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CE (Dist.)/D-III/EHV/Circular/ 27960

Date: 06.09.2014

CIRCULAR

**Sub: Guidelines for framing proposals regarding Establishment of New EHV Substations/
Augmentation / additional power transformers.**

Ref: 1. CE(Dist)/D-III/Circular/22197 dtd.20.05.2008

2. Office Note approved vide No. CE (Dist.)/D-III/EHV s/s/1273 dtd. 20.08.2014.

In order to discharge the universal supply obligation u/s 43 of EA 2003 and as per MERC (Electricity Supply Code and other conditions of Supply) Regulation, MSEDCL is taking extensive efforts to provide the power supply to large group of consumers in shortest possible time since last few years. For this purpose, MSEDCL through special schemes develop infrastructure on priority and release connections. Zonal Chief Engineers and their field officers regularly and proactively review the developments taking place in their Areas; plan and prepare schemes / DPR for creating infrastructure for releasing new electric connections in the areas and obtain funding from Financial Institutions and keep the works on shelves and in appropriate cases keep the contracts and materials (in case the work is to be done through non-turnkey contractors) ready for execution. As soon as demand from potential consumers come, the work under these schemes is executed and new power supply is released. In areas where fast, concentrated and large developments are taking place; the field officers proactively plan and create backend infrastructure such as creation/up gradation of substations to meet immediate future demand. The clear cut guidelines in this regards have been issued vide circular under reference (1) and presently in force.

It is observed that to create / strengthen the back end Infrastructure at EHV level such as creation or upgradation of EHV substations, the proposals are initiated from various nodes from the field and process to various different authorities of MSETCL.

In order that field engineers should follow uniform practice throughout the State and to have close monitoring of EHV proposals, following guidelines are issued.

Henceforth, all the EHV proposals from the field will be submitted to corporate office for approval. The proposal will be scrutinised by the Chief Engineer, Distribution and will put up to the competent authority i.e. Director (operations).

The Proposal shall contain the following:

1. The EHV and HV network diagram on District map.
 - a. Existing source of EHV substations, 33/11,22/11 kV Substations/switching stations along with capacity

- b. 33/22 kV HT line network diagram drawn on district map
 - c. Proposed EHV Substations along with capacities of 33/11 KV, 22/11KV Substations, Switching stations and length of relevant 33 KV feeders.
2. % V.R. calculation of existing feeders and proposed feeders initiated from existing EHV substation and of feeders diverted on proposed EHV substation (which will be treated as new from proposed EHV substation)
 3. Energy loss calculation of existing feeders and proposed feeders. (Annual energy Loss-AEL)
 4. Maximum and average loading on existing EHV substations and 33/11 kV substations, 22/22 kV switching substations and 22/11 kV substations to be considered while proposing new EHV s/s.
 5. Load bifurcation sheet from 33/22KV loadings (in the enclosed format prescribed by MSETCL-14 columns)
 6. Load growth for proposed substation / feeders.
 7. Single line block diagram showing existing networks of EHV substation with existing /proposed 33/22 KV networks and on the same proposed EHV substation where clear-cut marking of diverted 33/22KV substation network.
 8. To consider the possibility of diversion of future load growth on existing / proposed EHV substations in the way of augmentation / additional power transformers.
 9. To consider possibility of inter linking 33 kV lines for shifting future load growth / overloaded EHV substations on other existing / newly proposed EHV substations so that the capacity of loaded EHV s/s can be spared.
 10. Distance between nearest existing and proposed EHV substation to be given.
 11. While framing the proposal the availability of Government/Private land to be taken into consideration.
 12. The load centre for newly proposed EHV substation to be finalised in coordination with Testing Engineers and local MSETCL Authorities.
 13. Technical justification note to be submitted by field offices.
 14. The proposal should be scrutinised in deep at Circle/Zonal level and then only to be submitted through the Chief Engineer of respective Zones.
 15. Zonal Chief Engineer should submit separate justification note considering the load details of the concerned circles for the proposal of EHV substations with facts and figures.

The following technical aspects to be considered while framing the proposal :

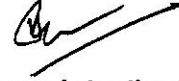
- a) To reduce the length of existing 22 KV/33KV feeders thereby reduction in Technical losses & improvement in % V.R.
- b) To reduce interruptions / breakdowns & to attain customer satisfaction.
- c) To accommodate the forthcoming load of rapidly growing Industrial / commercial / Residential sector.
- d) To give load relief to the existing overloaded EHV Substations.

- e) All the information shall be made available in soft (i.e. in MS Excel) & shall be updated regularly and such information be submitted to Corporate Office quarterly for ARR purpose.

All field officers are requested to follow above guidelines strictly.

The said circular is available on MSEDCL website.

Encl.: Load Format



Chief Engineer (Distribution)

Copy s.w.rs. to:

1. The Director (Operations), MSEDCL, Corporate Office, Mumbai.
2. The Director (Projects), MSEDCL, Corporate Office, Mumbai.
3. The Director (Finance), MSEDCL, Corporate Office, Mumbai.
4. The Director (Operations), MSETCL, Corporate Office, Prakashganaga, Mumbai.
5. The Regional Executive Director – I / II / III, MSEDCL, Kalyan / Pune / Nagpur.

Copy f.w.cs. to:

1. Chief Engineer, Commercial, MSEDCL, Corporate Office, Mumbai.
2. Chief Engineer (STU), MSETCL, Corporate Office, Prakashganaga, Mumbai.
3. Chief Engineer (Project & Designing), MSETCL, Corporate Office, Prakashganaga, Mumbai.
4. O. S. D. To M. D., MSEDCL, Corporate Office, Mumbai.
5. The All Chief Engineers, MSEDCL, O & M Zones,

Copy to:

1. All Superintending Engineers, MSEDCL, O & M Circles,
2. All Executive Engineers, MSEDCL, O & M Divisions,

Details of load on existing 220/132/33 kV and on proposed new EHV substation.

| Sr. No. | Name of EHV s/s | Installed capacity MVA/Max Demand in MW | No. of 33 kV & 22KV feeders emanating from EHV s/s | No. of existing 33 kV s/s | Installed capacity MVA/Max demand in MW of 33 kV & 22KV s/s | No of 33 kV s/s & 22KV s/s with proposed installed capacity | No. of 33 kV s/s & 22KV to be diverted on newly proposed EHV s/s with capacity. |
|---------|-----------------|---|--|---------------------------|---|---|---|
| 1 | Existing | | | | | | |
| 2 | Existing | | | | | | |
| 3 | Proposed | | | | | | |