

Maharashtra State Electricity Distribution Co. Ltd.

Office of the Chief Engineer (Distribution)



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CIRCULAR

Sub: - Requirement of adequate land for Distribution Transformer Centers and Substations while releasing connection to bigger societies/builders.

Ref: - CE (Dist)/D-III/Circular/22197 dated 20.05.2008

Guidelines were issued vide referenced circular for releasing connections to residential societies & commercial complex where Distribution Transformer or Sub-station is required to be established the provision of land to accommodate the same shall be made by developer. In circular how much space to be required for Distribution Transformer or Sub-station was not specifically mentioned. Number of complaints were received to corporate office regarding the acquiring the different size of land in different Zones and areas. A committee was constituted of Chief Engineer, Bhandup, Kalyan & Pune to streamline land requirement for various type of Distribution Transformer Centers and Sub-stations. A presentation was made to Hon. M.D. on dated 05.04.2011 in presences of Director (Operations) and Director (Projects) on committee's recommendations and comments thereof at corporate office. A detailed discussion was made during presentation and subsequent Board Resolution 101, item 7 dtd. 7th May 2012 following guidelines are hereby issued in the subject matter.

1. Load calculation of residential and commercial categories should be assessed and as per below-

Sr. No.	Class of premises	Connected load/Sq. Mtr.
1	Residential	75 W/Sq. Mtr.
2	Commercial	
(a)	Hotel with central air-conditioners	300 W/Sq. Mtr.
(b)	Offices, Shops, Residential hotels and other commercial establishments	200 W/Sq. Mtr.

For other categories load mentioned on A-1 form should be taken in consideration and loading of Distribution Transformer should be 100% considered.

2. Land requirement for installing Distribution Transformer Center after considering the above load calculation –

Sr. No.	Type of DTC	Land requirement
1	One Distribution Transformer Center with RMU	22 Sq. Mtr.
2	Two Distribution Transformer Center with RMU	40 Sq Mtr.
3	Compact DTC	10 Sq. Mtr.
4	Two Story DTC	15 Sq. Mtr.

3. Land requirement for installation of various types of sub-station after considering the above load calculation –

Sr.	S/Stn	T/F Capacity	Incomer	Outgoing	Land Requirement
1	Indoor 22/11 or 33/11 KV (including GIS)	2x5 or 2x10 MVA	2	6	1000 Sq. Mtr.
2	Outdoor 22 KV Switching	---	2	6	2800 Sq. Mtr.
3	Indoor 22 KV Switching	---	2	6	600 Sq. Mtr.
4	Outdoor 33/11KV (Generally for rural area)	2x5 or 2x10 MVA	2	6	4000 Sq. Mtr.

-As per society/complex load, land for additional Power Transformer including switchgear to be taken in possession for redundancy.

Note: Zonal Chief Engineer is authorized to allow 10% variation in above land requirement of sub-station only. For variation above 10% Director (Operations) is authorized.

4. The procurement of the land shall be done as per Regulation No. 5.5 of Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Other Conditions of Supply) Regulations, 2005, by signing lease agreement for the whole period of supply to premises by mutually agreed terms.
5. The Infrastructure including land for sub-station in MIDC area should be developed by MIDC.
6. Following safety measures shall be observed while installing Transformer-
- The location of transformer is a prime important and requirement of surrounding changes with type of transformer i.e. Oil immersed and Dry type transformer.
 - Be sure that the surface to which the transformer to be mounted is sufficiently strong to support the weight.
 - Oil immersed Transformers are preferably to be installed in a detached building so that it does

not present a fire hazard to any other building or property, and the interior is accessible only to qualified persons. The oil immersed transformer to be installed indoor, then it must be on ground floor only and the room must have 3-hr. fire resistance. All indoor transformers should be installed at least 3 ft away from building walls.

- If installed transformers quantity is more than one then fire barriers generally consisted of 1 hr. fire-rated materials must be placed in between.
- For dry-type transformer select a place that has the driest and cleanest air possible for installation of open ventilated units. Avoid exposure to dripping or splashing water or other wet conditions. The outdoor application requires a suitable housing or rain shields. There installation shall not expose to lightning stroke or heavy switching transients.
- The Dry-type transformers are insulated and cooled by air the cooling arrangement provided/suggested by manufacturer is a part of installation and it must be fulfilled.

All field officers are requested to follow above guidelines strictly.


Chief Engineer (Distribution)

Copy s.w.r. to:

The Managing Director, MSEDCL
The Director (Operations), MSEDCL
The Director (Projects), MSEDCL
The Director (V & S), MSEDCL
The Director (Finance), MSEDCL
The Executive Director (CP)/ (Project)/ (Comm), MSEDCL.
The Regional Executive Director, Kalyan/Pune/Nagpur, MSEDCL

Copy f.w.cs. to:

The Chief Engineer (IR & QC)/ (Comm)/ (APDRP)/(Infra), MSEDCL.
C.G.M. (IA)/ (IT), MSEDCL.

Copy to:

All Superintending Engineers, O&M Circles.
All Executive Engineers, O & M Divisions.

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The O.S.D. To M.D, MSEDCL.