently having installed capacity of 200MVA which includes 2 X 100 MVA, 220/132kV ICTs. The Executive Director (Distribution) MSEDCL, Vide L.No. ED (Dist)/SE(Planning)/33kV level at 220/ 132kV Warud/ 32393 dated 14.10.2024, submitted the requirement of 33kV level creation by erection of 2X 25MVA, 220/33kV T/Fs at existing 220kV Warud S/s As mentioned in the aforesaid letter 33kV level creation by addition of 2X 25MVA, 220/33kV T/Fs at 220kV Warud S/stn is approved by CMD, MSEDCL. At present existing 132/33kV Morshi and 132/33kV Warud EHV substation which fed power supply to Morshi and Warud Taluka in Amravati district. The installed capacity of 132/33kV Morshi S/s is 2X25MVA, 132/33kV i.e. 50 MVA and Maximum demand recorded on substation is 38.8 MVA (i.e. 78% loaded against 50MVA) There are 6 nos of outgoing feeder having 10 nos of 33/11kV substation and one HT consumer which are connected to 132kV Morshi substation with total connected capacity of 83.8 MVA. The installed capacity of 132/33kV Warud S/s is 2X25MVA, 132/33kV i.e. 50 MVA and Maximum demand recorded on substation is 41.4 MVA (i.e. 83% loaded against 50MVA). There are 5 nos of outgoing feeder having 10 nos of 33/11kV substation with total connected capacity of 98.15 MVA. Also, new 2X 5MVA, 33/11kV Karajgaon substation is proposed under upcoming RDSS scheme. Both EHV substations are currently operating above 77% loading. Due to space limitation, expanding the infrastructure at these location is not possible.

CE -STU pointed that, the quantum of load diversion and estimated load to be added may be confirmed. MSETCL representative have confirmed that, 35 MVA for new load and 33 MVA shifting load is considered while scheme preparation. AEML-T representative enquired whether the consideration for future demand projection is based on estimated connected load or estimated load demand? EE-O&M, MSETCL informed that data submitted by DISCOM is based on estimated load demand.

The estimated cost of the scheme is **Rs. 2648.40 Lakh**. The cited work proposes to be commissioned in **FY 2026-27**.

In order to meet the present & future load requirement, N-1 compliance & enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 6:

Scheme of Installation of new 1x125 MVAR, 400 kV Bus Reactor with allied Bay equipment at 400 kV Waluj sub-station, Dist.- CSN

MSETCL representative placed before the MTC a proposal for “Scheme of Installation of new 1x125 MVAR, 400 kV Bus Reactor with allied Bay equipment at 400 kV Waluj sub-station, Dist.- CSN”.

MSETCL representative submitted that 400 kV Waluj sub-station is commissioned in year 1999. The total installed capacity of this sub-station is 1341 MVA, the details of ICTs in service are as below.

a) 400/220/132kV, 315 MVA ICT-I b) 400/220/132kV, 315 MVA ICT-II

c) 400/220kV, 501 MVA ICT-III d) 220/33kV, 80 MVA TF-I

e) 220/33kV, 80 MVA TF-II f) 220/33kV, 50 MVA TF-III

MSETCL representative highlighted that 400 kV Waluj sub-station is one of the major grid-connected sub-station connecting MSETCL 400 kV Substations Khadka, Babhleshwar, Thaptitanda, Deepnagar as well as PGCIL 765/400 KV Chittepimpalgaon (CSN), 765/400 KV GIS Pune (Shikhrapur) substation & caters most of the load of Chhatrapati Sambhaji Nagar District. Being major grid connected & generation station connected 400kV SS, there is a issue of over voltages at 400kV Waluj SS. MSETCL representative explained that these overvoltage issues are temporarily resolved by keeping 400 kV Waluj - Bhusawal (Khadka) line out of service by hand tripping during night hours in consultation with LD. Hence, the scheme for Installation of 1 x 125 MVAR, 400 kV Bus Reactor at 400 kV Waluj sub-station, Dist. CSN was sanctioned vide BR No. 146/10 dtd.16.03.2021 at a total estimated cost of **Rs.1988.47 lakhs** (including IDC component of Rs.244.81 lakhs). Moreover, MERC had approved the In-Principle approval for the said scheme for cost of Rs.19.04 Crs against the claim of Rs.19.88 Crs of MSETCL.

Due to inadequate response & higher rates for similar works, the tender for said works could not be finalized by Projects section. Board approval validity exhausted in March, 2023. Hence the revised scheme of 125 MVAR Reactor is proposed with costing Rs. 24.70 Cr.

The estimated cost of the scheme is **Rs. 2470.31 Lakh**. The cited work proposes to be commissioned in **FY 2025-26**.

In order to maintain the voltage profile within specified limit and requirement of adequate reactive compensation at critical 400kV Bus after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 7:

Scheme of installation of new 2x80 MVAR, 400 kV line Reactor for 400 kV Kumbhargaon-Chandrapur Ckt-1 & Ckt-2 line with allied equipment at 400 kV Kumbhargaon sub-station under CSN

MSETCL representative placed before the MTC a proposal for “Scheme of installation of new 2x80 MVAR, 400 kV line Reactor for 400 kV Kumbhargaon-Chandrapur Ckt-1 & Ckt-2 line with allied equipment at 400 kV Kumbhargaon sub-station under CSN

MSETCL representative submitted that 400 kV Kumbhargaoon Substation (Dist. Nanded) is very vital sub-station under EHV O&M Circle Parli. The total installed capacity of this sub-station is 1,002 MVA, the details of ICTs in service are as below:

- i) 400/220kV, 501 MVA ICT-I
- ii) 400/220kV, 501 MVA ICT-II

MSETCL representative highlighted that 400kV Kumbhargaoon sub-station (Dist. Nanded) is one of the major grid-connected sub-station connecting 400kV Chandrapur Ckt-1 (277 KM) & 400kV Chandrapur Ckt-2 (301 KM) and 400kV Girwali Ckt-1 (160 KM) & 400kV Girwali Ckt-2 (163 KM). Also 220kV Waghala Ckt-1 & Ckt-2, 220kV Jalkot Ckt-1 & Ckt-2, 220kV Krishnur Ckt-1 & Ckt-2 and 220kV Bhokar Ckt-1 & Ckt-2 & caters most of the load of Nanded District. MSETCL representative submitted that 400kV Kumbhargaoon SS (Dist. Nanded) having long length 400kV lines, there is the issue of over voltage. As per MERC Grid Code-2020, Part-C (Operating Code), Sr. No 37.13, the prescribed limits for maintaining bus voltage at 400kV bus is $\pm 5\%$ i.e., 380kV to 420kV. However, it is seen that the limits of over voltage are crossed at 400kV Kumbhargaoon SS many times. As such, the scheme for Installation of 2 x 80MVAR, 400 kV Line Reactor at 400 kV Kumbhargaoon sub-station, Dist. Nanded was sanctioned vide **BR No. 136/42 Dt.29.07.2019** at a total estimated cost of Rs.1581.41 lakhs (including IDC component of Rs. 89.51 lakhs). Accordingly, Hon. MERC had approved the In-Principle approval for the said scheme for cost of Rs.15.59 Crs against the claim of Rs.15.81 Crs. of MSETCL. Due to inadequate response & higher quoted rates by bidders, the tender could not be finalized by Projects section. Validity of Board Approval was exhausted. Hence the revised scheme of 80 MVAr Reactor is proposed, with revised cost. MSETCL representative explained benefits of scheme as follows: Voltage profile will be maintained in the system. 400 kV line tripping on over voltage can be avoided. Overvoltage stresses on equipment insulation will be reduced, which will result in increase in life of equipment. Protection of substation equipment against overvoltage condition will be ensured.

Chairman MTC mentioned that these being Line reactors the provision of switchable Line reactors is essential considering the Operational aspect. In response, MSETCL representative informed that as per field feasibility reports due to space constraints the scheme is prepared for non switchable line reactors. However, Chairman MTC directed to review the scheme by exploring other options viz outdoor GIS/Hybrid so as to install switchable reactors .

The estimated cost of the scheme is **Rs. 3175.98 Lakh**. The cited work proposes to be commissioned in **FY 2025-26**.

After detailed deliberation and discussion, the committee recommend to apprise the views of the committee to GCC . The committee also directed MSETCL to explore the feasibility of switchable Reactor considering the operational aspects and resubmit he proposal for approval of MTC.

Agenda Point No. 8:

Scheme of Installation of new 1x125 MVAR, 400 kV Bus Reactor with allied Bay equipment at 400 kV Kudus sub-station under Vashi zone.

MSETCL representative placed before the MTC a proposal for “Scheme of Installation of new 1x125 MVAR, 400 kV Bus Reactor with allied Bay equipment at 400 kV Kudus sub-station under Vashi zone”.

MSETCL representative submitted that 400 kV Kudus Substation is very vital sub-station under EHV O&M Circle Kalwa. The total installed capacity of this sub-station is 1000 MVA, the details of ICTs in service are as below. a) 400/220kV, 500 MVA ICT-I b) 400/220kV, 500 MVA ICT-II. 400kV Kudus S/s is very important Substation in the grid. As per the overvoltage data, the over voltage duration (i.e. voltage above 420 KV) is max instant of total duration during year. Also, the overvoltage causes stress on insulation of other equipment which may lead to failure of equipment. MSETCL representative highlighted that at 400kV R.S. Kudus, there are 17 Nos. of 400 kV bays including tie bays {i.e. 400kV PGCIL Padghe 1 (Import), PGCIL Padghe 2 (Import), 400kV PGCIL Kala 1, 400kV PGCIL Kala 2 (Export), ICT 1, ICT 2 are in service. As well as 400kV Babhleshwar 1 (Proposed), Babhleshwar 2 (Proposed), Tarapur (Proposed), Padghe (Proposed) are upcoming lines ICT 3 (Proposed), Other 06 Nos are tie bays}, in addition to above, the 400KV incoming lines i.e Babhaleshwar-Kudus work is under progress. In view of the above upcoming lines and to control of over voltages, and to reduce the damage of equipment due to the high voltage stresses the Reactor scheme was proposed.

By absorbing reactive power, bus reactors can improve voltage stability on the grid. This helps to prevent voltage collapse or instability, which can occur when there is an excess of reactive power on the system. Therefore, by adding reactors to a power system, the reactive power balance can be adjusted improving voltage stability.

The installation of 400 kV, 1 x 125 MVA bus reactor at 400 kV Kudus sub-station was included in STU Plan 2018-19 to 2023-24 for the year 2020-21 & same is also included in year 2025-26 of 10 years STU plan of 2024-25 to 2033-34 on last page of Vashi zone scheme. MSETCL representative submitted that due to due to insufficient MVA compensation. There is

necessity of reactor at 400 kV Kudus sub-station. As such, the scheme for Installation of 1 x 125 MVAR, 400 kV Bus Reactor at 400 kV Kudus sub-station, Dist. Vashi was sanctioned vide BR No. 146/08 dtd.22.01.2021 at a total estimated cost of Rs.1613.20 lakhs (including IDC component of Rs.198.61lakhs). Moreover, MERC had approved the In-Principle approval for the said scheme for cost of Rs.15.45Cr. against the claim of Rs.16.13 Crs of MSETCL. As per administrative approval, SRM e-tender for the said scheme was floated by Project section. Due to inadequate response & higher rates for similar works, the tender could not be finalized by Projects section. The Board approval was valid up to Jan 2023 only. Hence the revised scheme of 125 MVAr Reactor is proposed, with revised cost.

The estimated cost of the scheme is **Rs. 2379.39 Lakh**. The cited work proposes to be commissioned in **FY 2025-26**.

In order to maintain the voltage profile within specified limit, after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 9

Scheme of replacement of existing 0.5 ACSR Twin Moose Conductor along with insulators and hardware by Twin HTLS Conductor equivalent to 0.5 ACSR Moose Conductor & allied hardwares & insulators of 400 kV Kalwa - Talegaon, Kalwa - Kharghar, Kharghar-Talegaon (DC) line and 400 kV Kalwa - Kharghar Bays at 400 kV RS Kalwa, 400 kV RS Kharghar and PGCIL Talegaon under Vashi and Pune Zone.

MSETCL representative placed before the MTC a proposal for “Scheme of replacement of existing 0.5 ACSR Twin Moose Conductor along with insulators and hardware by Twin HTLS Conductor equivalent to 0.5 ACSR Moose Conductor & allied hardwares & insulators of 400 kV Kalwa - Talegaon, Kalwa - Kharghar, Kharghar-Talegaon (DC) line and 400 kV Kalwa - Kharghar Bays at 400 kV RS Kalwa, 400 kV RS Kharghar and PGCIL Talegaon under Vashi and Pune Zone”.

MSETCL representative submitted that, this scheme is put up in front of MTC for Appraisal. Previously this scheme was presented in 11th MTC and recommended by MTC with costing Rs.503.53 Cr. However, the cost of scheme is increased to 621.70 Cr due to consideration of revised Overheads as per Circular No. 7913 dt.13.11.2024 while preparing estimates of scheme which is mentioned.

Chairman MTC mentioned the need of the scheme in view of strengthening of Mumbai & MMR transmission corridor. He also raised the issue of coordination with other ISTS/InSTS transmission licensees for associated elements at Talegaon (PG), Navi Mumbai (PG) ,Adani & KVTL so as to complete the work in coordination for reaping the true benefits of the scheme.

MSETCL representative have informed that they are in coordination with other utilities have for completion of work in matching timelines.

The cost of the Scheme is **Rs. 621.70 Cr.** Cited Work will be commissioned in **FY 2026-27**

In order to meet the present & future load requirement, for evacuation of upcoming RE generation, to address the overloading problems, enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval subject to coordination with other utilities to complete the associated work at their end within matching timelines.

Agenda Point No. 10:

Scheme of replacement of existing Twin 0.5 Moose Conductor, insulators, all accessories and hardwares by equivalent Twin High Performance Conductor along with insulators & suitable hardwares & accessories of 400kV Lonikand to Chakan line (25km) along with associated bay strengthening work at 400kV Lonikand- I & 400kV Chakan substation

MSETCL representative placed before the MTC a proposal for “Scheme of replacement of existing Twin 0.5 Moose Conductor, insulators, all accessories and hardwares by equivalent Twin High Performance Conductor along with insulators & suitable hardwares & accessories of 400kV Lonikand to Chakan line (25km) along with associated bay strengthening work at 400kV Lonikand- I & 400kV Chakan substation”

MSETCL representative highlighted 400 kV Chakan substation is having two transmission lines, i.e. 400 kV Talegaon (PG) to Chakan & 400 kV Lonikand I to Chakan line. Both these lines are in service since dtd. 23/03/1992 (33 years). At present, Pune transmission ring main system is facing critical operational constraints due to increase in loading of Pune District. To remove the transmission constraints and strengthening of present transmission network, following projects were planned & envisaged to be commissioned on Top- Priority : Conversion of existing S/C 220kV Chinchwad-Urse corridor into M/ckt corridor (Package A/B/C under BR No. 69/17 dt. 31.12.2011.) Establishment of 400/220kV Hinjewadi substation. 220kV D/C line from 400kV Talegaon (PG) substation to 220kV Chakan MIDC Phase-II substation (6km) 220kV LILO on 220kV Chinchwad- Telco S/C line at 400 220kV level creation at 765kV Shikrapur PG substation. The delay in commissioning of above projects is resulting into critical operation of Pune district transmission network & Pune ring main system. This results into frequent operation of LTS which leads to power cut off in Pune city. The rapid urbanization & industrialization of Pune city & nearby area is at its peak and present transmission system stretching beyond its capacity to match the rising load demand due to

delayed projects. This required immediate remedial action to cope up alarming loading condition in Pune transmission network.

MSETCL representative explained that 400kV Talegaon (PG) substation act as main power source to 400kv Lonikand-I & Chakan substation through 400kV Talegaon(PG)- Chakan S/C line, 400kV Talegaon(PG)- Lonikand-I S/C line & 400kV Chakan- Lonikand-I line. In case of failure of 400kV Talegaon (PG)- Chakan line, 400kV Talegaon(PG)- Lonikand –I S/C & 400kV Lonikand-I- Chakan lines act as source for 400kV Lonikand-I & 400kV Chakan substations respectively. The thermal limit of 0.5 ACSR twin moose conductor of above lines is 1600A. The peak load observed in the recent condition of 400kV Talegaon (PG)- Chakan is around **1350A**. In case of breakdown on 400kV Talegaon (PG)- Lonikand-I line, the loading of 400kV Talegaon(PG)- Chakan RS exceeds 1400A & LTS operates. Also, in case of 400kV Talegaon(PG)- Lonikand-I line, the maximum loading observed in recent condition is around 942A. Maximum load reached on 400 kV Lonikand I to Chakan during the year 2023-24 is **386 MW**. MSETCL representative added that recently, major occurrences observed due to overloading of any one of above lines and LTS operated causing power disruption in Pune city which caused economic loss to MSEDCL & MSETCL.

The cost of the Scheme is **Rs. 7251.89 Lakhs**. Cited Work will be commissioned in **FY 2026-27**.

In order to meet the present & future load requirement, to address the overloading problems, enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 11:

Scheme of replacement of existing twin 0.5 Moose conductor, insulators, all accessories & hardwares by equivalent new high performance conductor (twin HTLS conductor having current carrying capacity 3000A) along with insulators & suitable hardwares & accessories of 400 kV Talegaon (PG) to Lonikand- I line (42.57 km) (for MSETCL portion only) along with associated bay strengthening work at 400kV Lonikand -I substation under Pune Zone

MSETCL representative placed before the MTC a proposal for “Scheme of replacement of existing twin 0.5 Moose conductor, insulators, all accessories & hardwares by equivalent new high performance conductor (twin HTLS conductor having current carrying capacity 3000A) along with insulators & suitable hardwares & accessories of 400 kV Talegaon (PG) to Lonikand- I line (42.57 km) (for MSETCL portion only) along with associated bay strengthening work at 400kV Lonikand -I substation under Pune Zone

MSETCL representative explained scope of work, for cited scheme:

- Supply of High Performance Conductor (HPC) along with allied hardwares & accessories equivalent to existing 0.5 Moose conductor, Long rod anti fog porcelain insulators etc. Dismantling of existing 0.5 Moose conductor with all accessories & hardwares and transportation of removed/dismantled materials to 400kV Chakan RS Division site store. Stringing of HPC conductor along with allied hardwares, accessories & Long rod anti fog porcelain insulator etc. Strengthening of end bay at 400kV Lonikand-I substation.

MSETCL representative submitted that 400kV Talegaon (PG) - Lonikand-I line was commissioned on 08.07.2013 by making LILO on existing 400kV Lonikand-I - Kalwa line commissioned on 17.02.1990, which has completed almost 35 years of service life. The details of 400kV Talegaon (PG) - Lonikand-I line is as follows:-

- Total no. of towers: 110 nos. S/C towers (MSETCL) & 07 nos. D/C towers (Adani)
- Total no. of cut point towers on S/C, D/C: 21 nos. S/C (MSETCL) & 07 nos. D/C (Adani)

MSETCL representative added that the scope of replacement of twin moose conductor from loc. no. 111 to 117 (Adani) & bay strengthening work at 400kV Talegaon(PG) substation is not covered in this scheme, which is a part of CTU/ISTS. The same needs to be strengthened for fully utilization of corridor capacity.

At present, Pune transmission ring main system is facing critical operational constraints due to increase in loading of Pune District. To remove the transmission constraints and strengthening of present transmission network, following projects were planned & envisaged to be commissioned on **Top- Priority**

- a) Conversion of existing S/C 220kV Chinchwad-Urse corridor into M/Ckt corridor (Package A/B/C under BR No. 69/17 dt. 31.12.2011.)
- b) Establishment of 400/220kV Hinjewadi substation.
- c) 220kV D/C line from 400kV Talegaon (PG) substation to 220kV Chakan MIDC Phase-II substation (6km).
- d) 220kV LILO on 220kV Chinchwad- Telco S/C line at 400kV Chakan-9km.
- e) 220kV level creation at 765kV Shikrapur PG substation.

MSETCL representative highlighted that the delay in commissioning of above projects is resulting into critical operation of Pune district transmission network & Pune ring main system.

This results into frequent operation of LTS which leads to power cut off in Pune city. The rapid urbanization & industrialization of Pune city & nearby area is at its peak and present transmission system stretching beyond its capacity to match the rising load demand due to delayed projects. This required immediate remedial action to cope up alarming loading condition in Pune transmission network.

MSETCL representative explained that at present, 400kV Talegaon (PG) substation act as main power source to 400kV Lonikand-I & Chakan substation through 400kV Talegaon(PG)-Lonikand-I S/C line, 400kV Talegaon(PG) - Chakan S/C line, & 400kV Chakan- Lonikand-I line. In case of failure of 400kV Talegaon (PG)- Chakan line, 400kV Talegaon(PG)- Lonikand – I S/C & 400kV Lonikand-I- Chakan lines act as source for 400kV Lonikand-I & 400kV Chakan substations respectively

The thermal limit of 0.5 ACSR twin moose conductor of above lines is 1600A. The peak load observed in the recent condition of 400kV Talegaon (PG) - Chakan is around 1350A. In case of breakdown on 400kV Talegaon (PG) - Lonikand-I line, the loading of 400kV Talegaon(PG)-Chakan exceeds **1400A & LTS operates**. Recently, major occurrences observed due to overloading of any one of above lines and LTS operated causing power disruption in Pune city which caused economic loss to MSEDCL & MSETCL

CE-STU mentioned that, this is burning issue and for short term measures. Long term plans also to be considered in the STU prospective plan which will provide additional sources to Pune ring main network . Further he also raised the issue of coordination with other ISTS transmission licensees for associated elements at Talegaon (PG) & Adani so as to complete the work in coordination The estimated cost of the scheme is **₹ 118.83 Cr.** This scheduled commissioning of the cited scheme is in **FY 2026-27.**

In order to meet the present & future load requirement, to address the overloading problems, enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval and also directed to coordinate with other stakeholders to carry out associated strengthening at their end in matching timelines.

Agenda Point No. 12:

Replacement of existing 0.2 ACSR Panther conductor along with hardwares, insulator strings by HTLS conductor of 132kV Pandharpur-Utopian-Welspun-Mangalwedha & 132kV Pandharpur-Nimboli- Mangalwedha lines along with associated 132kV bay strengthening work under EHV O&M Division, Solapur

MSETCL representative placed before the MTC a proposal for a scheme for “Replacement of existing 0.2 ACSR Panther conductor along with hardwares, insulator strings by HTLS conductor of 132kV Pandharpur-Utopian-Welspun-Mangalwedha & 132kV Pandharpur-Nimboli- Mangalwedha lines along with associated 132kV bay strengthening work under EHV O&M Division, Solapur

MSETCL representative submitted that 132kV Pandharpur- Mangalwedha D/C line was commissioned on 31.03.1998. Following substation/Co-generations was made LILO on original 132kV Pandharpur- Mangalwedha line 1 & 2.

Sr.No.	Name of S/S/ Co-Gen	D.O.C.	LILO arrangement
1	132kV Welspun solar	03.10.2013	132kV Pandharpur- Mangalwedha Line – I
2	132kV Utopian Sugar	26.11.2014	132kV Pandharpur- Welspun Line
3	132kV Nimboni s/s	01.04.2021	132kV Pandharpur -Mangalwedha line -II

There are 2x50MVA, 132/33kV T/Fs installed at 132kV Mangalwedha substation & max load reached is around 65MW. Similarly, 132kV Nimboni substation is fed from 220/132kV Pandharpur substation through 132kV line from one end and from 132kV Mangalwedha s/s through other end. There are 2x25MVA, 132/33kV T/Fs installed at 132kV Nimboni substation & max load reached is around 30MW.

MSETCL representative submitted that currently, 220kV Pandharpur substation is having connectivity from 400kV Lamboti substation via 220kV Pandharpur - Lamboti - 1 Line & 400kV Karad through 220kV Pandharpur – Bhalwani line & 220kV Pandharpur-Khanapur lines. MSETCL representative added that evacuation of above generations i.e. **215MW** will be carried out through 132kV Mangalwedha-Nimboni-Pandharpur line and Mangalwedha-Welspun Solar-Utopian Cogen-Pandharpur line. In case of tripping or breakdown on either line will results in overloading of other line & generation evacuation constraints in the Mangalwedha-Nimboni-Pandharpur Network.

Hence, to create the transmission margin & to facilitate the generation evacuation through 132kV Mangalwedha-Nimboni-Pandharpur network, it is proposed to replace the existing conductor of 132kV Pandharpur-Nimboni-Mangalwedha line & 132kV Pandharpur-Utpoian cogen-Welspun Solar-Mangalwedha line by high performance conductor. MSETCL representative explained scope of work for cited scheme as below:

- Supply of High Performance Conductor (HPC) along with allied hardwares & accessories equivalent to existing 0.2 ACSR conductor, Porcelain insulators etc. Dismantling of existing 0.2 ACSR conductor with all accessories & hardwares and transportation of removed/dismantled materials to site store as per instructions of site-incharge. Stringing of HPC conductor along with allied hardwares, accessories & porcelain insulator etc. Strengthening of associated end bays.

MSETCL representative explained technical benefits of the scheme as follows:

- Enhanced current carrying capacity of the existing corridor using same RoW. Enhanced reliability and availability of 132kV network of Pandharpur-Nimboni-Mangalwedha ss. Grid stability will be improved. Increased transmission capacity to evacuate RE generation, meet future load growth demands.

The Estimated cost of the scheme is ₹ 67.61 Cr. The scheduled completion year of said scheme is FY 2026-27.

In order to meet the present & future load requirement, for evacuation of RE generation, to address the overloading problems, enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 13:

Providing additional 1x50 MVA, 220/22kV T/F along with HV GIS Bay & LV Bays at 220kV Hinjewadi-II S/s under Pune zone.

MSETCL representative placed before the MTC a proposal for “Providing additional 1x50 MVA, 220/22kV T/F along with HV GIS Bay & LV Bays at 220kV Hinjewadi-II S/s under Pune zone”

MSETCL representative explained that 220kV Hinjewadi-II S/s was commissioned in year 2009 & caters the load of Hinjewadi-II area, MIDC, IT Park and urban areas through 2x50MVA, 220/22kV T/Fs.

MSETCL representative highlighted that 220kV Pirangut & 220kV Pegasus lines are the main source to this substation while 2X220kV Hinjewadi-II, Hinjewadi-III GIS lines feed power (around 10MW) to 220kV NXTRA Date EHV consumer via 400kV Hinjewadi-III GIS substation. Also 2X220kV GIS lines will be commissioned soon for the ongoing Pune Metro project. MSETCL representative highlighted that DISCOM load of 70MVA is sanctioned on T/F-1 & 79.9MVA is sanctioned on T/F-2. It is difficult to manage the load in case of

tripping/outage on any of the T/F i.e. Not fulfill N-1 criteria. Hence, to satisfy (N-1) criteria & also to meet the future load demand, additional 1x50 MVA, 220/22kV T/F is proposed at 220kV Hinjewadi-II S/s by CE, EHV PC(O&M) zone, Pune

The Estimated cost of the scheme is ₹ 1436.22 Lakh, The Scheduled commissioning year of said scheme is FY 2026-27.

In order to meet the present & future load requirement, N-1 compliance & enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 14:

Replacement of 3x50 MVA, 220/22kV T/Fs by 3x100 MVA, 220/22kV T/Fs, 3x22kV Incomer GIS Bays, 2x22kV Bus section GIS bays, 12x22kV GIS Feeder bays at 220kV Telco S/s under Pune zone.

MSETCL representative placed before the MTC a proposal for “Replacement of 3x50 MVA, 220/22kV T/Fs by 3x100 MVA, 220/22kV T/Fs, 3x22kV Incomer GIS Bays, 2x22kV Bus section GIS bays, 12x22kV GIS Feeder bays at 220kV Telco S/s under Pune zone”.

MSETCL representative submitted that 220kV Telco Sub-Station was commissioned in 19.06.1993 & caters the load of Industrial area, MIDC, TATA motors and urban areas through 3x50MVA, 220/22kV T/Fs. MSETCL representative added that 220kV Bhosari-I & 220kV Chichwad-II lines are the main sources to this substation. It feeds the power supply of 35MW to M/s TATA motors. Due to uneven loading of 22kV Bus, the transformer needs to be run in parallel many times & cannot be put individual to restrict the fault level. MSETCL representative highlighted that there is no space available for commissioning additional T/F at 220kV Telco S/s as situated in M/s TATA motors premises in compact space in MIDC area. It is difficult to manage the load in case of tripping/outage on any of the T/Fs i.e. Not fulfill N-1 criteria. The proposed scheme fulfils the augmentation criteria. Hence, to satisfy (N-1) criteria & also to meet the future load demand, replacement of 3x50 MVA, 220/22kV T/Fs by 3x100 MVA, 220/22kV T/Fs is proposed at 220kV Telco S/s by CE, EHV PC(O&M) zone, Pune.

Chairman MTC mentioned to constraints of lines to be consider. Source lines to be strengthen. In time frame as per said scheme plan and to be executed. Outage issues arrive in Pune.

The Estimated cost of the scheme is ₹ 4805.16 Lakh. The above scheme will be commissioned in FY 2026-27.

In order to meet the present & future load requirement, N-1 compliance & enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 15:

Replacement of 1x10 MVA, 132/22kV T/F by 1x25 MVA, 132/22kV T/F at 132kV Bhatghar S/s under Pune zone.

MSETCL representative placed before the MTC a proposal of “Replacement of 1x10 MVA, 132/22kV T/F by 1x25 MVA, 132/22kV T/F at 132kV Bhatghar S/s under Pune zone.

MSETCL representative submitted that 132kV Bhatghar Sub-Station was commissioned in the year 1977 & caters the load of Bor & Velhe Taluka through 1x25MVA, 132/22kV & 1x10MVA, 132/22kV T/Fs. 132kV Kamthadi & 132kV Shirwal lines are the main sources to this substation and it is attached to Hydro Generation plant having 16MW power generation capacity. MSETCL representative highlighted that it is difficult to manage the load on 10MVA T/F in case of tripping/outage on 25MVA T/F i.e. Not fulfill N-1 criteria. Hence, to satisfy (N-1) criteria, replacement of 1x10 MVA, 132/22kV T/F by 1x25 MVA, 132/22kV T/F is proposed at 132kV Bhatghar S/s by CE, EHV PC(O&M) zone, Pune.

The Estimated cost of the scheme is ₹ 527.75 Lakh. The schedule year of commissioning of the above scheme is **FY 2026-27**.

In order to meet the present & future load requirement, N-1 compliance & enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 16:

Up gradation of voltage level from 22kV level to 33kV Level by replacement of 2X50MVA, 132/22kV T/Fs by 2X50MVA, 132/33kV T/Fs at 132kV Baramati S/s under Pune Zone

MSETCL representative placed before the MTC a proposal of “Upgradation of voltage level from 22kV level to 33kV Level by replacement of 2X50MVA, 132/22kV T/Fs by 2X50MVA, 132/33kV T/Fs at 132kV Baramati S/s under Pune Zone”.

MSETCL representative explained that 33/11 kV Baramati City substation having installed capacity 20 MVA (2X10MVA) is commissioned under RAPDRP Scheme in the period of 2013-2015. This feeder is nearer to 132/22kV Baramati S/s however, at present it is fed from 220kV Baramati S/s. At present, only one 22kV feeder (Industrial Estate) of Baramati Urban Sub-division is emanating from 132/22 kV Baramati substation.

MSETCL representative highlighted that considering the growth of Baramati City and MIDC area, MSEDCL has already proposed 3 Nos. of 33/11kV substations namely 33/11kV Urja Bhavan (2X5MVA), 33/11kV Urban Gram (2X5MVA) & 33/11kV Gokulnagar (2X10MVA).

MSETCL representative added that load of 7 nos. of feeders namely 22kV Pandare (Ag), 22kV Baramati Industrial Estate, 22kV Sawal (Ag), 22kV Anjangaon (Ag), 22kV Anjangaon Gaothan, 22kV Pandare Gaothan and 22kV Sawal Gaothan emanating from 132/22kV Baramati S/s will be shifted on these 3 nos. of proposed MSEDCL S/s.

MSETCL representative submitted that, the load of 4 Nos. of 33/11 kV Substations (namely Mekhali, Zargadwadi, Pahunewadi & Sangavi) & 6 Nos. of HT Consumer connected at 33 kV Pahunewadi Feeder and load of 2 Nos. of 33/11 kV Substations (namely Kanheri & Parawadi) & 1 No. of HT consumers connected at 33kV Bigwan feeder of 220/33kV Baramati S/s will also be shifted to 132kV Baramati S/s after elimination of 22kV Voltage level and creation of 33kV Voltage level. MSETCL representative added that, there is no spare 33kV bay available at nearby 220/33 kV Baramati substation and also possibility of new 33 kV Bay is Nil due to space constraints. Further, there is no other 33kV source available for proposed MSEDCL's substations. At present, MSEDCL's 33/11kV Baramati City substation is fed by 220/33kV Baramati S/s as other alternative 33kV source is not available nearby. Hence, it is required to create 33kV level at 132kV Baramati S/s to feed power to total 4 nos. of 33/11kV MSEDCL S/s i.e. 33/11kV Baramati City (2x10 MVA), 33/11kV Urja Bhavan (2x5 MVA), 33/11kV Gokulnagar (2x5 MVA) & 33/11kV Urban Gram (2x10 MVA). MSEDCL has also confirmed the requirement of elimination of 22kV level & establishment of 33kV level at 132kV Baramati S/s.

Hence, the scheme for up-gradation of voltage level from 22kV level to 33kV Level by replacement of 2X50MVA, 132/22kV T/Fs by 2X50MVA, 132/33kV T/Fs at 132kV Baramati S/s under Pune Zone, is necessary.

The Estimated cost of the scheme is ₹ 993.30 Lakh. The schedule year of commissioning of the above scheme is **FY 2025-26**.

In order to meet the MSEDCL requirement, enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 17:

Replacement of existing 2 x 25MVA, 132/33kV T/Fs by 2 X 50 MVA, 132/33kV T/Fs at 132kV Shaha S/s under EHV O&M Division Nashik

MSETCL representative placed before the MTC a proposal for “Replacement of existing 2 x 25MVA, 132/33kV T/Fs by 2 X 50 MVA, 132/33kV T/Fs at 132kV Shaha S/s under EHV O&M Division Nashik”.

MSETCL representative submitted that the 132 kV Shaha Substation is commissioned in the year 2023. Average maximum loading reached on both the T/Fs are about 76 % of installed capacity. Due to the indirect connection of the 33 kV Somthane and Wadangali feeders through the Deopur feeder, the load on the 132 kV Shaha Substation has reached 75% of its installed capacity during peak periods. Once the aforementioned feeders from Kopergaon Rural Subdivision are connected, the load is expected to exceed the substation’s capacity, potentially leading to transformer tripping or forced load shedding to prevent overload.

MSETCL representative highlighted that, 220kV Babhaleshwar - Eklahare GCR DCDC line is getting overloaded on daily basis. Considering situation of large ELR in the tune of 200MW to 250MW, it is required to shift some of load from sinner pocket i.e. shifting of some of 33kV feeders from 132kV Sinner (Old) to 132kV Shaha S/s. The relief of around 30MW on Babhaleshwar line will be achieved by shifting of load on 132kV Shaha S/s.

MSETCL representative added that due to present loading condition, the shifting of 33kV feeders from 132kV Sinner (Old) S/s to 132kV Shaha S/s is not possible. Hence, it is necessary to replace existing 2x25MVA, 132/33kV T/Fs by 2x50MVA, 132/33kV T/Fs at 132kV Shaha S/s, on priority basis.

The estimated cost of the scheme is **Rs. 1361.13 Lakhs**. The cited scheme will be commissioned in **FY 2025-26**

In order to meet the present & future load requirement, N-1 compliance & enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 18:

Conversion of existing 400 kV Kalwa - Padghe Ckt-I & II SCSC line to DCDC by using Twin HPC conductor.

MSETCL representative placed before the MTC a proposal for Conversion of existing 400 kV Kalwa - Padghe Ckt-I & II SCSC line to DCDC by using Twin HPC conductor.

MSETCL representative submitted that 400/220 kV Kalwa S/S is a major source to cater the load of Mumbai, Mumbai Suburban, Navi Mumbai and part of Thane District areas. There are only two 400 kV source lines to 400 kV Kalwa S/S from 400 kV Padghe S/S and these two SC lines are on SC towers. 400 kV Kalwa – Padghe Ckt. I and Ckt. II are in service from around 44 years. MSETCL representative highlighted that in case of tripping or major breakdown on any

of the circuit, the other circuit gets overloaded & results in critical condition of the Grid. With the implementation of proposed scheme two additional 400 kV sources will be available to 400 kV Kalwa s/s, which will help in catering the increasing load and future load demand of the Mumbai, Mumbai suburban, Navi Mumbai & Thane Urban areas. These additional two sources can be made available by using MSETCL's same line corridor.

MSETCL representative explained that projected load of Mumbai & MMR is 5500 MW. Hence, 400 kV Kalwa-Padghe ckt.-I & II will not be sufficient to cater future load. Additional GIS Substation is proposed at 400kV Kalwa premises. Considering future load growth and grid connectivity issued to various consumers, the available Total Transmission Capacity (TTC) of transmission system of MSETCL serving Mumbai region needs to be strengthened. With the completion of the proposed works, reliability of the supply will be increased due to increase in the transmission capacity, Overloading of Sub-stations & lines can be eliminated and future load growth can also be met. The execution of proposed line work is possible only after completion of replacement of existing conductor by HPC conductor of 400kV Kalwa-Padghe ckt-I & II (DoC Ckt-I: 14.01.2025 and DoC Ckt-II: 28.01.2023).

MSETCL representative explained Scope of work as follows:

- 1) Conversion of existing SCSC 400 kV Kalwa-Padghe ckt-I into DCDC using the same corridor by using HPC Conductor – 30.371 kms - formation of 400 kV Kalwa-Padghe DCDC line ckt-III.
- 2) Conversion of existing SCSC 400 kV Kalwa-Padghe ckt-II into DCDC using the same corridor by using HPC Conductor – 30.679 kms. & replacement of ACSR conductor of 22.82 kms of existing DCDC line by HPC from Padghe end - formation of 400 kV Kalwa-Padghe DCDC line ckt-IV.

MSETCL representative explained benefits as follows:

1. Mumbai Metropolitan Region System Strengthening.
2. To bring additional source to 400kV Kalwa S/S.
3. To enhance loading capacity of 400kV Kalwa – Padghe corridor.
4. To increase reliability and quality of supply.
5. To save transmission loss at 400kV level.

The estimated cost of the scheme is ₹ 962.66 Cr.. The scheduled completion year for said scheme is **2026-27**.

To address the overloading problems, enhance system reliability, and system point of view, after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval. Considering the cost of the scheme above the threshold limit of TBCB under MYT Regulations 2019/2024 the committee opined that although the scheme involves up gradation of existing Tr. Line corridor and thus can be taken up through RTM route however, the relevant process of MERC approval / appraisal to Empowered Committee as defined in MYT regulation should be followed by STU.

Agenda Point No. 19:

Construction of LILO on 100 kV Mohane - Amberath Line at 220 kV Jambhul Substation.

MSETCL representative placed before the MTC a proposal for “construction of LILO on 100 kV Mohane - Amberath Line at 220 kV Jambhul Substation”.

MSETCL representative submitted that there are constraints of overloading of Padghe-Mohane-Ambernath 100kV D/C line under contingency. In case, if loading of 100 kV Padghe-Mohane line and Padghe-Ambernath line is increased the entire load will not shift on any other line. Due to this both 100 kV Ambernath s/s and 100 kV Mohane s/s goes into dark, hence N-1 criteria cannot be fulfilled.

MSETCL representative highlighted that Presently, 100 kV Ambernath s/s & 100 kV Mohane s/s are having single 220 kV source from 400/220 kV Padghe s/s. There are constraints of overloading of Padghe-Mohane-Ambernath 100kV D/C line under contingency. In case, if loading of 100 kV Padghe-Mohane line and Padghe-Ambernath line is increased the entire load will not shift on any other line. Due to this both 100 kV Ambernath s/s and 100 kV Mohane s/s goes into dark, hence N-1 criteria cannot be fulfilled.

MSETCL representative added that work of replacement of existing 0.3 ACSR Goat conductor with High Performance Conductor (HPC) of 100kV Padghe-Ambernath, 100 kV Padghe-Mohane & 100 kV Mohane-Ambernath lines under EHV PC O&M Zone, Vashi is already approved by BR No 167/23 Dated 08.03.2024.

MSETCL representative submitted that 220 kV Padghe- Jambhul & Padghe- Pal conductor is replaced by HTLS. Further, MSETCL representative mentioned brief scope of work, of scheme as follows:

Construction of LILO on 100 kV Mohane - Ambernath Line for 220/100 kV Jambhul s/s in new corridor – 5 kms

- 1) 100 kV line bay at 220 kV Jambhul s/s- 02 nos. with contingencies.
- 2) Construction of LILO on 100 kV Ambernath - Mohane line at 220 kV Jambhul s/s – 5
 - i. 100 kV DC line on DC tower - 4 kms

ii. Underground cable(2500sqmm) - 1 km

MSETCL representative highlighted benefits of scheme as follows:

- Second source alternative to 100 kV Ambernath , 100 kV Mohane s/stns & 220 kV Jambhul S/S.
- Reliability and availability of power supply to consumers of Mohane&Ambernath s/s.
- Utilization of under loaded 1x100 MVA + 125 MVA ICT at Jambhul s/s.
- Network improvement work of Vashi Zone.

Chairman MTC directed to submit the execution plan for this scheme considering the hurdles in execution through the forest area.

The estimated cost of the scheme is ₹ 7027 Lakh. The scheduled completion year for said scheme is 2026-27.

To address the overloading problems, enhance system reliability, and system point of view, after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 20:

Establishment of 400 kV Kalwa GIS S/s. in the premises of existing 400 kV Kalwa, Airoli, Dist. Thane

MSETCL representative placed before the MTC a proposal for “Establishment of 400 kV Kalwa GIS S/s. in the premises of existing 400 kV Kalwa, Airoli, Dist. Thane”.

MSETCL representative submitted that existing 400/220kV Kalwa substation is commissioned in the year 1981 and served around 43 years old. It Feeds Mumbai region and the average load is 1600-1700 MW (approx.) & maximum load reached is about 1900 MVA. At present, the existing 400/220kV Kalwa s/s having installed capacity of 3 x 500 MVA and 3x200 MVA i.e. total capacity 2100 MVA.

MSETCL representative highlighted that during N-1 contingency of 1x 600MVA ICT, the load cannot be managed by other ICTs. Also, in future many IT park and data centres are expected in Vashi area.

Hence, the total anticipated load as on existing Kalwa s/s during the year 2027 will be nearly 3900 MW (approx.). And the anticipated load by the year 2034 will reach upto 5957 MW. This upcoming demand cannot met by existing 400/220kV Kalwa s/s. Also, the fault level of existing 400 kV Kalwa s/s has reached 54 kA against permissible fault level of 40 kA. If the existing bus of 400/220kV Kalwa s/s is split-up then the fault level will reduce.

Accordingly in order to cater the upcoming load and to reduce the fault level of existing 400kV Kalwa s/s, it is proposed to establish of new 400/220kV GIS s/s in the same premises. Land is made available by demolishing Office Building, T/F repair shed and staff Quarters.

MSETCL representative explained scop of work, as below:

1. 3 X 167MVA, 400/220 kV ICT – 3 Nos., with 1 spare 167 MVA ICT along with HV,LV bays.
2. 4 X 400kV bays and 8 X 220kV bays.
3. Re-orientation work of 400kV line using 400kV cables for proposed GIS-I at Kalwa
4. Re-orientation work of 220kV line using 220kV cables for proposed GIS-I at Kalwa.

MSETCL representative added objective of the scheme:

- a) To reduce the fault level at existing 400/220kV Kalwa substation.
- b) To address the existing overloading constraint of ICTs at existing 400/220kV Kalwa substation.
- c) To cater the upcoming Load in Mumbai & MMR region

MSETCL representative highlighted benefit of this scheme:

- Reduction in Fault level at 220kV bus.
- Transformation capacity will add upto 1500MVA.
- Reduction in 400/220 kV ICT loading thereby SS will be n -1 compliant.
- Reliable and qualitative supply

MSETCL representative highlighted that this scheme was recommended in 4th MTC for the cost of Rs. **791.14 Cr. At present** cost increase due change in SOR and considering one and half breaker system in GIS. Land is available at 400 kV Kalwa GIS.

CE-STU informed that re-orientation of lines will be carried out at 400 kV level and 220 kV level only. As the scheme the scheme involves up gradation of existing Substation and thus can be taken up through RTM route however, the relevant process of MERC approval / appraisal to Empowered Committee as defined in MYT regulation should be followed by STU.

The Estimated cost of the scheme is **Rs. 876.71 Cr.** The scheduled year of completion for the cited scheme is **FY 2025-26.**

To addressing overloading constraints, for reduction in fault level at 220 kV Bus, requirement, for creating evacuation for Khavda RE power , enhance system reliability and stability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 21:

132 kV level creation / ICT addition at 220/33 kV Patoda Substation, LILO on 132 kV Kharda - Ashti line at 220 kV Patoda Substation - 30 km with end bays & 132 kV Patoda - Raimoha SCDC line – 23.6 km with end bays.

MSETCL representative placed before the MTC a proposal for “132 kV level creation / ICT addition at 220/33 kV Patoda Substation, LILO on 132 kV Kharda - Ashti line at 220 kV Patoda Substation - 30 km with end bays & 132 kV Patoda -Raimoha SCDC line – 23.6 km with end bays”.

MSETCL representative submitted that There is requirement of evacuation of 670 MW RE power generation from 220 kV Patoda, 132 kV Raimoha, 132 kV Kharda and 132 kV Ashti Substation area. There is system constraints for RE power evacuation in existing transmission system of 220 kV Patoda, 132 kV Raimoha, 132 kV Kharda and 132 kV Ashti Substation area.

MSETCL representative explained objective of this scheme as follows:

- 1) For evacuation of RE Power.
- 2) To strengthen the 132 kV network in Beed District area.
- 3) To improve reliability of power supply in Beed District area.

Chairman MTC mentioned that as per system study reports the scheme is not technically feasible and hence, this Scheme is to be deferred.

The Estimated cost of the scheme is ₹ 91.82 Lakh. The scheduled year of commissioning of said scheme is FY 2024-25.

After details analysis and system study carried out by STU in view of the planned network in the area for RE evacuation Committee did feel the need for the scheme & has deferred the scheme.

Agenda Point No. 22:

Establishment of 220/132/33kV Substation along with associated EHV lines at Kesurdi MIDC, Tal. Khandala, Dist. Satara

MSETCL representative placed before the MTC a proposal for “Establishment of 220/132/33kV Substation along with associated EHV lines at **Kesurdi MIDC**, Tal. Khandala, Dist. Satara”

MSETCL representative submitted that the MIDC has proposed development of Kesurdi Phase – II area. The EHV consumers and HT consumers planned to set up industries in this area.

MSETCL representative highlighted that the Kesurdi MIDC is expected to be developed rapidly. It is near to Pune and National Highway-4. At present, the area near Kesurdi is fed from 132 kV Shirwal S/s – 97/150 MVA.

MSETCL representative added that there is no alternate provision at existing 132/33/22kV Shirwal S/s to meet the upcoming load growth of 80 MW/89 MVA in MIDC area. Considering the load growth, to meet the upcoming load demand and to get load relief at existing 132kV Shirwal S/s, establishment of EHV S/s at Kesurdi MIDC is essential.

MSETCL representative explained scope of Work as follows:

- a. 2x100 MVA, 220/132 kV ICT alongwith HV/LV bays.
- b. 2x100 MVA 220/33-22 KV Power transformers (Dual ratio).
- c. LILO on 220kV Kanadalgaon– Sona alloys line between Loc.No.266-267 (M/c towers)-2 km
- d. LILO on 132kV Lonand- Wai DCDC line at Loc. No. 78 (cut point). Route length – 6.5 kms
- e. LILO on 132kV Bhatghar – Shirwal MCDC line using existing RoW of 132 kV SCMC Shirwal- Iuin line– 4.8 km.

MSETCL representative highlighted objective of the scheme:

- Catering future upcoming load growth of 80 MW in Kesurdi , MIDC area.
- Bringing source nearer to load pockets of Khandala Taluka
- Reducing line lengths of 33 kV feeders.
- Reducing line interruptions / breakdowns and increase system availability.
- Providing reliable and quality supply to customers.

In addition to above, MSETCL representative added benefits of scheme:

In future upcoming MIDC load i.e EHV consumer can be catered from 132kV level.

- Bringing source nearer to load pockets of Khandala Taluka.
- Reduces line lengths of 33/22 KV feeders.
- Reduction in line interruptions / breakdowns thereby reducing line losses.
- Improving Voltage Regulation of area.
- Providing reliable and quality supply to customers.
- The system availability will be increases.

There is saving in losses by 4.84 MW.

This scheme was recommended in 11th MTC for the cost of Rs. **151.58 Cr.**, but due to increase in electrical and civil cost, overall cost of scheme was increased.

The Estimated cost of the scheme is **₹ 21440.82 Lakh**. The scheduled year of commissioning of the cited scheme is **FY 2027-28**

In view of the requirement to fulfill present & future MSEDCL demand in Kesurdi and Khandala, enhance system reliability, after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 23:

Establishment of 220/22KV Suraksha Smart City GIS Substation at Rajavali ,Vasai (East), Tal-Vasai , Dist- Palghar

MSETCL representative placed before the MTC a proposal for the “Establishment of 220/22KV Suraksha Smart City GIS Substation at Rajavali ,Vasai (East), Tal-Vasai , Dist- Palghar”

MSETCL representative submitted that As per MSEDCL proposal, PM Awas Yojna is planned in Vasai Taluka. The load of this scheme is proposed 110 MVA and load of 32 MVA of 100 kV Vasai and 220 kV Vasai substations is proposed to shift on 220/22 kV Suraksha Smart City substation – Total load of 142 MVA. At present, consumers of Vasai & Virar are fed by 220/100/ 22 kV Vasai and 100 /22 kV Vasai substations. 100/22 kV Vasai SS & 220/22 kV Vasai GIS SS are overloaded.

MSETCL representative highlighted scope of work as below:

- 3 x 100 MVA , 220/22 kV Transformers
- LILO on existing 220 kV Kamba-Vasai Line at 220 kV Suraksha Smart City Substation - 0.365 kms.
- 14 x 22 kV Bays
- Remote end Automation.

MSETCL representative added that the scheme is proposed to cater to the load of the Suraksha Smart City area and resolve low voltage issues faced by consumers in the Vasai area which are currently fed by lengthy 22 kV Feeders from 1 00/22 kV Vasai and 220/22 kV Vasai substations. Hence in view of the above low voltage issues, insufficiency of transformation capacities at the above-mentioned substations, and proposed load of Suraksha Smart City, the requirement of 220 kV Suraksha Smart City substation is feasible on 220 kV Kamba-Vasai Line.

MSETCL representative highlighted benefits of the scheme:

- To cater MSEDCL PM Awas Yojna Laod.
- Load relief to existing 100/22 kV Vasai and 220 kV Vasai GIS Substation
- To improve reliability of power supply in Palghar District area.
- Saving in system losses is **3.9 MW**

MSETCL representative highlighted that this scheme was recommended in 10th MTC (AD12) for the cost of Rs. **70.00 Cr.** In earlier estimate tentative block cost of AIS substation is considered. Now it revised by considering GIS with fully automated from remote end. The Estimated revised cost of cited scheme is ₹ **146.61 Crore.** The Scheduled Commission year for scheme is **FY 2027-28.**

CE-STU informed that the scheme is to cater the PM Aawas Yojna for which work is already underway & the said scheme is as per DISCOM requirements.

Considering the additional load requirement of MSEDCL, re-orientation of existing load and voltage Regulation improvement, after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 24:

Conversion of 110 kV SCSC link from 220/110 kV Oglewadi S/s to 110 kV Borgaon S/s

MSETCL representative placed before the MTC a proposal for “Conversion of 110 kV SCSC link from 220/110 kV Oglewadi S/s to 110 kV Borgaon S/s”

MSETCL representative explained that in Satara & Sangli district main network is of 110 kV level. 110 kV Oglewadi - Borgaon SCSC is the main transmission line which is in service since 1963.

MSETCL representative added that the line has given more than 60 years of service life. Single ckt of 110 kV Oglewadi - Borgaon line caters major load & connected to co-gen plant Krishna SSK & HPP Tembhu. Oglewadi - Borgaon line needs to be upgraded to 132 kV level so that Oglewadi - Miraj network can be operated at 132 kV Level. Upgradation of 110 kV Oglewadi – Mayani – 42.03 km to 132 kV level is already completed and commissioned on 15.01.2019. 132 kV new Peth - Borgaon line is also under construction. 90% work is completed. (Oglewadi-Borgaon line construction work will be taken up after the completion of 132 kV Peth - Borgaon line.)

MSETCL representative submitted Scope of work for said Non-DPR scheme:

Conversion of 110 kV Oglewadi - Borgaon SCSC to 132 kV SCDC Line - 30.69 km.

MSETCL representative highlighted Objective of this scheme:

- Level upgradation from 110 KV to 132 KV standard voltage level.

- To enhance line loading capacity.
- To reduce transmission losses .

MSETCL representative highlighted benefits of above scheme:

- Loading capacity of Oglewadi – Tembhu – Rethre - Borgaon corridor will be increased.
- Possibility of accidents due to increased sag can be avoided.
- Tripping of lines reduces .Hence reliability of power evacuation of CO-gen and hydro power will be increased.
- Transmission losses of the line will be reduced.

The Estimated cost of the scheme is ₹ **24.60 Cr.** The scheduled commissioning year for said scheme is **FY 2024-25**

In view of enhance system reliability and stability & fulfill the need for up gradation to 132 kV voltage level after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 25:

Construction 132 kV DCDC link line by making LILO of one circuit of 132 kV Amalner (220 kV Amalner-II s/s) to Nardane to one circuit of 132 kV Amalner (132 kV Amalner-I s/s) to Parola line

MSETCL representative placed before the MTC a proposal for “construction 132 kV DCDC link line by making LILO of one circuit of 132 kV Amalner (220 kV Amalner-II s/s) to Nardane to one circuit of 132 kV Amalner (132 kV Amalner-I s/s) to Parola line”.

MSETCL representative mentioned that the Presently, 132 Kv Amalner & 132 Kv Parola s/s are single source substations fed from 220 Kv Amalner ss through 132 Amalner –I Amalner II SCSC line & 132 Kv Amalner-Parola DCDC line.In case of interruptions of 132 kV AmalnerI ,Amalner II SCSC Line supply of both 132kV Amalner & Parola gets interrupted.

MSETCL representative highlighted that Maintenance point of view, it is difficult to carry out the routine, emergency work due to single line source. To avoid single line source connectivity it is essential to establish LILO on one of the circuits 132 kV Amalner II-Nardana line to LILO on 132 kV Amalner I- Parola Line . 132 Kv DCDC link line will be established on second circuit of 132 kv Amalner-Nardana & Second circuit of 132 Kv Amalner-I –Parola line. Considering populated area of Amlner & Parola city, second line is essential.

MSETCL representative added that, it is not possible to lay second source from 220 kV Amalner(A-II) to 132 kV Amalner –II ss. As per compliances received from Field severe ROW problem, it is not possible to lay the second source from 220 Kv Amalner –II to 132 KV Amalner –I SS. 2nd circuit stringing is already done of 132 Kv Amalner (A-II) to Nardane line & 132 Kv Amalner (A-I)

MSETCL representative explained brief scope of work for above scheme is as follows:

- Construction of 132 kV DCDC link line by making LILO of one circuit of 220 kV Amalner (A-II) to Nardane line to one circuit of 132 kV Amalner (A-I) to Parola line. (RL-17.6 Kms)

MSETCL representative explained objectives of scheme:

- Second line connectivity to 132 kV Amalner –I and 132 kV Parola substation.
- To increase system reliability.

MSETCL representative highlighted benefits of scheme:

- It will eliminate single line source connectivity of 132 Kv Amalner –I SS, 132 Kv Parola SS and enable N-1 criteria to 132 kV Amalner –I –Amalner –II SCSC Line.
- It is beneficial to establish DCDC Line
- It will increase supply reliability.
- This scheme will help for proper maintenance activity of 132 kV Amalner (A-II)- Amalner(A-I) Line.

The Estimated cost of the scheme is ₹ 1530 Lakh. The scheduled commissioning year for said scheme is FY 2026-27.

In order to enhance system reliability, stability and mitigate present N-1 non compliance in the 132kV network after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

Agenda Point No. 26:

Establishment of 220/132 kV Waghdari Substation along with associated lines

MSETCL representative placed before the MTC a proposal for the “Establishment of 220/132 kV Waghdari Substation along with associated lines”

MSETCL representative submitted that Presently, in Akkalkot Taluka there are 2 nos. of 132kV EHV sub-stations and 01 no. of 220kV s/s which are used for the evacuation of solar power & other sugar co-generation.

132kV Waghdari s/s was established in 2004-05 with an installed capacity of 100 MVA (1x50 MVA & 2x25 MVA). 33kV & 132 kV both levels are connected for evacuation of renewable power. This s/s is evacuating power of total evacuation is 220 MW which is overloading the line and s/s capacity. It is observed that this capacity is not sufficient to evacuate present and future generations.

In order, to address generation constraints, at present, the Bus sections of 33kV & 132kV side requires to be kept open at 132/33 kV Wagdari s/s. Also, a special protection scheme (SPS) is provided to restrict line overloading due to generation evacuation connected with Wagdari s/s.

Further, evacuation of these renewable generation from 132kV Wagdari s/s is carried out by only two 132kV lines i.e. 132kV Wagdari-Akkalkot DC line & Akkalkot-Naldurg SC line. Any tripping/breakdown on any one line results in a Back down of generation as well as overloading of these lines, which in turn increases commercial & system losses.

In addition to this, developers have submitted the feasibilities for connectivity at 132kV Waghdari s/s. Due to the non-availability of transmission margin, grid connectivity cannot be issued. As such there is no other alternative available to evacuate the existing & future RE power in the region. Considering the present scenario of 132 kV Akkalkot-Wagdari-Naldurg pocket & upcoming generation in the Osmanabad-Solapur region, the establishment of 220/132/33kV Wagdari s/s is proposed. The proposed 220/132/33kV Wagdari s/s will help to mitigate the transmission margin constraint & to cope with the existing & envisaged renewable generation in the region.

Hence, 220/132/33 kV Waghdari s/s is proposed to address the present transmission constraints, with this sub-station, evacuation of existing & envisaged renewable generation in the region will be smooth & it will also facilitate the evacuation of renewable energy sources in Akkalkot-Waghdari-Naldurg region

MSETCL representative highlighted scope of work:

- 1) 2 x 200 MVA, 220/132 kV ICT with bays.
- 2) 1 x 50 MVA, 220/33 kV transformer with bays.
- 3) Construction of

a) LILO on both circuits of 220 kV Solapur (PG) – Narangwadi DC line at 220kV Waghdari s/s with HPC – 19.509 km

b) LILO on both circuits of 132 kV Waghdari – Tata Solar DC line at 220 kV Waghdari – 3.082 km.

4) 4 x 220kV line bay at proposed Waghdari s/s.

5) 4 x 132kV line bay at proposed Waghdari s/s.

6) 6 x 33 kV outlets at proposed Waghdari s/s.

MSETCL representative highlighted benefits of scheme:

- It will facilitate 600MW evacuation of RE power in Akkalkot – Waghdari - Naldurg area.
- 220 kV & 132 kV network in Akkalkot Taluka will get strengthen.
- Saving in system transmission losses is 4.73 MW.
- The Pay Back Period for this scheme will be after 3years of commissioning of the s/s.

This scheme was previously recommended in Approved in 10th MTC for the cost of Rs. **151.24** Crs.). Due to change in equipment rating due to utilization of HTLS conductor, Cost of CT, WT, Isolator revised. Change in conductor for LILO portion from 0.4 Z ACSR to 525 sq.mm HPC due to which revision in cost of conductor and Line Hardware's. The stringing rate for conductor is revised due to utilization of HPC

The Estimated cost of the scheme is **₹ 229.11 Cr.** The scheduled commissioning year of the cited scheme is **FY 2025-26.**

Considering the Wagdhari & adjoining area being RE rich in order to cater to the evacuation of RE power after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval further Committee Opined the MYT regulation 2019 / 2024 should be followed.

TPC-T Schemes

Agenda Point No. 27

Augmentation of source and transformation capacity of existing 110 kV Powai station & up gradation of 110 kV system to 220 kV

TPC-T representative placed before the MTC a proposal for the “Augmentation of source and transformation capacity of existing 110 kV Powai station & up gradation of 110 kV system to 220 kV”

TPC-T representative submitted that TPC-T has already submitted proposal with feasibility for 220 kV level creation at Powai in 11th MTC with 2 no's 220 kV Source lines from AEML's 220 kV Chandivali RSS. M/s AEML informed that space for only 1 no's 220 kV line bays is available. Hence TPC-T change the scope of 220 kV source line in this DPR to LILO of 220 kV Salsette-Amazon line at 220 kV Powai RSS. Load flow study jointly completed with STU for revised option.

TPC-T representative explained that MMRDA has applied to STU for the 110 kV load @ 57 MVA for proposed Metro Station. TPC-D has applied to STU for 33 kV load @ 90 MVA.

The existing firm transformation capacity (90 MVA) and Source capacity (150 MVA) is not adequate to cater this load demand. MERC has opined to upgrade existing 110 kV Stations to 220 kV level in view of long-term transmission planning. Hence, to meet the existing and future load requirement it will be necessary to augment the existing 110 kV Powai RSS to 220 kV level.

TPC-T representative explained brief scope of the work, as below

- Source line to 220 kV GIS by LILO of 220 kV Salsette-Amazon line (Approx 7 Ckt km cable)
- Installation and commissioning of 220 kV 07 bay GIS.
- Installation and commissioning of 2X160 MVA 220 kV / 110 kV / 33 kV ICT.
- Installation and commissioning of 33 kV GIS bus.

The Estimated cost of the scheme is ₹ 424 Cr and RI cost is 124 Cr. The scheduled commissioning year for the cited scheme is FY 2027-28

In view of the requirement to fulfill present & future load demand, enhance system reliability and considering system point of view, after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval. Considering the cost of the scheme above the threshold limit of TBCB under MYT Regulations 2019/2024 the committee opined that although the scheme involves up gradation of existing Substation and thus can be taken up through RTM route however, the relevant process of MERC approval / appraisal to Empowered Committee as defined in MYT regulation should be followed by STU.

Agenda Point No. 28:**New 22 kV/33 kV bus extension for Discom outlet requirement at Versova, Saki, Panvel, Carnac, Kalyan, Dharavi, Trombay, Vikhroli, Kurla, Malad RSS.**

TPC-T representative placed before the MTC a proposal for “New 22 kV/33 kV bus extension for Discom outlet requirement at Versova, Saki, Panvel, Carnac, Kalyan, Dharavi, Trombay, Vikhroli, Kurla, Malad RSS”.

TPC-T representative explained that to meet Load demand of Discoms at Transmission RSS, this scheme was proposed to MTC. 90% bay extension is there in this scheme. Discom received connectivity from STU for additional outlets requirement from TPC-Ts receiving stations as per above list. But this scheme will be gone in Non-DPR category.

The Estimated cost of the scheme is **Rs. 30 Cr.** The scheduled commissioning of the cited scheme is in **FY 2025-26.**

In view of the requirement to fulfill present & future load demand after detailed deliberation and discussion, the committee has taken note and recommended the scheme for submission to GCC for appraisal.

Agenda Point No. 29:**MV AIS switchgear conversion with GIS at Salsette, Borivali, Mankhurd**

TPC-T representative placed before the MTC a proposal for the “MV AIS switchgear conversion with GIS at Salsette, Borivali, Mankhurd”.

TPC-T representative submitted necessity of work as below:

Salsette – 22 kV MV AIS commissioned in 1991. Existing switchgear is having multiple defects. OEM also stopped the supplying of spares. Also, Discom have requested additional outlets from existing 22kV AIS.

Borivali- 33 kV MVA AIS commissioned in 1996. Existing switchgear is having multiple defects. OEM also stopped the supplying of spares.

Mankhurd- 22 kV MV AIS commissioned in 1998. Discom have requested segregation of back-to-back feeders for network reliability. Also, existing switchgears is having multiple defects & OEM stopped the supplying of spares.

TPC-T representative explained brief scope of work, as below:

- Installation & Commissioning of 22 kV MV AIS to GIS conversion at Salsette & Mankhurd with additional outlets to discom

- Installation & Commissioning of 33 kV MV AIS to GIS conversion at Borivali.

TPC-T representative explained that detail engineering work for MV AIS to GIS conversion is in progress and DPR for these works will be submitted to STU.

In view of the requirement to fulfill present & future load demand, enhance system reliability after detailed deliberation and discussion, the committee recommended the scheme for submission to GCC for approval.

AEML-T Schemes

Agenda Point No. 30:

1000 MW HVDC (VSC based) Kudus-Aarey scheme (Pole-2)

AEML-T representative placed before the MTC a proposal for “1000 MW HVDC (VSC based) Kudus-Aarey scheme (Pole-2)”.

AEML-T representative stated that Mumbai Power Peak demand growth has been 8.5% (last 3-year CAGR). Mumbai System demand ~4300 MW, supply through embedded generation 1877 MW + ~2400 MW import via Transmission Corridor lines. Mumbai Generation 1877 MW includes 930 MW Thermal + 447MW Hydro Generation of TPC and 500 MW Thermal Generation of Adani.

Mumbai Peak Load has reached up to 4306 MW in FY 2025. Considering the load growth @ 3.6%, the load is estimated to be in the range of 5140 MW. Further, estimated point loads on account of Data Centres, EV Charging, New Infra will add ~800 MW. This will add up to total ~6000 MW Peak Demand of Mumbai by FY 2030.

AEML-T representative highlighted that any addition in Mumbai Generation, Not feasible. Hence, all load growth + System contingencies has to be supported by Transmission corridor capacity. As mentioned in Report on ‘PPA Extension of Mumbai Embedded Generation, July 2022’, that estimated Network capacity margin estimated to be significantly eroded post FY2028 and will require Corridor capacity enhancement. ATC margin is estimated to be exhausted by FY 2028. Need to enhance Available Transmission Capacity (ATC) of Mumbai was discussed/ recommended in various forums and reports.

AEML-T representative submitted that as age old generation units are due to be phased out and considering growing Mumbai demand, transmission corridor capacity strengthening is the most critical need for Mumbai.

AEML-T representative highlighted that STU's 10-year plan dated 05/09/2024, outlines HVDC (VSC-based) schemes for Mumbai: **1000 MW HVDC (VSC Based) from Kudus to Aarey (Pole 2), is part of Plan.**

AEML-T representative explained that Kudus, strong upcoming source, ~ 80 kms North of Mumbai, with huge RE feed, as 765kV BOISAR-II / 400kV Velgaon & connectivity with 400kV Kudus under execution. AEMIL already developing 1000MW HVDC (VSC based) link between Kudus to Aarey, with estimated CoD FY2026. (1000MW HVDC scheme (Pole-1) under construction.

AEML-T representative submitted that while recommending said 1000MW HVDC scheme, CEA (vide letter 'I/5525/2019/1307-1310 dated 13.06.2019), also suggested provision of RoW/space for second 1000MW HVDC feed from kudus to Mumbai.

“.....6.0 Keeping in view future requirements, possibility of provisions in terms of RoW and space at Kudus for another 1000MW may be explored along with Kudus to Aarey HVDC link.”

Based on CEA recommendation, space & RoW provision has already been made for additional 1000MW HVDC link Kudus to Aarey (2nd pole), during execution of 1st HVDC scheme (Pole-1) approved by MERC. Accordingly, AEMIL has proposed 1000 MW HVDC (VSC based) Kudus – Aarey (Pole 2) scheme.

1000 MW HVDC (VSC based) Kudus – Aarey scheme (2nd pole), is found to be the most feasible, techno-economical, short construction period and most beneficial scheme for Mumbai power system and ATC.

AEML-T representative submitted that 1000 MW HVDC (VSC based) Kudus – Aarey scheme (2nd pole), is found to be the most feasible, techno-economical, short construction period and most beneficial scheme for Mumbai power system.

AEML-T representative explained brief scope of work as below:

- Extension of 400kV GIS Bays at AEMIL Kudus.
- 1000 MW HVDC (VSC based) Converter S/s (Pole 2) at Kudus and Aarey.
- OH HVDC Line: 30 kms, existing OH line conductor to be utilized. UG HVDC Cable system: 50 km, cable to be threaded through spare HDPE pipes.
- Transit S/sn at Mandvi – Existing Land usage to be optimized.

- 400kV and 220kV GIS Bays at Aarey.
- 3 x 500 MVA 400/220kV ICTs at Aarey.
- Land at Aarey: Existing land usage optimization + ~22,000 sq.m. land adjacent to existing Aarey EHV S/s.
- Land at Kudus – Existing land usage to be optimized..

AEML-T representative explained benefits of the scheme:

1. As per existing network and STU-5 year/10-year plan, extensive upstream and downstream network has been planned out around Aarey, facilitating evacuation of upcoming HVDC feeds across Mumbai including to South Mumbai (through aarey – BKC – Chembur – Trombay).
2. Unlike 400kV HVAC, aforesaid 1000MW HVDC link(2nd pole) shall push another 1000MW to Mumbai, relieving Kalwa/Vikhroli/Kharghar transmission corridors, whereby its capacity may be better deployed for meeting up-coming load (Data Centers, Metro & New Infra projects) for Navi Mumbai/Thane load growth.
3. Another 1000MW feed at Aarey (2nd pole), shall also disburse power towards Borivali / Goregaon/ Versova / Gorai/ Ghodbunder, thereby also relieve North Mumbai corridors i.e. Boisar – Borivali, DTPS/Boisar – Versova/Ghodbunder etc.
4. Schemes shall add 1000MW Transmission capacity, thereby increasing power import capacity (ATC) of Mumbai Network, reduce dependency on Embedded Generation, facilitate sourcing cheaper/ green power to Mumbai Discoms.
5. HVDC technology brings benefits of Capacity addition w/o adversely impacting system fault level, Active/reactive power management, Black start, cable friendly technology to transmit bulk power etc.

The Estimated cost of the scheme is ₹ 8000 Cr. The scheduled commissioning year of the cited scheme is **FY 2029-30**.

In view of the requirement to fulfill present & future Mumbai demand, enhance system reliability after detailed deliberation and discussion the committee recommended the scheme for submission to GCC for approval. Considering the cost of the scheme above the threshold limit of TBCB under MYT Regulations 2019/2024 the committee opined that although the scheme is an addition of pole to the already approved scheme of +- 320 kV 1000 MW Kudus – Aarey HVDC utilizing the substation land and same O/H / Cable line RoW and thus can be taken up through RTM route. However, the relevant process of MERC approval / appraisal to Empowered Committee as defined in MYT regulation should be followed by STU.

Agenda Point No. 31:**400 kV Chandivali scheme (400 kV U/G S/C cable link between Vikhroli S/s-Chandivali S/s)**

AEML-T representative placed before the MTC a proposal for “400 kV Chandivali scheme (400 kV U/G S/C cable link between Vikhroli S/s-Chandivali S/s)”.

AEML-T representative explained that currently, Power flow within Mumbai network is mainly through 220kV / 110kV network. Said network is significantly loaded, as outages for maintenance/augmentation works not so easily granted by SLDC. High Level Committee has suggested 400kV network for strengthening internal transmission network of Mumbai.

AEML-T highlighted that estimated Load in Chandivali/Powai/Saki area has been over 730MW, in view of datacenter load and commercial developments. Currently, feeding in the area is mainly through existing 220kV TPC Saki-TPC Sahar-TPC Salsette/Vikhroli single circuit lines, 220kV AEML Aarey to A-Saki to TPC-Saki double ckt connectivity. Further, MERC has approved DPR for 220kV Chandivali S/s by LILO of Vikhroli-T Saki line. MTC/GCC recently approved Aarey to Chandivali and Aarey to T-Saki single ckt connectivity. Existing & upcoming 220kV / 110kV network appears insufficient to cater to such a volume of load. AEML-T representative submitted that estimated Load in Chandivali/Powai/Saki area has been **over 730MW**, in view of datacenter load and commercial developments. Existing & upcoming 220kV / 110kV network around Chandivali/Powai/Saki appears insufficient to cater to such a volume of load.

AEML-T highlighted that currently, Power flow within Mumbai network is mainly through 220kV / 110kV network. Said network is significantly loaded, as outages for maintenance/augmentation works not so easily granted by SLDC. Higher voltage level i.e. 400kV, augment Power carrying capacity, by optimally utilizing limited RoW. (220kV D/C cable system carries ~500MW, while 400kV system ~ 2000MW, 4X capacity for same RoW).

In view of above, AEML proposes to upgrade 220kV AEML-Chandivali S/s by creation of 400kV level, with connectivity from KVPTL 400kV Vikhroli (S/C 12 Km Route Length), with 3X500MVA, 400/220/33kV Transformers, 400kV Reactor at Chandivali. AEML intends to optimize space usage at its existing facilities (Chandivali) to accommodate proposed 400 kV S/s

AEML-T representative highlighted brief scope of work:

- 400kV S/C U/G 2500 sq mm cable between KVPTL Vikhroli to Proposed Chandivali.(12 Kms Route length)
- 400kV GIS EHV S/s at Chandivali. (3 x 500 MVA ICT + Reactor)
- 400kV GIS at KVPTL Vikhroli.
- Associated Civil Works.

AEML-T representative submitted urgency of this scheme as follows:

- Currently, Power flow within Mumbai network is **mainly through 220kV / 110kV network**. Said network is significantly loaded, as outages for maintenance/augmentation works not so easily granted by SLDC.
- Estimated Load in Chandivali/Powai/Saki area has been over 730MW, in view of datacenter load and commercial developments.
- Existing & upcoming 220kV / 110kV network around appears insufficient to cater to such a volume of load.
- Considering huge load growth in area, 220kV network will need augmentation by creation of 400kV level, so as to handle huge power demand reliably.

Hence, in view of huge upcoming load in/around Powai/Chandivali/Saki area, 220kV network needs augmentation by creation of 400kV level, so as to handle huge power demand reliably. In view of above, AEML proposes to upgrade 220kV AEML-Chandivali S/s by creation of 400kV level with connectivity from KVPTL 400kV Vikhroli

The Estimated cost of the scheme is **₹ 900 Cr.** The scheduled commissioning of the cited scheme is **FY 2028-29.**

The committee opined that, 400 kV Chandivali is a part of new corridor STU plan and based on the provisions of MYT regulation, STU is in the process of issuing guidelines for selection criteria of projects to be routed through TBCB. STU had sought for stakeholder comments and is in the process of finalization of the same. The above project shall be taken for discussion after the said guidelines are issued.

Agenda Point No. 32:

Observation about rise in short circuit level w.r.t. recent faults in AEML-T Network.

AEML-T representative placed before the MTC for “observation about rise in short circuit level w.r.t. recent faults in AEML-T Network”.

AEML-T submitted that recent faults were observed in the EHV S/s, under AEML-T Network:

Saki EHV S/s

- On **3rd Dec 2024, 220 kV GIS Bus-2 (Y Phase Disconnecter)** at AEML Saki EHV S/s tripped due to Three Phase fault.
- Flashover marks were observed due to Fault at 220 kV GIS Bus-2, Y phase, Bus Disconnecter EDS (Earth Disconnecter Switch) of 220kV Bay No.8 (Bus Coupler)
- Operation of 220 kV Bus Bar Protection lead to Tripping of 125 MVA Transformer-2 at 12.31 Hrs resulting in **48.73 MW of load loss** at Saki EHV S/s.
- **Fault current 56.65 kA** was observed, with Heavy voltage dip was experienced by the system.
- Caused major interruption to consumers connected to distribution network of a Licensee connected fed from this Transformer.

Gorai EHV S/s

- On **28th May 2024, 220 kV Bus-1 & Bus-2** at AEML Gorai EHV Substation tripped due to Three Phase fault.
- **Operation of 220 kV Bus Bar Protection lead to Tripping of 125 MVA Transformer-1 & 2** at 17:59 Hrs resulting in total blackout of Gorai EHV Sub Station.
- Caused major interruption to consumers connected to distribution network of a Licensee connected fed from these Transformers.
- **Fault current of magnitude 58.6 kA** was observed, with Heavy voltage dip was experienced by the system.
- **Load loss of 491.5 MW** was observed (including actual load loss of ~ 100 MW at Gorai EHV S/s).
- As per CEA Planning criteria 2023, (Ch. 5 : Substation Planning), *“the maximum short-circuit level on any new substation should not exceed 80% of the rated short circuit capacity of substation equipment...”*
- The fault current rated designed capacity 50KA, which has been exceeded as observed during recent fault.

AEML-T submitted chronology , after event of faults observed as follows:

Saki EHV S/s

- On 24.12.2024 (02.01.2025 vide Email), Equipment Failure Report submitted to Member Secretary, Standing Committee, CEA. Vide letter no. AEML-T/MT/O&M/CEA/03/2024-25
- On 09.12.2024 AEML submitted Tripping Report of 220kV Main Bus - 2 at AEML Saki to SLDC & WRPC.

Gorai EHV S/s

- On 30.05.2024 Grid Event Report : Mumbai Region (No. 01063) received from SLDC.
- On 11.06.2024 AEML submitted Analysis Report on Tripping of 220kV Main Bus -1 & 2 at AEML Gorai on 28.05.2024 to SLDC.
- On 05.07.2024 AEML submitted Letter to STU, regarding High fault level in MMR system observed during Bus fault t Gorai EHV S/s.
- 10th MTC discussion, & Joint site visit on 31.07.24
- On 07.10.2024, AEML letter to STU for System study & remedial measures.
- 11th MTC issue was discussed on 16.10.2024

After detailed deliberation and discussion, the Committee directed STU to form a Committee for concrete integrated study, in this matter and directed STU to submit a detailed analysis report with mitigation measures by next MTC.

Additional Agenda

TPC-T Schemes

Agenda Point No. AD1:

Installation of 220 kV/22 kV RSS at Kailash Nagar, Waghle Estate, Thane

TPC-T representative placed before the MTC a proposal for the “Installation of 220 kV/22 kV RSS at Kailash Nagar, Waghle Estate, Thane”

TPC-T representative explained that to meet Load demand of MSEDCL in the Wagle Estate , Thane, this scheme was proposed. Brief scope of work under this scheme:

- LILO of 220 kV Salsette – Borivali line by using corridor of existing 110 kV Salsette-Kolshet line.
- 220 kV GIS (07 bays including PTs) and 22 kV GIS (43 bays including PTs) along with Protection, Communication and Automation.

- 220 kV / 22 kV, 2X125 MVA Transformers & with space provision for additional 125 MVA Transformer

TPC-T representative highlighted status of scheme as follows:

- Hon'ble chairman & MD of MSEDCL has accorded the approval for erection of new Kailas Nagar EHV Substation at Wagle estate, Thane by M/s Tata Power. The proposal for the same was submitted on the Director(operations) MSETCL on 14.11.2024.
- On 20th Dec-2024, STU requested technical feasibility for establishment of 220/22kV Kalilash Nagar station at Wagle estate, Thane.
- Subsequently, TPCT has submitted technical feasibility for the same on 02.01.2025 with feasibility for 220 kV substation instated 110 kV station as directed in 10th MTC.
- Detail tower wise survey completed by TPC-T & with minimum towers line will be erected.
- Existing 110 kV Salsette-Kolshet line COD is 1970 & Wildlife forest act was published in 1980.Hence as per communication by forest office, for proposed line new permission is not essential. Permission for re-orientation of existing line will be provided by forest office.

The committee directed TPC-T to carry out joint study and based on study outcome, the proposal will be discussed in next MTC for further needful.

Agenda Point No. AD2:

Up gradation of existing 110 kV Parel S/s by creation of 220 kV level

TPC-T representative placed before the MTC a proposal for the “Upgradation of existing 110 kV Parel S/s by creation of 220 kV level”.

TPC-T representative explained that the 110 kV Parel RSS is having Transformation capacity is 515 MVA. As per CEA’s substation planning criteria maximum Transformation capacity at 110 kV level is 500 MVA. The existing firm transformation capacity @ 33 kV bus is 150 MVA & 33kV peak load is 130 MVA and is not adequate to cater load demand BEST & TPC-D

TPC-T representative highlighted that BEST has applied for 33 kV load @ 119 MVA. TPC-D has applied for 33 kV load @ 90 MVA. MERC has opined to upgrade existing 110 kV Stations to 220 kV level in view of long-term transmission planning. To meet the existing and future load requirement it will be necessary to augment the existing 110 kV Parel RSS to 220 kV level.

TPC-T representative submitted brief scope of works:

- Source lines, as approved by MERC, 220 kV Parel-Mahalaxmi line (7 Ckt km) is already commissioned in view of 220 kV Parel and 220 kV Trombay –Carnac-7 LILO line at proposed 220 kV GIS at Parel RSS. (Approx 6 Ckt Km cable).
- Installation and commissioning of 220 kV 07 bay GIS.
- Installation and commissioning of 1X 250 MVA 220 kV / 110 kV / 33 kV ICT & 1X 125 MVA 220 kV/ 33 kV Transformer with future provision for additional 125 MVA power Transformer
- Installation and commissioning of 33 kV GIS bus sections

BEST representative submitted that there is redevelopment works in that area. Further CE-STU asked from TPC-T that is study part for said scheme was completed? TPC-T representative answered that they have submitted feasibility proposal to STU. Therefore, CE-STU said Joint study shall be completed for this scheme, before final conclusion.

The Estimated cost of the scheme is **₹ 350 Cr. and RI cost ₹ 100 Cr. This scheme will commissioned in FY 2026-27.**

The committee directed TPC-T to carry out joint study and based on study outcome, the proposal will be discussed in next MTC for further needful

Member Convener, MTC offered the vote of thanks to all the MTC members and other participants and concluded the 12th MTC Meeting.

Chairperson –MTC
Chief Engineer (STU)