JPR5-857
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ORDER

Various orders have been issued regarding electrification of colonies, multistoried building and townships from time to time. Looking to the problems being faced in implementation of above orders and feedback received from field officers, following revised procedure is hereby prescribed for the same:

1. **For Plotted Development (Colonies)**

The norms for electrification of Colonies/Housing scheme developed by Private Builders/Developers/Housing societies and releasing permanent connection therein were prescribed vide JPR5-754 dated 08.04.15 and further amended vide JPR5-755 dated 13.04.15, 757 dated 21.04.15 and 777 dated 24.11.15. In supersession to previous orders, following revised guidelines are hereby prescribed for electrification of Colonies/Housing schemes (Plotted Development) .

1.1 The estimated designed demand criteria shall be 2KW per 1000 Sq. feet of plot area for Domestic and 5KW per 1000Sq.feet of plot area for Non-domestic and 50% of the sum of the load so worked out of all the plots in the colony/housing schemes shall be taken as the estimated designed demand of colony. For converting KW to KVA, 0.9 PF shall be considered. The following design parameters shall be considered for preparation and approval of the electrification scheme of the colony-

1.1.1. Provision of approximately 50% additional line DPs for creation of new 11/0.4KV Sub-station be kept for further expansions and location be identified accordingly at initial stage.

1.1.2. The capacity of the transformer, cables and allied equipment shall be worked out by considering 1.3 times the estimated designed demand.

1.1.3. Individual distribution transformer capacity shall not be more than 315 KVA.

1.1.4. Maximum length of each LT feeder shall not be more than 250 meters.

1.1.5. The estimated designed demand and electrification voltage level of multistoried buildings shall be worked out in accordance with the relevant and prevalent orders.

1.2 All contiguous blocks of the colony shall be considered as a part of the colony for the purpose of computation of estimated designed demand.

1.3 The supply voltage level shall be corresponding to estimated designed demand and upto 1500 KVA supply voltage level shall be 11KV and for estimated designed demand more than 1500 KVA the supply voltage level shall be 33 KV. For electrification by developer/colonizer/Housing Societies at 33KV supply voltage level, a piece of land measuring 1000 square meter for colonies having estimated designed demand more than 1500 KVA shall be made available by the Developer/Colonizer/Urban Local Bodies free of cost for construction of 33KV/11KV sub-station. For making available land free of cost, the Developer /Colonizer shall be solely responsible. Similarly, in case if the estimated designed demand of any colony is more than 15MVA, land measuring at least 5000 square meter shall be made available free of cost for construction of 132KV Grid sub-station.

1.4 The scheme for electrification, keeping in view the estimated designed demand and distribution network shall be adjudged for technical feasibility i.e. if it is feasible from the existing 33KV (except feeder feeding Discoms sub-station) or 11KV line in the vicinity of the colony/housing scheme, the same shall be tapped by providing double pole structure with isolator/RMU. However, in case the scheme is not found technically feasible from the existing system, a separate 33KV or 11KV feeders be proposed from the nearby 33KV sub-station or 132KV, GSS (For working out technical feasibility, no diversity factor is to be taken in estimated design demand). In no case 33KV feeder feeding Discoms 33/11KV sub-station shall be tapped.

1.5 The primary distribution system shall be laid with 11KV overhead line(s) or by underground cable of suitable capacity. 11/0.4KV sub-stations shall be erected pole mounted. For LT lines no bare conductor will be used, only 3-core 50 Sq. mm/1-core 35sq.mm AB cable or Insulated Rabbit conductor shall be used. For street light points separate AB cable shall be laid, if required on the same supports.

1.6 The cost of electrification (Lines/Sub-stations) of colony/area for supply voltage upto 33KV shall be borne by the Developer/ Colonizer/Housing Societies/Plot holders as prescribed in subsequent paras. Cost of electrification shall not include cost of 132KV works, if required for any scheme. The land required for construction of 33KV sub-station(s) as per item No.3 above shall be provided by the Developer/Colonizer /Urban Local Bodies free of cost.

1.7 The Developer/Colonizer/Housing Society may opt and carry out electrification of the colony/area with the technical approval and under the supervision of Nigam. However, the developer shall have to deposit the cost of 33/11 KV Power Transformers and 11/0.4KV Distribution Transformers with the Nigam at store issue rate plus usual overhead charges. These transformers will be installed by the Nigam as per requirement. All material which is to be used by Developer/Colonizer for electrification work shall be as per specification of Nigam and meeting CTL requirements. In such cases 15% supervision charges shall be recovered for overhead line works. If entire electrification of the colony is done by underground cabling then supervision charges shall be 5% as per order No.JPD/Rules-751 dated 11.07.2011. The cost of shifting/re-alignment of the existing power lines in the scheme shall also recoverable from the developer/colonizer, if any.

1.8 Where developers/ Colonizers have left and there is no electric connection in the scheme or some connections have been released but number of such plot holders having electric connections are less than 50% of the total plots of the scheme, then the electrification scheme including cost of 33/11 KV S/S, line, if any, shall be prepared and its cost shall be worked out by considering the entire plot area of the scheme minus the cost of infrastructure already available in the scheme for the existing connection and shall be sanctioned by the competent authority. In such cases the prospective consumer shall be given connection on depositing the fix service connection charges towards expenses for providing electric line/ plant and extension of distribution mains and / or service line as under:

1.8.1	Nagar Nigam Area:	Rs. 200/- per Sq Yard of Plot area
1.8.2	Nagar Parishad Area:	Rs. 170/- per Sq Yard of Plot area
1.8.3	Nagar Palika Area:	Rs. 150/- per Sq Yard of Plot area
1.8.4	Rural Area (Not covered Under 1.8.1, 1.8.2 & 1.8.3 above)	Rs. 130/- per Sq Yard of Plot area

In the cases where demand notices has been issued as per provisions prevailing prior to issue of this order but the same is not deposited up to issue of this order, then demand notice shall be revised as per provisions of this order.

The above charges shall be increased by 5% every financial year from 1st April. The other charges viz. meter and consumption security shall be recovered as per provisions of TCOS-2004 as amended from time to time.

1.9. The cost of shifting/re-alignment of the existing power lines in the scheme area shall also be added in the cost of electrification. (Total plot area is the sum of area of all individual plots in the colony. Area of roads, gardens will not be included in the area). The electrification work shall be taken in hand by Nigam as and when required as per the load requirement and technical parameters of the existing network.

1.10. It is further clarified that where schemes had already been sanctioned prior to issue of this order shall not be reviewed. However, where schemes have been sanctioned in past but demand notice amount is not deposited in the sanctioned scheme and no connection is released in such schemes or schemes which are yet to be sanctioned or in process, shall now be governed by this order.

1.11. In case more than 50% plot holders in the scheme have been provided electric connection in colonies/housing schemes at the time of framing scheme of electrification, the balance connections may be released to applicants as per provisions of TCOS-2004 (Amended up to date).

1.12. An additional electric connection of any category to the premises/plot already having electric connection, shall be released as per provisions of TCOS (amended upto date).

The above design criteria, provisions and procedure shall also be applicable to colonies/housing schemes developed by RHB/UITs/ Development Authorities etc.

2 <u>For Multi Storied Building Complexes :</u>

The Electrification of Multistoried Building Complexes is to be carried out as per provisions of JPR5-709, the details of which are given blow.

2.1 In case of Building Complex/Large Building, if the estimated designed demand calculated on the basis of covered area as per calculation given below is more than 50 KVA then the owner/builder/developer/ group of consumers is required to

install transformer and its associated equipment's within the Building Complex/Large Building of appropriate capacity :

S.No	Type of Building Complex/Large Building	Estimate connected load per 1000 sq. feet of total covered area#	Estimated Designed Demand
1	Domestic	8 KW	50% of total Estimated connected load as per area based calculation converted in KVA considering a power factor of 0.9
2	Non-Domestic	10 KW	50% of total Estimated connected load as per area based calculated converted in KVA considering a power factor of 0.9
3	Load of parking floor(s)/ area(s)		To be added @5% of Total Estimated Designed Demand worked out as above

#covered area on all floors including common utility area except parking area of such building complex/ large building as per approved plan or actually constructed whichever is more. In case building is located at such a locality where prior approval of plan is not required as per prevailing byelaws of the local authorities, actual constructed area including common utility area on all floors except parking area.

2.2 The owner/builder/developer/group of consumers is required to carry out the following works.

2.2.1 Laying of HT cable from terminating pole near the building complex/Large Building to the transformer.

2.2.2 Installation of transformer sub-station within the premises.

2.2.3 Laying of LT cable upto the busbar/metering cubical and all associated works.

2.2.4 The Nigam shall recover supervision charges as per applicable rate. However, if owner/builder/developer/ group of consumers is unable to undertake the work at his own, he may request the Nigam for getting work executed on his behalf on payment basis.

2.3 The laying of overhead HT line from the nearest existing mains to the building Complex/Large Building shall be undertaken as a deposit work by Nigam at Consumer's cost.

2.4 The capacity of HT cable/overhead line, distribution transformer & the LT cable connecting the transformer to the meter cubical etc. shall be designed for 30% higher demand than the Estimated Designed Demand.

Note:

2.4.1 For the purpose of arriving at the voltage of supply to building complex/Large Building, the Estimated Designed Demand shall be considered.

2.4.2 Above provisions are not applicable for electrification of colonies.

However, if a consumer/owner/builder/developer/group of consumer install a transformer of capacity even higher than that worked out in the manner above, he shall be allowed to do so.

2.5 If the Estimated Designed Demand of the building complex/Large Building as calculated above is below 50 KVA, then the connections to individual owner/occupant shall be released through Nigam's transformer as is released to other normal consumers in that case the owner/builder/developer/group of consumers shall provide at their own cost cubical with panel for fixing meters on the ground floor of the Building Complex/Large Building & shall pay supervision charges towards this work.

However, large buildings which take a single connection having demand upto 50 KVA shall not be required to install own distribution transformer even if the Estimated Designed Demand as per area norms is more than 50 KVA"

2.6 The maintenance of such infrastructure provided for electrification by the owner/builder/developer/group of consumers be done by themselves. However, maintenance of overhead and underground line up to the terminating point shall be done by the Nigam.

2.7 In case more than one consumers in a building complex require HT connections, instead of providing individual transformers, they may in their own interest, provide jointly, complete infrastructure for electrification from HT supply point up metering point of individual consumers by installing only one transformer of appropriate capacity not less than arithmetic sum of their contract demand. However, for billing and other purpose, the consumers shall be treated individually.

2.8 If a building complex building which had at least one connection prior to 31.12.2010 and had not installed its own transformer as per applicable Terms & Conditions at that time requires more connections/load extension, it should be given the required connections without insisting for installation of its own distribution transformer even though the Estimated Designed Demand as per Para 2.1 is more than 50 KVA by charging amount as mentioned in Schedule to these Terms & Conditions for respective categories and augmentation of system, if required , for this purpose would need to be undertaken by the Nigam at its own cost.

However, if the building has been newly constructed after demolishing the old one then the owner/builder/developer/group of consumers is required to install his own transformer and its associated equipment's within the Building complex/large building of appropriate capacity as per calculation above at Para 2.1.

2.9 In case of building complexes, if the electrification is to be carried out on 33 KV supply voltage, then developer may be allowed to install 33/0.4 KV transformer as per estimated designed demand and confirming to parameters as prescribed in JPR 5-537.

3. <u>Electrification of Group Housing Schemes having multistoried towers only.</u>

In the cases where developer is constructing multistoried towers/Buildings/Villas in the township and there is no plots/land sold by the developer in the area, then such cases will be covered under para **2** above and infrastructure in such cases is to be developed and maintained by the developer himself as details given at para **2**(For Multi Storied Building Complexes).

4. <u>For Electrification of Group Housing Schemes/Townships (having plotted development and Multi Storied Building Complexes)</u>

For the schemes/townships/colonies of mixed nature i.e. schemes having individual plots as well as multi-story buildings, the designed load of the entire scheme shall be inclusive of the estimated design demand of all the multi-storied buildings /complexes & individual plot area worked out as per para 2.1 & 1.1 above and the scheme shall be prepared accordingly. Electrification of the large buildings in such schemes shall be allowed at the voltage applicable (11KV or 33KV) from the technically feasible network developed by the colonizer/developer for the entire scheme as per norms as stated at para 2 above.

5. **Piecemeal Electrification** :

There are some cases of colonies/complexes developed by Builders where the entire complex/colony is not being developed in one phase and is being developed in 3-4 phases. To deal with such cases, the supply voltage line may be drawn at the voltage level which is determined as per the designed load considering entire scheme. However, the sub-station need not be installed as per final scheme requirement, the size of the sub-station and the voltage of the sub-station may be determined as per the designed load of the first phase or the second phase as the case may be. The feeding line should be charged initially on the lower voltage in such cases but the construction of the feeding line shall be as per the requirement of higher entitled voltage. In case after electrification of first phase the developer does not come forward for electrification of balance scheme as per designed load, then connection to prospective applicants will be given as per the provision of point 1.8 of this order.

This order is issued in supersession to all previous orders issued in this regard. Strict compliance of above order shall be ensured by field officers.

By order,

(A.K. Khandelwal)
Chief Engineer (Comml.)