

(A Govt. of Maharashtra Undertaking)
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OFFICE OF CHIEF ENGINEER (DISTRIBUTION)
Plot No.G-9, 'PRAKASHGAD', Prof. Anant kanekar Marg,
BANDRA (E), MUMBAI -400 051
Phone: (022)26472131/26474211 Fax: (022)26472937
E-mail : cedistmsedcl@gmail.com
Website : www.mahadiscom.in

CE(Dist)/D-III/Req. of Land/ 28792

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Circular

Sub: - Revised Guidelines for Requirement of adequate land for Distribution Transformer Centers and Substations while releasing connection to Residential/Commercial/Industrial etc. complexes/township/establishments, having multiple numbers of connections.

- Ref:-** 1) CE(Dist)/D-III/Circular/22197 dated 20.05.2008
2) CE (Dist)/D-III/15754 dated 06.06.2012
3) Urban Devp. Dept. GoM Notification no. TPS-1812/157/CR71/12/12/REC no 34/12/UD 13 dtd 21/11/2013
4) CE (Dist)/D-III/ Req. of Land/Committee/29454 dtd. 20.09.2014

In order to follow uniform practice, to avoid hardship to prospective consumers and to remove the difficulties in release of new connections of individual LT residential / Non domestic consumers, group of LT non domestic & residential complex , Agriculture consumers and LT industrial individual and group consumers the guidelines were issued vide reference circular (1).

Further, to determination of the load of residential and commercial premises of the complexes/societies and the requirement of adequate land for various types of Distribution transformer centers and various substation/switching stations were issued vide reference Circular (2).

A committee was formed to review the load growth, load pattern in different zones and areas, criteria of determination of load of residential and commercial premises in complexes and adequacy of the land required for various types of distribution transformer centers, HV & EHV sub-station/ switching station required to accommodate the load demand. A committee in view of the regulatory provisions/ State Govt. notifications studied the mentioned aspects in three categories of Cities/Towns viz. 1) Mumbai Metropolitan Area, Pune & Nagpur 2) Municipal Corporation Areas 3) Other than Municipal Corporation areas.

After a review and approval of competent authority, the following revised guidelines are hereby issued in subject matter.

A) Determination of Load of Residential /Commercial/ industrial premises in complexes / establishments

On receipt of such application, the Total load of such Complexes/establishment shall be determined.

The criteria of Load calculation of categories are revised as follows. The load shall be assessed accordingly.-

Sr. No.	Class of premises	Connected load/ Sq.Mtr. carpet area.
1	Residential	75 W/Sq. Mtr.
2	Commercial with central air-conditioning	200 W/Sq. Mtr.
3	All other Commercial establishments	150 W/Sq. Mtr.
4	For all other categories	Load actual mentioned in application /A1 form

B) Determination of capacity of Distribution Transformer/s for complexes

The estimated category wise load shall be determined considering, the following diversity factor

Sr. No.	Class of premises		Diversity Factor
1	Residential	Carpet area upto & including 500 sq.ft.	1.5
		Carpet area above 500 sq.ft.	2.5
2	Commercial with central air-conditioning		1.5
3	All other Commercial establishments		1.5
4	Other categories		1.5

The transformer capacity shall be determined considering the effective load so determined.

C) Determination of Requirement of Sub-station for Residential/commercial / industrial complexes/establishments

1) 22/11 kV & 33/11 kV Substation

- i. If the load of complex/township/group establishments etc. is more than 5 MVA in Mumbai Metropolitan Area, Pune, Nasik, Aurangabad, Thane, Nagpur & more than 3 MVA in all other area but up to and including 20 MVA; 33/11kV or 22/11kV substation of appropriate capacity shall be proposed. If the load is more than 10 and upto 20 MVA; two feeders of 10 MVA each capacity shall be proposed.

- ii. Power supply to the complex/township/group establishments etc. shall not be allowed through Switching Stations **except** in extreme circumstances where if in EHV sub-station no space for 22kV Bay for separate feeder requires to release the load to complex/establishment is available and if it is technically feasible to release the load on existing nearby feeder.
- iii. In this case, concerned Superintending Engineer, O & M Circle after examining all the possible alternatives for establishment of substation and due verification of the proposed switching station will forward the proposal with justification to the concerned Chief Engineer (O&M Zone).
- iv. Concerned Chief Engineer,(O&M) Zone will forward the proposal with recommendation along with rationale to The Chief Engineer (Distribution), Corporate office for the approval of competent authority i.e. Director (Operations).

2) EHV Substation

If the load of complex/township/group establishment etc. is more than 20 MVA EHV substation of appropriate capacity shall be proposed.

D) Requirement of Land for establishment of Distribution Transformer centre/s

Sr. No.	Type of DTC	Suitable Land requirement
1	Distribution transformer centre (Indoor)	25 Sq. Mtr.
2	Distribution transformer centre (Outdoor)	25 Sq. Mtr.
3	Distribution transformer centre(compact)	10 Sq. Mtr.

Note:

- a) As per DCR Mumbai 1991 the minimum land provision for one DTC is 5mtr X 5mtr i.e. 25 sq.mtr. with max. Height 5 mtr.
- b) Necessary clearances to be maintain/observed as per latest CEA Regulations while establishment of Distribution transformer centers. Especially in case of Indoor DTC adequate Height of the ceiling shall be maintained.

E) Requirement of Land for establishment of Sub-station & Switching Station

1. Suitable Land requirement for installation of various types of sub-station

Sr. No.	S/Stn	Land Requirement
1	GIS 22/11 or 33/11 KV opted under DDF	600 Sq. Mtr.
2	Indoor 22/11 or 33/11 KV for metropolitan and corporation area	For one Power transformer:1200 Sq. Mtr.
3	Indoor 22/11 or 33/11 KV for metropolitan and corporation area	For Two Power transformer:1500 Sq. Mtr.
4	Hybrid 22/11 or 33/11 KV (22or 33 kV outdoor and 11kV indoor) for metropolitan and corporation area	2800 Sq. Mtr
5	Outdoor 22/11 or 33/11KV	4000 Sq. Mtr.
6	Outdoor 22 KV Switching station	2800 Sq. Mtr.
7	Indoor 22 KV Switching station for metropolitan and corporation area	600 Sq. Mtr.
8	Indoor/Outdoor/GIS EHV Substation	As per the requirement of MSETCL

Note:

Chief Engineer (O&M) is authorized to take a decision regarding requirement of Indoor 22/11 or 33/11 KV instead of Hybrid Substation 22/11 or 33/11 KV (22or 33 kV outdoor and 11kV indoor) for metropolitan and corporation area.

2. As per the provisions in MERC (Electricity Supply Code and Other Conditions of Supply) Regulations 2005 and Various Standardized Development Control and Promotion Regulations of Urban Development Department, Government of Maharashtra, it is the responsibility of the Developer/Builder /Owner/Applicant to provide the adequate developed land required for Establishment of Distribution transformer Centre/s and sub-station.

Applicant may be requested to make available the required suitable piece of land for the Establishment of distribution network for providing the power supply to the establishment by way of lease agreement of Rs 1/- annually for the period of 99 years.

3. If land is not suitable for feeder outlets then developer shall carryout trench work with suitable stack and trench covers as per approval by MSEDCL.

4. The Developer/Builder /Owner/Applicant can option under DDF to develop, erect and commission substation and necessary allied infrastructure for getting power supply for his establishment either by paying 1.3% supervision charges towards estimated cost to MSEDCL or by 100% payment to MSEDCL for establishing the said work mentioned.
5. If Developer/Builder /Owner/Applicant provides the required land to MSEDCL and MSEDCL develops, erects and commissions substation and necessary allied infrastructure, then it shall be treated as Non-DDF.
6. On receipt of the application for requirement for such power supply and after determination of the requirement of DTC or Substation,
 - i. If the land required is for Distribution transformer centre/s only, then concerned Executive Engineer (O & M) Division along with Sub-division Incharge shall visit the site for finalization of the location.
 - ii. If the land required is for 33/11 or 22/11 kV Sub-station along with Distribution transformer centres, then Concerned Superintending Engineer (O & M) Circle, The Executive Engineer (O & M) Division along with Sub-division In charge shall visit the site for finalization of the location.
 - iii. If the land required is for EHV Sub-station then concerned Superintending Engineer (O & M) Circle along with concerned Superintending Engineer (Civil) zone MSETCL shall visit the site for finalization of the location.

7. Development in Phased Manner :

The following procedure shall be followed for releasing the power supply in case of the Development of Complexes/Township/establishments is approved in phased manner

- If in case the approved plan of development is in phased manner and if Determined load of phase-I is up to and including 20 MVA, same procedure shall be followed as mentioned above.
 - If In case Phase-I's determined load or determined cumulative load of phase-I and additional phase is more than 20MVA, then EHV substation shall be proposed by following the above procedure.
8. In circumstances of non availability of adequate land / scarcity of land at applicants premises, Developer may provide to MSEDCL/MSETCL
 - The land from Amenity Space after fulfillment of required necessary compliances of Local Bodies (Municipal Corporation, Municipal council etc.) by making payment at their end to the local authority

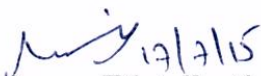
OR

- The alternate desired land in nearby area with mutual agreement as a relief to existing substation on which prospected applicant's load considered. In such case, Developer shall either bear the total estimated cost of infrastructure or shall develop such infrastructure required for diversion of the load from the existing substation and to release the load of developer as per the provisions MERC (Electricity Supply Code and Other Conditions of Supply) Regulations 2005 as amended from time to time.
- 9. In case, Developer/Builder/Applicant spares and hand over the required land for Substation/Switching station for releasing of power supply to the Complexes/Township/establishments and afterwards in future demands additional power supply and if the total determined load (as per above mentioned procedure) is up to and including 20 MVA; No additional land for substation/switching station shall be demanded from same Developer/Builder/Applicant.
- 10. In case if Group of Developers/ Builders/Applicants in close vicinity (i.e. having adjacent plots and common boundaries) with common approved plan are ready to spare and hand over common single piece of required land for substation/switching station; MSEDCL shall allow this and no separate land shall be demanded from individual Developer/Builder/ Applicant from this group.

11. Other Instructions:

- a. The temporary connection/construction meter shall be released only after earmarking of required land and leasing the same to MSEDCL.
- b. The temporary connection/construction meter shall be released by using pre-paid meter only.
- c. Necessary safety Rules and regulations shall be observed as per latest CEA Regulations for all the Indoor/outdoor/ compact type substation, any substations in the basement using dry type transformers and all such electrical installations.
- d. The delay or non release of power supply due to non compliance of the necessary provision/s in the circular shall be at the risk and cost of developer/Builder/Owner/ applicant.
- e. In case of new consumer (coming later) the expenditure needs to shared in proportion subject to availability of capacity.
- f. Also, the DDF (First developer) will give a undertaking allowing to use the infra subject to payment by new developer.

All the Field officers are directed to follow the guidelines strictly from immediate effect


Chief Engineer (Distribution)

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