MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.
(A Govt. Of Maharashtra Undertaking)
CIN : U40109MH2005SGC1536

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CIRCULAR

Subject- Infrastructure development for release of new connections.

As per Electricity Act 2003, section 43, duty to supply on request, read with section 46, recovery of charges, whenever supply of electricity to the premises requires extension of distribution lines or commissioning of electric lines and electric plant, the State Commission may by Regulation authorize a distribution licensee to charge from a person requiring a supply of electricity any expenses reasonably incurred in a providing any electric line or electrical plant used for the purpose of giving that supply.

The State Commission vide its Regulation (Electricity Supply Code and other Conditions of Supply Regulations, 2005 [Supply Code Regulations]) and Standard of Performance Regulations, 2014 (SoP Regulations) has provided for the recovery of expenses reasonably incurred in providing electric line or electrical plant used for the purpose of giving supply. Apart from other provisions, specific provisions are covered under Section 5.5 and Section 5.7 of Supply Code Regulations wherein the Developer/Builder/Owner/Applicant has to make available suitable piece of land to be used by the Distribution Licensee for extending the supply. Further, Section 5.6 stipulates provision of land or room for installation of electric equipment to provide supply to premises.

In existing practice, discretion is being exercised by the Builder/ Developer/Applicant/Owner and also by officers of MSEDCL mainly in cities in metropolitan areas where the infrastructure is developed by Builder/ Developer/Applicant/Owner at their cost under DDF scheme. This Infrastructure development under DDF is being done by the Developer/Builder/Owner/Applicant by recovering the cost from individual

consumers by charging them. In other areas and for other consumers/ categories, MSEDCL compulsorily develops such infrastructure (except Industrial DDF case) and claims such expenditure in Annual Revenue Requirement (ARR). Therefore, to bring uniformity, the Board of Directors of the Company vide Resolution no. 1055 dated 21st November, 2017 has resolved that all the electrical infrastructure to supply electricity to a person upto distribution mains will be developed by MSEDCL at its own cost (except in case of DDF- Sec 3.3.3 and Sec 3.3.5 of Supply Code Regulations) and will claim the expenditure in ARR as per governing regulations.

It is also necessary to implement the provisions of Regulation and other provisions of Planning Authority in respect of the requirements for Electrical Infrastructure. Accordingly, the Developer/Builder/Owner/ Applicant should necessarily spare the required land and ROW for infrastructures like Substation, Distribution Transformers, HT/ LT lines etc. as per the Regulation of MERC (Section 5.5 to Section 5.7 of Supply Code Regulations) and as per the Development Control Rules (DC Rules) of the Planning Authority of that particular area.

To bring uniformity, transparency following procedure is issued for implementation.

1) Whenever providing supply to the premises requires extension of distribution Lines or commissioning of 33/11KV or 22/11 KV substation and / or Augmentation / extension of DTC, HT/LT lines etc. the work for this infrastructure is to be carried out by MSEDCL (except in case of DDF) as per the provisions of section 43 and 46 of the Electricity Act 2003, and the subordinate regulation Sec 5.5 to 5.7 of the Supply Code Regulations and also the provisions of Development Control rules of the Planning Authority of that particular area.

2) The Board of Directors has thus resolved that all the electrical infrastructure to supply electricity to a person upto distribution mains will be developed by MSEDCL and the expenditure will be claimed in ARR as per regulations. Accordingly, the procedure for carrying out infrastructure development to release new

connections in consonance with statutory and legal provisions under various Regulations of MERC and also the provisions under the Development Control (DC) Rules of the concerned Planning Authority is given here under.

A) Guidelines:-

(1) These guidelines shall be applicable for release of new connection only under Residential, Commercial, Industrial categories including Residential Co-Operative Societies /Group of consumers/connections (except Industrial DDF cases).

(2) MSEDCL shall develop, erect and commission electric lines and any electric plant (substation, DTC etc.) and necessary allied infrastructure up to distribution mains in all cases.

(3) The Developer/Builder/Owner/Applicant shall provide the required land as per Development Control (DC) Rules of the Planning Authority of that area and / or MERC regulations (Supply Code Regulations) section 5.5 - 5.7. The concerned MSEDCL Authority shall necessarily refer to the DC Rules of the local Planning Authority of that areas in which electricity supply is required and shall ensure that the land as envisaged statutorily/legally is transferred to MSEDCL (by way of Registered document / Govt. order / land revenue records) [Eg. in case a township is being developed in "XYZ" Municipal Corporation area, the Development Control rules of "XYZ" Municipal Corporation shall be referred to with regards to provision for providing electricity and the same needs to be complied by the Developer/Builder/Owner/Applicant]. This is the Mandatory Condition and the MSEDCL Competent Authority at field has no powers to deviate from the same. If the DC rules are silent on the issue with regards to the Provisions for Supply of Electricity then as per regulations, Supply Code Regulations, section 5.5 to 5.7, adequate land as specified in section 5.5 needs to be taken from the Developer/Builder/Owner/Applicant.

The Land/RoW to be made available by the Developer/Builder/ Owner/Applicant.

(4) Such piece/s of required land must necessarily be leased and registered in the name of MSEDCL before release of either temporary or permanent connection for construction purpose and registration charges as applicable shall be borne by the Developer/Builder/Owner/Applicant and land should be physically transferred for possession of MSEDCL. Provided further that, such land / space / room should be taken on lease for 99 years Rs.1per year lease rent and the transfer document shall clearly have this condition. However, in case of projects, where phase wise development is proposed, lands required for first phase of the project must be leased & registered in the name of MSEDCL before release of temporary connection. Further, an undertaking from the builder/developer/consumer applicant in the prescribed format (Annexure-A) shall be taken for handing over of the balance land before start of the next phase. Further, this land shall be clearly marked on the sanctioned plan. The temporary connections shall be given phase-wise only. No temporary connection shall be given for next phase unless the balance land for distribution/ EHV Sub station is transferred & registered in the name of MSEDCL. Any extension from temporary connection of phase one to other phase will be treated as un-authorised extension of load & shall be liable for action under section 126 of Electricity Act 2003 (Unauthorised extension).

If the Developer undertakes to provide lands in 2nd or 3rd phase, then concerned S.E. (O&M) circle shall write to local body / Municipal Corporation regarding the requirement of land for substation and shall request not to sanction next phase development unless the required land for substation & lines is marked on the proposed phase. The land so provided by the builder/developer/applicant/owner should be fully developed and suitable for developing the electrical

infrastructure and shall not require any cost to be incurred by MSEDCL for levelling etc. except cost for erecting electrical infrastructure.

(5) Since the infrastructure developed on such land for providing connections to the applicant will be developed by MSEDCL the same will be common infrastructure of MSEDCL and shall not be dedicated for premises / consumer/ group of consumers. MSEDCL will be at liberty to release connection to other applicants from such infrastructure. MSEDCL will also be at liberty to augment/alter capacity of substation or DTC or electrical infrastructure created on such land as per its requirement.

(6) The Developer/Builder/Applicant/Owner can opt for developing the Infrastructure for expediting the development. This Infrastructure shall be developed as per the technical approvals of MSEDCL. These technical approvals shall be given by the Competent Authority of MSEDCL, as per the delegation of powers for release of loads. The builder/developer/applicant/owner shall be responsible to carry out work as per the technical sanctions/approvals given by MSEDCL and should also comply with the timelines stipulated in the SoP Regulations or the circulars or any other provisions issued by MSEDCL from time to time. The material so required for this infrastructure will have to be procured as per the specifications and Vendors approved by MSEDCL and no deviation whatsoever shall be allowed. The said material shall be guaranteed by the manufacturer /supplier for a period of 2 years (minor materials) & 5 years (major materials) as per Annexure-B. The repair/replacement of failed material shall be done in maximum one month. After completion of this infrastructure and handing over of the same to MSEDCL, the Developer/Builder/Applicant/Owner the amount will be reimbursed equivalent to 100 % of the cost of material (i.e only cost of infrastructure material upto service point.) as per the prevailing Cost

Data of MSEDCL with valid GST invoice .The WCR will be prepared and material will be capitalized by MSEDCL.

Other charges such as RI charges ,labour charges, other cost towards necessary permission will not be refunded. The estimates shall be prepared accordingly.

(7) In exceptional case, if the Developer/Builder/Applicant/Owner is providing smaller piece of land instead of the stipulated size (bigger) land required as per regulations or DC rules or as per the provisions of this circular and if this smaller piece of land is insufficient for construction of conventional substation and if only GIS / Indoor substation can be constructed on the same, then in such cases the differential cost over Conventional substation, as mentioned in the Annexure – C, shall be borne by the Developers/ Builder/ Applicant/Owner. The substation so created will be the exclusive property of MSEDCL and it would be utilized for all consumers and will not be DDF to the Developer/Builder/ Applicant/Owner even if the differential cost has been borne by the Developer/Builder/Applicant/ Owner. All other conditions of this circular will be applicable in such cases also as if this infrastructure is a common facility of MSEDCL.

(8) In case of projects where phase wise development is considered, developer shall provide entire land parcel through registered Lease deed to MSEDCL as per load requirement considering the total projected demand for all phases together, as mentioned at para A(4). No concession with regards to land requirement shall be granted in such cases. The land/s shall be commensurate and suitable to accommodate complete infrastructure required in last phase (combination of substation, lines, DTC or any other electrical infrastructure like RMU's etc). MSEDCL will be at liberty to develop the infrastructure as per the load requirement and in such manner, it deems fit. In this case also, provisions of para A(6) will apply for

developing the infrastructure in phases (Not for making available the total land for the complete project)

In case of any reason, if the Developer/Builder/Applicant/ Owner has not disclosed the correct load and thereby has not given the required land, MSEDCL will not be able to provide supply to the Developer/ Builder/Applicant/Owner. The Developer/Builder/Applicant/ Owner will be responsible for the consequences (legal/regulatory).

(9) The work of such Infrastructure development for releasing new connections will be booked through annual capital budget allocation under this scheme and claimed in the ARR.

(10) In case of HT consumers applying for Express Feeder or a group of Express Feeder under DDF the same will be considered for approval only if the contracted capacity is more than 60% of the permissible load / rated capacity of that line and for such cases the infrastructure to be developed shall be from the substation of MSEDCL/ MSETCL. (Upto 3 MVA – 11 kV, Above 3 MVA – 22 kV / 33kV). Further subject to technical feasibility report, Dedicated (Separate) feeder shall be sanctioned from MSEDCL Substation/Switching Station if load is ≤ 3 MVA.

Provided that in case of under utilization of this feeder by the consumer, the balance capacity (load) can be utilized by MSEDCL for other consumers without obtaining "No Objection Certificate" from the consumer. In short, for Express Feeder/Dedicated Distribution Facility the load should be at least 60% of the permissible load / rated capacity. MSEDCL will be at liberty at its sole discretion to take over such Express Feeder at depreciated cost of infrastructure (depreciation at the rate specified in MERC Multi Year tariff Regulations 2015), if the loading on express feeder falls below the agreed minimal load in consecutive 12 months.

This will be applicable for the existing under loaded Express Feeder also in which case the same will be taken over by MSEDCL for using it as common facility.

Exception to this provision will be available to the electricity supply requirement of Government/Civil Hospitals, Airports, Govt. Medical Colleges, Defence establishment, Courts, LIS, PWW and street lights or other important Government Establishment, continuous process industries like paper printing press, chemical or pharma industries, IT Data centres etc, where uninterrupted power supply for process is a must provided the consumers opts for the same under Dedicated Distribution Facility. The approval for Express feeders will be subject to technical feasibility.

B) Procedure:

(1) After receipt of application from the Applicant/Developer/Builder/ Owner, the field officer should carry out the survey of applicant premises for actual requirement of load (as per norms given below in para C(1) and Competent Authority of MSEDCL should ensure that entire requirement of load of all phases have been covered in the application. Further the passive loads like fire fighting and standby pumps shall be excluded from total load calculation of the project.

(2) The requirement of Infrastructure for the required load, i.e. 33/11 kV, 22/11 KV substation and/or DTC, HT/LT Lines, etc including infrastructure required up at EHV substation i.e. MSETCL (as per norms in Para- D) and the land required for the same (as per the provisions of this circular) shall be finalized and taken in possession after execution of registered lease deed prior to sanction of any load.

The land requirement shall be conveyed to Developer/Builder/ Applicant/Owner for providing the encumbrance free land for a period of 99 years on lease at a nominal rate of Rs 1 annually, duly registering lease deed in the name of MSEDCL as per procedures. Concern Civil Sub Division / Division Engineer will be responsible for registration process and taking over the land from the Developer/Builder/Applicant/Owner.

Developer/Builder/Applicant/Owner will have to meet the expenditure for registering the lease deed. MSEDCL may utilize such land for substation/switching station/section office/cash collection center/ complaint center or any purpose for consumer benefits etc.

After receipt of consent of land from the Developer/Builder/Applicant on the stamp paper of Rs. 200/-, detailed estimate as per latest prevailing Cost Data shall be prepared through SAP/ERP system.. The detailed estimate shall be sanctioned by Competent Authority as per delegated powers for sanctioning of load. This is a pre-condition before sanction of load.

Before releasing the Temporary or permanent connection for construction purpose to the applicant, the required land must be transferred in the name of MSEDCL as per model lease agreement attached with this circular. The registered lease deed and the other details of the land shall be uploaded in the IT system. This is a pre-condition before sanctioning any temporary /permanent load. Further, in case of phase-wise requirement of load, the concerned Municipal authority shall be informed regarding the requirement of Land & shall be requested not to sanction next phase development unless the required land for substation & lines is marked on the proposed phase.

(3) For completing works within stipulated time, registered Electrical Contractors shall be empanelled in advance for a period of three years. It is advised that, every circle / Division shall empanel

minimum 4 to 5 contractors for carrying out the infrastructure work on behalf of MSEDCL for s/stn, HT (33/22/11 kV) overhead & underground lines, DTC & associated lines, etc. (Circle Office – Empanelment of Contractors for Substation and associated overhead / underground incoming & outgoing lines and express feeders. Division office – Empanelment of Contractors DTCs & associated 11 kV / LT O/H & U/G lines). If in a complex, work involves such as Substation(33/22/11 kV), DTCs and Incoming/Outgoing lines with LT network, then in such case the said entire work should be given to Single Agency/Contractor.

(4) After approval to detailed estimate, partial / full turnkey works contract shall be awarded to empanelled contractors and work shall be completed as per SoP Regulations (Sec. 4.8 and Sec.4.9) subject to Right of Way.

In case of delay in execution of work and possibility of not complying the SoP Regulations, the complete details/ reasons shall be uploaded in the IT system along with the related documents.

(5) The Competent Authority shall decide on the proposal of Developer/ Builder/Owner/Applicant for the infrastructure required as per the provisions of this circular within the time as detailed below and ensure release of connection as per the SoP Regulations :

Sr. No	Particulars	Time period in days for survey and estimation (Maximum)
1	Distribution Transformer Centre	15
2	Substation(33/22/11kV)	30
3	EHV Substation	45

In case of delay without assigning any reasons on part of the concerned field officer, (in system) beyond above stipulated period, a system generated report will be sent to concerned Regional Directors and Executive Director (Dist), who will then decide the case within 15 days thereafter.

C) Norms for Determination of Load

(1) The load for Residential/Commercial and group of Residential/Commercial complex/Industrial premises should be calculated as per following norms based on the carpet area.

Sr. No.	Class of premises	Connected load/ Sq. Mtr. carpet area.
1	Residential	**Minimum 75 W/Sq. Mtr**
2	Commercial with central air-conditioning	**Minimum 200 W/Sq. Mtr**
3	All other Commercial establishments	**Minimum 150 W/Sq. Mtr**
4	For all other categories	**Load actual mentioned in A1 form or contract demand in case of connection above 20 KW**

Note: (i). The Passive loads like load of fire fighters, loads of stand by equipments shall be excluded from calculation of connected load of the project.

(ii) However, if load demanded by the Developer/Builder/Applicant in A1 form is more than the calculation carried out as above, then higher load mentioned in the A1 form shall be considered.

(2) Further, for final determination of total load for deciding the infrastructure, (including lines, DTC's, Substations, etc.) and area of land for the substation/DTCs, the calculations should be carried out considering diversity factor as below:

Sr. No.	Class of premises		Diversity Factor
1	Residential	Carpet area upto and 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**

(3) Diversity factor is for working out infrastructure and land requirement only.

(4) The transformer capacity shall be determined by considering the effective load so determined and considering 0.8 PF for Rural areas and 0.9 PF for Urban areas.

D) Norms for determination of requirement of Electrical Infrastructure:

[Determination of Requirement of Sub-station for Residential/ Commercial / Industrial complexes/establishments]

(1) Sample cases of actual land/Electrical infrastructure required as per applicant/Developer/Builder demanded load

Sample:1 (Example for Dist. Transformer having load less than 500kVA)

Sr. No.	Type of Premises	Total Carpet Area in sq.mtr.	Watt per Sq. mtr.	Total Load to be sanctioned in kW (A1 form)	No. of Conns.	Total Load in kW to be sanctioned for the complex	Diversity Factor	To determine Elect. Infrastructure & Land	
								Load in kW after D.F.	Load in kVA after D.F. (PF-0.9)
1.	Residential	60	75	4.5	75	337.5	2.5	135	150
2.	Commercial	25	150	3.75	15	56.25	1.5	37.5	41.67
3.	Common Utility			20	1	20	1.5	13.33	14.81
4.	Fire Fighting			25	1	25*	0	0	0
						438.75		**185.83**	**206.48**

*Excluding passive loads like fire fighting and standby pumps

Note A single estimate shall be prepared for the works of one premises / one building / phase wise of the complex, Adequate land for establishing DTC. of appropriate capacity wherever required shall be provided. The transformer capacity in a complex shall be determined by considering 120% of the effective load arrived after considering Diversity factor i.e. (206.48 x 120% = 247.78 kVA). Then the standard capacity of Dist. Transformer corresponding with the determined load will be installed in the complex i.e. 315 kVA.

Sample: 2 (Example for Dist. Transformer having load more than 500 kVA)

Sr. No.	Type of Premises	Total Carpet Area in sq.mtr.	Watt per Sq. mtr.	Total Load to be sanctioned in kW (A1 form)	No. of Conns.	Total Load in kW to be sanctioned for the complex	Diversity Factor	To determine Elect. Infrastructure & Land	
								Load in kW after D.F.	Load in kVA after D.F. (PF-0.9)
1.	Residential	60	75	4.5	500	2250	2.5	900	1000
2.	Commercial	25	150	3.75	25	93.75	1.5	62.5	69.45
3.	Common Utility			75	3	225	1.5	150	166.67
4.	Fire Fighting			50	1	50*	0	0	0
						2618.75		**1112.5**	**1236.12**

*Excluding passive loads like fire fighting and standby pumps

Note A single estimate shall be prepared for the works of one premises / one building / phase wise of the complex, Adequate land for establishing DTCs. of appropriate capacity wherever required shall be provided. The transformer capacity in a complex shall be determined by considering 120% of the effective load arrived after considering Diversity factor i.e. (1236.10 x 120% = 1483.32 kVA). Then the standard capacity of Dist. Transformer corresponding with the determined load will be installed in the complex i.e. 2 x 630 kVA and 1 x 315 kVA.

Sample: 3 (Example for Required land for Substation having load more than 3 MVA)

Sr. No.	Type of Premises	Total Carpet Area in sq.mtr.	Watt per Sq. mtr.	Total Load to be sanctioned in kW (A1 form)	No. of Conn.	Total Load in kW to be sanctioned for the complex	Diversity Factor	To determine Elect. Infrastructure & Land	
								Load in kW after D.F.	Load in kVA after D.F. (PF-0.9)
1.	Residential	60	75	4.5	1000	4500	2.5	1800	2000
2.	Commercial	25	150	3.75	200	750	1.5	500	555.56
3.	Common Utility			150	6	900	1.5	600	666.67
4.	Club House			150	1	150	1.5	100	111.11
5	Fire Fighting			100	3	300*	0	0	0
6						6600		3000	3333.34

*Excluding passive loads like fire fighting and stanby pumps .

Note: Only a single estimate for works of one premises / one building phase wise of the complex should be prepared & issued.

As total load after considering Diversity Factor is more than 3 MVA, suitable land shall be provided for establishment of Sub-Station and DTCs at different locations so as to maintain HT:LT ratio of less than one. The transformer capacity in a complex shall be determined by considering 120% of the effective load arrived after considering Diversity factor i.e. (3333.34 x 120% = 4000 kVA). Then the standard capacity of Dist. Transformer corresponding with the determined load will be installed in the complex i.e. 6 x 630 kVA and 1 x 315 kVA or 4 x 1000 kVA.

Sample: 4 (Example for Required land for EHV Substation having load more than 20 MVA)

Sr. No.	Type of Premises	Total Carpet Area in sq.mtr.	Watt per Sq. mtr.	Total Load to be sanctioned in kW (A1 form)	No. of Conns.	Total Load in kW to be sanctioned for the complex	Diversity Factor	To determine Elect. Infrastructure & Land	
								Load in kW after D.F.	Load in kVA after D.F. (PF-0.9)
1.	Residential	100	75	7.5	6000	45000	2.5	18000	20000

2.	Commercia l	50	150	7.5	500	3750	1.5	2500	2777.78
3.	Common Utility			150	10	1500	1.5	1000	1111.11
4.	Club House			150	1	150	1.5	100	111.11
5.	Fire Fighting			150	3	450*	0	0	0
						50850		**21600**	**24000**

*Excluding passive loads like fire fighting and stand by pump etc.

Note :-Only a single estimates for works of one premises / one building phase wise of the complex should be prepared & issued. The transformer capacity in a complex shall be determined by considering 120% of the effective load arrived after considering Diversity factor i.e. (24000 x 120% = 28800 kVA). Then the standard capacity of Dist. Transformer corresponding with the determined load will be installed in the complex i.e. 46 x 630 kVA or 29 x 1000 kVA.

- From load calculation-As total load for the entire complex after considering Diversity Factor is more than 20 MVA, land for establishment of EHV Sub Station, 33/22/11 kV Substations, and DTCs shall be handed over to MSETCL/MSEDCL.

(2) 33/11 kV and 22/11 kV Substation (To be approved only at Head Office)

i) If the load of complex/township/group establishments etc. is more than 3 MVA but up to 20 MVA (after applying diversity factor) then 33/11 kV or 22/11 kV substation of appropriate capacity shall be proposed by the field officer. Further, if the substation load is more than 10 MVA and upto 20 MVA (after applying Diversity Factor), then two incomer feeders of 20MVA capacity each shall be proposed.

ii) The provision for open & leveled land to accommodate substation or other electrical infrastructure shall be made available by the Developer/ Builder/ Owner/Applicant from the space earmarked on approved plan as per A (Guidelines), MERC (Supply Code) Regulations in force and/or DC rules of Planning Authority. The

said land should comply with the Safety Regulations (e.g. land below ramp, below podium etc will not accepted).

iii) While proposing infrastructure in Urban area, it shall be ensured that Ring Mains System for redundancy and quick diversion of load in case of breakdown is created. (RMU instead of AB Switch/tapping to be proposed)

The Developer/Builder/Owner/Applicant should also provide dedicated Right Of Way (ROW) in his/her premises for laying electric lines (I/C and O/G) for Ring mains system. For laying U/G cables, adequate RCC ducts with chambers at the interval of 15 meters & provision of alternate stacks of GI angles shall be insisted to avoid excavation during fault repairing.

iv) Power supply to the complex/township/group establishments etc. shall not be allowed through Switching Stations, except in isolated circumstances, such as in case of EHV sub-station where there is no space for 33KV/22 kV Bay for separate feeder. In such an eventuality the power supply can be extended through switching station through Line-in Line-Out (LILO) arrangement only on existing feeder or from existing bus bar of High Voltage substation/switching station through breaker. No switching station to be proposed on outgoing feeder of HV substation/switching station.

After due verification and examination of all possible alternatives for establishment of switching substation the said proposal will be forwarded with justification and recommendations by Superintending Engineer (O&M) Circle through proper channel to Chief Engineer (Distribution), Corporate office for the approval of Competent Authority i.e. Director (Operations). In this case also, the timelines for sanction of the proposal will be as per Para B(5).

v) The proposal for establishment of 33/11 kV or 22/11 kV

substation of appropriate capacity shall be prepared by concerned Superintending Engineer (O&M) circle and forwarded directly through Jt. MD/ RD to Corporate Office for the approval of Competent Authority i.e. Director (Operations). The Proposal shall be scrutinized by Jt.MD/RD within 15 days and submit the same with his comments to Corporate Office. The proposal shall be decided upon including fund provision at Corporate Office within 15 days of receipt of the same.

vi) Requirement of Land for establishment of Dist. 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.**

*There will not be any expenditure or reimbursement from MSEDCL for this.

Note:-

i) The above areas or the areas mentioned in the DC Rules whichever is higher shall be made available by the Developer/Builder/Owner/ Applicant. Further, 10 sq. mtr. land to be added for each additional transformer in case the transformer is required to be installed in vicinity/ augmented at same location.

ii) Necessary clearances to be maintained/observed as per latest CEA Regulations while establishment of Distribution transformer centres. Especially in case of Indoor DTC minimum 5 meter height of the ceiling and also proper ventilation shall be maintained.

iii) While releasing load in complex/s and where DTC is required to be established in that complex, the provision

for land to accommodate DTC shall be made available by the Developer/Builder/Owner/ Applicant from the space earmarked on approved plan to MSEDCL as per MERC regulations in force from time to time.

iv) Only one transformer of adequate capacity for each building should be proposed. In case of deviation or more transformers are proposed the reasons for the same shall be recorded in the IT system.

v) If Developer/Builder/Owner/Applicant provides less land where only compact distribution transformer center be accommodated, then cost of such compact distribution transformer center including RMU's and allied equipments shall be fully borne by the Developer/Builder/ Owner/Applicant and there will not be reimbursement to the Developer/Builder/Owner/Applicant. Distribution transformer and RMU should be as per MSEDCL approved specifications only. The infrastructure so created shall remain as common infrastructure of MSEDCL and MSEDCL shall be at liberty to release connections to other consumers through that infrastructure.

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

(1) Suitable Land requirement for installation of various types of s/stn.

Sr. No.	S/Stn	Land Requirement
1	GIS 22/11 or 33/11 kV	600 Sq. Mtr. *

2	Indoor 22/11 or 33/11 KV for metropolitan and corporation area	For Two Power transformer: 1000 Sq. Mtr. **
3	Conventional Hybrid 22/11 or 33/11 KV (22 or 33 kV outdoor and 11kV indoor) for metropolitan and corporation area	2800 Sq. Mtr
4	Outdoor 22/11 or 33/11KV	4000 Sq. Mtr.
5	Outdoor 22 KV Switching station	2800 Sq. Mtr.
6	Indoor 22 KV Switching station for metropolitan and corporation area	600 Sq. Mtr. ***
7	EHV Substation indoor/Outdoor/GIS	As per the requirement of MSETCL

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

* & **:- If the developer is unable to provide the land for establishing conventional substation as mentioned above at 3 & 4 and provides less land as per Sr. No.1 and Sr.No.2 then the Developer/ Builder/ Applicant shall pay the differential cost between Conventional Hybrid substation and possible GIS or Indoor substation as per Annexure 'C' & expenditure for the substation will not be reimbursed.

*** - If the developer is unable to provide the land as mentioned above at 5 and provides less land as per Sr. No. 6, then the Developer/ Builder/ Applicant shall pay the differential cost of outdoor and Indoor switching station as per Annexure-'C' expenditure for the substation will not be reimbursed.

(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 by the Superintending Engineer (O&M) of the Circle in consultation with MSETCL. In case of delay from MSETCL, the Jt. MD/RD shall take up the issue with local MSETCL authority. Further, Jt.MD/RD shall also intimate delay/ difficulty to Head Office and in this case the issue shall be taken up with the Head Office of MSETCL by Distribution Section of MSEDCL. During the interim period of construction of EHV substation, partial load may be released to the consumer on our existing network considering technical feasibility, provided that the Developer/Builder/Owner/ Applicant hands over the required land for EHV substation duly registered in the name of MSEDCL/MSETCL before releasing the partial load.

F. General Conditions for accepting the Land for developing infrastructure:

(1) The Developer/Builder/Owner/Applicant should provide encumbrance free required land duly transferring such land in MSEDCL name on execution of an agreement for leasing of land to MSEDCL for a period of 99 yrs. at a nominal rent of Rs 1 annually.

(2) The land lease agreement should be as per Annexure "A".

(3) In circumstances of non-availability of adequate land at Developer/Builder/Owner/Applicant premises, he/she may provide land to MSEDCL/MSETCL as below:

i) The alternate desired land in nearby area upto 250 meters with mutual agreement as a relief to existing substation on which proposed Developer/Builder/Owner/Applicant's load is calculated can be considered. In case the offered land is

beyond 250 meters, the proposal shall be decided only by Head Office.

OR

ii) If Developer/Builder/Owner/Applicant/ group of builders is not in position to provide land then MSEDCL will try to purchase nearby land. The cost of such land should be borne by Developer/Builder/Owner/Applicant/group of builders. **The MSEDCL shall not be responsible for delay in providing power supply due to non-availability of land for substation / Distribution transformer centre (DTC).**

(4) In case, Developer/Builder/Owner/Applicant spares and hands over the required land for Substation/Switching station for releasing of power in phases (upto 20MVA) supply to the Complexes/ Township/establishments and afterwards in future demands additional power supply and if the total determined load (existing and additional) is up to 20 MVA for that premises, then no additional land for substation/switching station shall be demanded from same Developer/Builder/Owner/Applicant. In this case MSEDCL shall be at liberty to supply power to consumers other than the consumers of that township.

(5) 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 handover 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/Owner/Applicant from this group. After agreeing to handover common single piece of required land if any dispute arises among the group and if that dispute delays the completion of infrastructure, MSEDCL will not be responsible for this delay.

G. Other Instructions:

(1) The estimates so sanctioned shall be verified and 2 % sample verification is to be carried out by the concern as follows:

Sr. No.	Land and Estimation for	Authority
1	Distribution transformer centre/s	Superintending Engineer (O&M) circle
2	33/11 or 22/11 kV Sub-station	Chief Engineer (O&M) Zone
3	EHV Sub-station	Jt. MD/Regional Director, Regional office

(2) For laying of cables /lines from substation to Distribution transformer center and Distribution transformer center to consumer metering point dedicated corridor shall be provided by the Developer/Builder/Owner/ Applicant.

(3) MSEDCL shall not be responsible for delay in providing electrical infrastructure for the Developer/Builder/Owner/Applicant due to issues related to handing over (requested) land, Right of Way issues, Statutory Clearances or for reasons beyond the control of MSEDCL.

(4) 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.

(5) The Executive Director (IT and consumer Services) shall make necessary changes / modifications (if any) in SAP / ERP or IT system as per Board Directives vide resolution No 1055 to cover all this aspects of the circular.

Similarly, the CE(MMC) and CE(O&M) shall ensure smooth flow of the material procured by HO or field offices respectively.

Necessary budget provision for this additional procurement of material be made in the SAP/ERP Capital budget.

Estimates for development of Infrastructure work should be sanctioned under NSC scheme, the budget provision will be accordingly. (except DDF).

(6) Records related to works carried out shall be maintained in proper manner so as to enable the submission of same to MERC for claiming the expenditure in ARR.

(7) Every field Officer shall proactively take action in implementing these provisions so that MSEDCL will be in a position to meet the demand of prospective consumers in time in accordance with the provisions of Electricity Act 2003.

(8) Wide publicity should be given at all offices of MSEDCL to all consumers, RERA (Real Estate Regulation Authority), Builders Associations and Consumer Associations, etc. regarding MSEDCL policy so as to prevent additional charging to the consumers on the pretext of electrical infrastructure development.

The Circulars vide no CE(Dist.)/D-III/NSC/10992 Dtd. 15.05.2018, CE(Dist.)/D-III/Req. of Land/39010 Dtd. 09.11.2015, CE(Dist.)/D-III/Req. of Land/28792 Dtd. 17.07.2015, CE/Dist/D-III/15754 Dtd. 06.06.2012 are superseded.

The estimates already sanctioned and in process of sanctioning shall be completed with old procedure.

This circular shall come into force with effect from 1st January 2019. However, the field officers shall start working on the above provisions including empanelment of registered electrical contractors so as to fully implement the same from the effective date.

This circular is available on www.mahadiscom.in website.

Chief Engineer (Distribution)

Encl:

1) Annexure A (Format of Land Lease Agreement),
2) Annexure B (Major & Minor material).
3) Annexure C (Calculation sheet of Differential Cost)

Copy s. w. r.s. to:

1. The Chairman and Managing Director, MSEDCL, Mumbai.
2. The Chairman and Managing Director, MSETCL, Mumbai.
3. The Director (Operations)/(Finance)/(Projects)/(Commercial), MSEDCL, Mumbai.
4. The Director (Operations)/ (Finance)/ (Projects), MSETCL, Mumbai.
5. The Executive Director (Dist-I,II,III,IV), MSEDCL Mumbai.
6. The Joint Managing Director, A'bad Region, MSEDCL A'bad/ Regional Director (Pune/Nagpur/Konkan Region), MSEDCL, Pune / Nagpur./ Kalyan.

Copy to: All as per standard mailing list.

Section: Glossary of Definitions

1) "Consumer" means any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under Electricity Act or any other law for the time being in force and includes any person whose premises are for the time being connected for the purpose of receiving electricity with the works of a licensee, the Government or such other person, as the case may be.

2) "Distributing Main" means the portion of any main with which a service line is, or is intended to be, immediately connected;

3) "Main" means any electric supply- line through which electricity is, or is intended to be, supplied;

4) "Electricity Supply Code" means the Electricity Supply Code specified under section 50;

5) "Licensee" means a person who has been granted a licence under section 14 of Electricity Act , 2003;

6) "Line" means any wire, cable, tube, pipe, insulator, conductor or other similar thing (including its casing or coating) which is designed or adapted for use in carrying electricity and includes any line which surrounds or supports, or is surrounded or supported by or is installed in close proximity to, or is supported, carried or suspended in association with, any such line;

7) "Premises" includes any land, building or structure

8) "Regulations" means regulations made under the Electricity Act 2003;

9) "Rules" means rules made under the Electricity Act 2003;

10) "Sub-station" means a station for transforming or converting electricity for the transmission or distribution thereof and includes transformers converters, switch-gears, capacitors, synchronous condensers, structures, cable and other appurtenant equipment and any buildings used for that purpose and the site thereof;

11) "Supply", in relation to electricity, means the sale of electricity to a licensee or consumer;

12) "Builder" one that builds; especially: one that contracts to build and supervises building operations.

13) "Applicant" a person who makes a formal application for supply.

14) "Power factor" the ratio of the real power flowing to the load to the apparent power in the circuit.

15) "Diversity factor" the ratio of the sum of the maximum demands of the various part of a system to the coincident maximum demand of the whole system.

16) "Infrastructure" shall mean in context to supply of electricity, the line, substations and equipment required to supply.

17) "Land" is an area of ground, especially one that is used for a particular purpose.

18) "Dedicated Corridor" shall mean a long, narrow way, typically having walls either side, that allows access between buildings or to different rooms within a building.

19) "Electricity" means electrical energy.

(a) Generated, transmitted, supplied or traded for any purpose; or

(b) used for any purpose except the transmission of a message;

20) "Local authority" means any Nagar Panchayat, Municipal Council, municipal corporation, Panchayat constituted at the village, intermediate and district levels, body of port commissioners or other authority legally entitled to, or entrusted by the Union or any State Government with, the control or management of any area or local fund;

21) "Utility" means the electric lines or electrical plant, and includes all lands, buildings, works and materials attached thereto belonging to any person acting as a generating company or licensee under the provisions of this Act

22) "Electrical plant" means any plant, equipment, apparatus or appliance or any part thereof used for, or connected with, the generation, transmission, distribution or supply of electricity but does not include-

(a) an electric line; or

(b) a meter used for ascertaining the quantity of electricity supplied to any premises; or

(c) an electrical equipment, apparatus or appliance under the control of a consumer;

23) "Encumbrance" is a right to, interest in, or legal liability on real property that does not prohibit passing title to the property but that diminishes its value.

24) "Corporation Areas" means areas under local governing body, including (but not necessarily limited to) cities, counties, towns, townships, charter townships, villages, and boroughs.

Annexure-A

LEASE DEED / AGREEMENT

This Deed of Lease made and entered into at..... (Place), this.....(Date) day of..... (Month) 2016

BETWEEN

Between ..... **(name of developer/consumer)** having its/his

Registered office/ resident of ..... within the local limits of..... (Municipal Councial), hereinafter referred to as "THE LESSOR" (which expression shall, unless it be repugnant to the context or meaning thereof be deemed to mean and include its successors and assigns) as PARTY OF THE ONE PART.

AND

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED through its ----------(Designation), M---------- (Name), ------- (Age) ---------- (place of working) a company under Government of Maharashtra incorporated under the Electricity Act, 2003 and registered under the Companies Act, 1956 & having its registered office at Plot No. G9, Prakashgad, Station Road, Bandra (E), Mumbai-400051 hereinafter referred to as "THE LESSEE" (which expression shall, unless it be repugnant to the context or meaning thereof be deemed to mean and include the distribution Company, its successors and assigns etc. under Electricity Act, 2003) as PARTY OF THE OTHER PART.

WHEREAS the LESSOR is absolutely seized and possessed of or otherwise well and sufficiently entitled to the piece of land bearing Gut No,----------(Gat No/Survey No) more fully described in **'Schedule A'**, hereunder written, and hereinafter referred to as "said premises".

WHEREAS the lessor, has developed a residential/commercial/industrial project at ..... (place) in the ..... District in the state of Maharashtra. known as ..... (name of project) hereinafter referred to as " the said project").

WHEREAS the LESSEE has approached the LESSOR with a request to grant them the lease of a portion of the said premises belonging to the LESSOR as mentioned in **'Schedule B'** herein under written, for the purpose of

construction of 33/11KV receiving electrical substation control room/ DTC to be installed and maintained by lessee for the purpose of supply of electricity to the residents of the said project and to the consumers of MSEDCL in nearby area if MSEDCL desires.

And whereas The LESSOR has agreed to the above request of the LESSEE and has agreed to grant the LESSEE, a lease for the period of 99 years, of the portion of the said premises described in Schedule "B" on terms and conditions hereinbefore recited and hereinafter stated in this agreement.

NOW IT IS AGREED BY AND BETWEEN

THE PARTIES AS FOLLOWS

1. That the LESSOR agrees to give unto the Lessee and LESSEE agrees to take on lease a portion of the said premises admeasuring about .....sq. mtrs., more particularly described at Schedule 'B" hereunder written, and shown bounded by a red colour boundary line on the plan annexed hereto & marked as **Annexure-A.**
2. That the LESSEE and his officers, servants contractor and agent shall be entitled, to have a right to lay underground wires, cables, pipes, drains for lighting, water, electricity or any other purpose relating to the construction of the substation.
3. That the lease rent is agreed at Rs. 1/- per year and the lessee is ready to pay the total lease rent for the period of 99 years commencing from the date of registration of this deed in advance at one time. Accordingly the lessee has paid unto the lessor the total lease rent Rs.99/- by a cheque bearing No. ..... dtd..... drawn on the ..... Bank ..... Branch the receipt whereof the lessor hereby acknowledges, and a separate receipt for the same shall not be necessary.
4. The lease rent for the said lease property shall be exclusive of the taxes, assessment dues and duties payable in respect of the said portion of land and the Sub-station to be constructed by the LESSEE thereon, to the Government, Municipal Corporation, the Grampanchayat or any other local authority or public body and which taxes etc. will be payable by the LESSEE as and when they become due and payable.
5. That the LESSEE shall enjoy the premises free from disturbance from the LESSOR.

6. That the LESSOR shall not create any encumbrance or third party interest in respect of the leased premises so as not to affect the enjoyment of the said premises by the LESSEE.
7. The LESSEE shall have right to put on and construct Electric sub- station/DTC on the said demised property and shall be entitled to use the same. However, the lessee shall do so strictly in accordance with the rules and regulations and the prevalent laws as to construction, use and enjoyment of such property, and use the premises for electrical substation only.
8. The LESSEE shall not sub-let or sub-lease the leased premises, and shall not part with the possession under whatsoever pretext.
9. The LESSEE shall use the leased premises subject to and by following rules and regulations framed under the prevalent laws and shall maintain the said property and Electrical sub- station/DTC in good condition at his own costs.
10. The LESSEE shall not do any act affecting the title of the LESSOR to the subject premises.
11. That if the LESSEE intends to surrender the lease-hold rights, then he shall do so by giving 12 months notice to the LESSOR.
12. That in consideration of the lessee having paid the total rent, as aforesaid, the LESSOR does hereby grant and confer lease of the demised premises by putting him in actual possession **TO HAVE AND TO HOLD** the same for period of 99 years, as a lessee thereof.
13. All the taxes & other out going in respect of the said lease property up to date of completion of the lease and handing over possession to the lessee will be paid by lessor.
14. That all the expenses towards stamp-duty, registration charges and incidental expenses thereto were agreed to be paid and borne out by the lessor, and accordingly, he has done so.
15. The lessor declares that the said lease property is not subject to any reservation.
16. Nothing in this agreement shall be considered as sale of the said Lease Property or any part or portion thereof in favour of the Lessee.
17. If any permission or No Objection Certificate is required to be obtained from any authority for granting a lease of the said Lease Property as afore said, the Lessee shall obtain the same at its own costs as a condition precedent to the execution of the Deed of Lease However the Lessor should extend full co-operation to Lessee for obtaining local sanction etc. from appropriate revenue authorities.
18. The Lessee shall observe and conform to the rules and regulations prescribed

by the local and/or competent authority and/or bodies and/or under any law for the time being in force relating to the constructions of Substation and/or other structures and/or public health in the said lease property.

19. That the lessee will not make any excavation upon any part of the said lease property remove any stone, earth or other material except so for a may be necessary for the purpose of forming the foundation of the Substation and the compound wall and executing the works as may be necessary in the opinion of the company.
20. That the lessee shall permit the lessor and it's duly authorised agents and representatives to enter upon the said lease property after giving 24 hours' notice in writing in order to view and examine the state and conditions of the said lease property.
21. All notice, consent and approval under this lease shall be in writing and any notice to be given to lessees shall be considered duly served if the same shall have been delivered to the address of the lessees herein above stated.
22. It is specifically agreed the parties hereto that all the expense to set up receiving station substation and control room including construction, cable up to receiving station, installation, maintenance etc. will be borne by lessee alone and on this assurance lessor has agreed to give the lessee the said lease property more particularly described in the second scheduled hereunder written.
23. The liabilities arising for the lessor by any means like attachment of the property by court's etc. will not affect any right of the lessee over the said lease property.

SCHEDULE "A" OF THE PROPERTY ABOVE REFERRED TO:

All that piece and parcel of the land bearing Gut No.....admeasuring .....Sq.mts within the Registration Division and District ..... Sub division and Taluka .....situated at Revenue Village.....and bounded by as follows.....

On or towards the East :

On or towards the South :

On or towards the West :

On or towards North :

SCHEDULE "B" OF THE PROPERTY ABOVE REFERRED TO :

All that piece and parcel of land which forms a portion of the LESSOR'S property described in Schedule A admeasuring.....sq.mts and bounded by

On or towards the East :

On or towards the South :

On or towards the West :

On or towards North :

IN WITNESS WHEREOF the parties hereto have signed hereunder at..... (Place), this..... (Date) day of.....(Month) 2016

LESSOR LESSEE

WITNESSES:

1. Signature .....
   Name.....
   Address.....

2. Signature .....
   Name.....
   Address.....

Annexure-B

Tentative List of Major Material to be indent for Creation of Distribution Infrastructure to relase new connections as per Distribution Circular 10992 Dated 15.05.2018.

Sr No	Description of Material
1	Power Trans.33/11 KV 5 MVA
2	Power Trans.33/11 KV 10 MVA
3	Power Trans.33/22 KV 5 MVA
4	Power Trans.33/22 KV 10 MVA
5	Power Trans.22/11 KV 10 MVA
6	Power Trans. 33/11 kV 20 MVA
7	Power Trans. 22/11 kV 20 MVA
8	Dist.Transformer 11/0.43 KV, 63 kVA
9	Dist.Transformer 11/0.433 kV,100 kVA
10	Dist.Transformer 11/0.43 KV OD 200 KVA
11	Dist.Transformer 11/0.43 KV OD 315 KVA
12	Dist.Transformer 11/0.43 kV ID 315 KVA
13	Dist.Transformer 11/0.43 kV ID 630 KVA
14	Dist.Transformer 11/0.43 KV OD 630 KVA
15	Dist.Transformer 22/0.43 KV 63 KVA
16	Dist.Transformer 22/0.43 KV 100 KVA
17	Dist.Transformer 22/0.4 kV OD 200 KVA
18	Dist.Transformer 22/0.4 kV OD 315 KVA
19	Dist.Transformer 22/0.4 kV ID 630 KVA
20	Dist.Transformer 22/0.4 kV OD 630 KVA
21	Dist.Transformer Single Phase 16 KVA
22	100/1-1 A, 11 KV CT
23	11 KV PT
24	22 KV P.T.
25	30 V, 100 AH Lead Acid Battery sets
26	Battery chargers suitable for above
27	11kV 250 MVA OD switchgear comprising of one incomer and 3 single feeders with associated OD panels
28	33 KV VCB 1600 A
29	C&R Panels for 33 KV Transformers with 1 Amp Relays without differential Protection
30	C&R Panels for 33KV transformers with differential Protection
31	33 kV Current Trans.400-200-100/1-1-1 A -3 core for protection
32	33 kV P.T. for sub-station
33	Isolator with EB 33 KV 800 A
34	Isolator without EB 33 KV 800 A

35	C & R Panel for 33 KV Single Feeder with 1 Amp Relays (30V DC)
36	11 KV Indoor Switchgear with C & R Panels (2 I/C + 1 B/C + O/G) 500MVA
37	22 KV C.T. Three core.
38	CT 200-100/1-1 A , 22 KV
39	11 KV CT 600 - 300 / 5 - 5 Outdoor
40	11 KV CT 600 - 300 / 5 - 5 Indoor
41	CT - 11 KV 400 - 200 - 100/ 5-5-5 A / 3 Core I/D
42	11 KV CT 400 - 200 / 5 - 5 Outdoor
43	11 KV CT 400 - 200 / 5 - 5 Indoor
44	CT 200 -100 / 5 - 5 Amp11 KV 1 Ph. Oil filled Out Door Type with Terminal connections
45	100/1-1 A, 11 KV CT
46	All Aluminium Alloy Conductor 34 sq.mm.
47	All Aluminium Alloy Conductor 55 sq.mm.
48	All Aluminium Alloy Conductor 100 sq.mm.
49	XLPE Cable 11 kV 3C 95 sq.mm.
50	XLPE Cable 11 kV 3C 185 sq.mm.
51	XLPE Cable 11 kV 3C 240 sq.mm.
52	XLPE Cable 11 kV 3C 300 sq.mm.
53	XLPE Cable 22 kV 3C 95 sq.mm.
54	XLPE Cable 22 kV 3C185 sq.mm.
55	XLPE Cable 22 kV 3C 300 sq.mm.
56	XLPE Cable 33 kV 3C 300 sq.mm.
57	R.S.J. Poles 100 x 116 mm - 10 Mtr.
58	R.S.J. Poles 175 x 85 mm - 9 Mtr.
59	R.S.J. Poles 125 x 70 mm - 8 Mtr.
60	R.S.J. Poles 152 x 152 mm - (13.00 Mtr.)
61	R.S.J. Poles 152 x 152 mm - (11.00 Mtr.)
62	L.T. PVC Armoured cable 2C 16 Sq.mm
63	L.T. PVC Armoured cable 4C 16 sq.mm.
64	L.T. PVC Armoured cable 3.5C 35 sq.mm.
65	L.T. PVC Armoured cable 3 1/2 C 50 sq.mm.
66	L.T. XLPE Armoured cable 3.5C X 70 sq.mm.
67	L.T. XLPE Armoured cable 3.5C X 120 sq.mm.
68	L.T. XLPE Armoured cable 3.5C X 185 sq.mm.
69	L.T. XLPE Armoured cable 3.5C X 300 sq.mm.
70	L.T. XLPE Unarmoured cable 1C X 50 sq.mm.
71	L.T. XLPE Unarmoured cable 1C X 70 sq.mm.
72	Single Phase Meters 5-30A Without Encloser
73	Single Phase Meters 5-30A With Encloser
74	Pre-paid Single Phase Meters 10-60A
75	Pre-paid Three Phase Meters 20-80A

76	Three Phase Static Meters (KWH+KVA MD)10-40A
77	Three phase 40-200A Meter with Inbuilt CT & Modem
78	HT TOD Meters -/5A & -/1A 0.5S class
79	HT TOD Meters -/5A & -/1A 0.2S class
80	LT CT Operated Electronic Meter 50/5A
81	LT CT Operated Electronic Meter 100/5A
82	CT Operated Metering Cabinet 50/5A
83	CT Operated Metering Cabinet 100/5A
84	CT Operated Tri-vector Energy Meter 150/5A for DTC
85	CT Operated Tri-vector Energy Meter 200/5A for DTC
86	11 KV metering cubical with ratio 5/5A
87	11 KV metering cubical with ratio 10/5A
88	11 KV metering cubical with ratio 25/5A
89	11 KV metering cubical with ratio 50/5A
90	11 KV metering cubical with ratio 100/5 A
91	22KV metering cubical with ratio 5/5A
92	22KV metering cubical with ratio 10/5A
93	22KV metering cubical with ratio 25/5A
94	22KV metering cubical with ratio 50/5A
95	11 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 1 Br
96	11 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 2 Br
97	11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 1 Br
98	11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 2 Br
99	11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 3 Br
100	11 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 4 Br
101	11 kV SF6, Motorized, SCADA Compatible RMU 3 Iso + 2 Br
102	11 kV SF6, Motorized, SCADA Compatible RMU 3 Iso + 1 Br
103	22 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 1 Br
104	22 kV SF6, Motorized, SCADA Compatible RMU 1 Iso + 2 Br
105	22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 1 Br
106	22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 2 Br
107	22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 3 Br
108	22 kV SF6, Motorized, SCADA Compatible RMU 2 Iso + 4 Br
109	22 kV SF6, Motorized, SCADA Compatible RMU 3 Iso + 2 Br

Tentative List of Minor Material to be indent for Creation of Distribution Infrastructure to relase new connections as per Distribution Circular 10992 Dated 15.05.2018.

Sr No	Description of Material
1	G.I. Stay Wire 7/8 SWG
2	G.I. Stay wire 7/10 SWG
3	G.I. Wire 8 SWG
4	G.I. Wire 10 SWG
5	G.I. Wire 6 SWG
6	L.T. Dist. Box 63 KVA
7	L.T. Dist. Box 100 KVA
8	L.T. Dist. Box 200 KVA
9	L.T. Dist. Box 315 KVA with MCCB / Kitkat
10	W.P. Wire 1.5 mm2 T/C 1100 V Grade
11	W.P. Wire 2.5 mm2 T/C 1100 V Grade
12	W.P. Wire 4 mm2 T/C 1100 V Grade
13	W.P. Wire 10 mm2 T/C 1100 V Grade
14	L.T. XLPE Aerial Bunched cable 3 X 50 + 16 + 35 sq.mm.
15	L.T. XLPE Aerial Bunched cable 3 X 70 + 16 + 50 sq.mm.
16	L.T. XLPE Aerial Bunched cable 3 X 120 + 16 + 70 sq.mm.
17	11 kV A.B. Switch
18	22 kV A.B. Switch
19	11 kV Horn Gap fuse unit
20	22 kV Horn Gap fuse unit
21	11 kV Pin Insulator
22	22 kV Pin Insulator
23	33 kV Pin Insulator
24	Disc Insulator 11 kV 45 KN
25	Disc Insulator 11 kV 70 KN
26	HT Pillar 22 KV
27	11 KV Feedar Pillar 2 Way
28	11 KV Feeder Pillar 4 Way
29	L.T.Dist.Boxes 25/63 KVA with MCCB
30	L.T.Dist.Boxes 25/63 KVA with KITKAT
31	L.T.Dist.Boxes 100 KVA with MCCB
32	L.T.Dist.Boxes 100 KVA with KITKAT
33	L.T.Dist.Boxes 200 KVA with MCCB
34	L.T.Dist.Boxes 200 KVA with KitKat
35	8 way feeder pillar with ACB
36	6 way feeder pillar with ACB
37	Common Meter Reading Instru. for Static Meters.
38	L.T. Mini Feedar Pillar
39	LT Feeder Pillar 2/3 Way
40	L.T. Feedar Pillar 4 Way
41	LT Feeder Pillar 6 Way
42	LT Feeder Pillar 8 Way
43	Single Phase Distribution Box 15/25 KVA
44	AC Distribution Board 'B' type

ANNEXURE-C

A: Conventional Substation

- A Conventional Substation in Urban area shall be 33/11 kV or 22/11 kV, 1X10 or 2 x 10 MVA capacity substation depending upon the load of Developer/Builder/Applicant and with 2 no. of Incoming feeders of 20MVA capacity each and 4 or 8 no. of Outgoing feeders with Bus Coupler.
- In this case, all 33/22 kV Switchgears along with Power Transformer, substation distribution transformer shall be installed in outdoor switchyard whereas 11 kV Switchgears & CR Panels along with 33 kV CR Panels shall be installed inside the Control Room.
- The Standard Specifications and arrangement including the Control Room specified by MSEDCL shall be followed.
- The minimum land for such Conventional Substation shall be 2800 sq. mtr.

B: Indoor Substation

- An Indoor Substation shall be 33/11 kV or 22/11 kV, 1X10MVA or 2 x 10 MVA capacity substations depending upon the load of Developer/Builder/Applicant and with 2 nos. of Incoming feeders of 20 MVA capacity each. 4 or 8 Nos. of 11 kV Outgoing feeders & Bus Coupler.
- In this case, all 33/22/11 kV switchgears along with CR panels will be installed inside the Control Room. Only Power Transformers and Substation Distribution Transformer will be installed in the outdoor yard.
- The Standard Specifications and arrangement including the Control Room specified by MSEDCL shall be followed.
- The minimum land for such Conventional Substation shall be 1000 sq. mtr.

C: GIS Substation

- A GIS Substation shall be 33/11 kV or 22/11 kV, 1X10 MVA or 2 x 10 MVA capacity substations depending upon the load of Developer/Builder/Applicant and with 2 nos. of Incoming feeders with 20MVA capacity each. 4 or 8 Nos. of 11 kV Outgoing feeders & Bus Coupler.
- In this case, all 33/22/11 kV switchgears along with CR panels shall be installed inside the Control Room. Only Power Transformers and Substation Distribution Transformer will be installed in the outdoor yard.
- 33 kV switchgear shall be GIS and 11 kV switchgears shall be AIS.
- The minimum land for such Conventional Substation shall be 600 sq. mtr.

Differential cost to be recovered from Developers/Builder/Owner/Applicant in case land for substation is provided less than the land required for conventional substation (2800 sq.mtr.) (excluding cost of I/C and O/G feeders)

Amount in Rs. in Lakhs

Land provided in Sq. Mtr.	**Substation to be established**	**Cost of Conventional S/Stn excluding I/C & O/G lines**	**Cost of S/stn to be established**	**Differential amount be recovered from Developers/Builder /Applicant**
4000	Outdoor	22/11kV- Rs.334.47 lakhs 33/11kV- Rs.338.37 lakhs	22/11kV-Rs.334.47 lakhs 33/11kV-Rs.338.37 lakhs	Nil
2800	Conventional Hybrid S/stn.(33 or 22 kV – Outdoor, 11 kV – Indoor)	22/11kV- Rs.334.47 lakhs 33/11kV- Rs.338.37 lakhs	22/11kV-Rs.334.47 lakhs 33/11kV-Rs.338.37 lakhs	Nil
1000	Indoor	22/11kV- Rs 334.47 lakhs 33/11kV– Rs 338.37 lakhs	22/11kV- Rs 408.53 lakhs 33/11kV– Rs 416.99 lakhs	22/11kV- Rs 63.37 lakhs 33/11kV– Rs 78.62 lakhs
600	33 kV or 22kV GIS and 11kV AIS	22/11kV- Rs 334.47 lakhs 33/11kV– Rs 338.37 lakhs	22/11kV- Rs 416.47 lakhs 33/11kV– Rs 425.06 lakhs	22/11kV- Rs 71.31 lakhs 33/11kV– Rs 79.71 lakhs
2800	22kV Switching substation Outdoor	Rs 177.02 lakhs	Rs 177.02 lakhs	Nil
600	22kV Switching substation Indoor	Rs 177.02 lakhs	Rs 194.90 lakhs	Rs 17.88 lakhs

- All the costs are as per prevailing Cost Data 18-19. The Cost will change if the Cost Data is changed in subsequent period (Prevailing cost data will be made applicable).

Two developers can jointly provide the required land, if any one builder is not able to provide the land as mentioned above.