
Draft report

*Submitted by Working Group of the Distribution Licensees
in Maharashtra*

[On the issues raised by Maharashtra Chamber of Commerce, Industries and Agriculture (MCCIA) with regard to single point supply to commercial building/ industrial complexes for mixed load.]

June, 2008

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Part I: Suggestions on

- 1) Various points raised during the discussions,
- 2) Letter of MCCIA : 74/E/Petition/335 dated 14.1.2008
- 3) Letter of K. Raheja Corp. dated 26.12.2007

	Points discussed	Suggestion by Working Group		
1.0	various points raised during the discussions,			
1.1	What is the present practice followed by the licensees for giving supply to the consumers (in commercial / industrial complexes) having contract demand / sanctioned load above 150 kW?	<p>The present practice followed by all the Distribution Licensees for giving supply to the consumers (Commercial/Industrial complexes) having Contract Demand / Sanctioned load above 150KW /187kVA is to insist upon HT supply. However in case of multiple applicants in the same building, where there are issues of space constraints for installation of transforming substations, in such cases LT supply is provided by the Licensees.</p> <p>However the Committee felt that the limit of 150 KW/187kVA is low and hence the information about number of consumers in the respective licensees' areas has been collected as follows:</p>		
	Distribution Licensee	from 187 kVA to 600 kVA	above 600 kVA	TOTAL
i)	BEST	345	91	436
ii)	REL	279	31	310
iii)	TPC	156	64	220
iv)	MSEDCL			
1.3	What is the tariff applicable to such consumer? Whether they are billed as per HT tariff or LT tariff.	The consumers are billed as per HT and LT tariff depending on supply voltage at the point of supply.		
1.4	Whether any additional charge (towards line loss, transformer loss, transformer O&M charges) is being collected by the Licensees. Whether collection of such charges has been approved by MERC?	<p>The utilities are not charging any additional charges over and above the approved tariff rates, to such consumers.</p> <p>In BEST's approved Conditions of Supply, there is provision that in the event of metering on LT side, for HV consumers, the HV reading is</p>		

		<p>obtained by adding 2% to the energy and demand reading.</p> <p>TPC also does not collect any additional charges from HT customers who are metered on LT. However, for such customers ,TPC adjusts the meter readings as per the following clause listed in the power supply agreement:</p> <p>Clause 14.2 of TPC power supply agreement reads "When the loads justify the installation of HT metering at the point of supply, suitable meters will be installed by the Licensee on the LT side of the consumer's transformer and the reading of the meter shall be added the average losses in the transformer ordinarily calculated as follows: $(730 * \text{KVA rating of the transformer})/100$ units per month + 1% added to the units for copper losses. And to arrive at the equivalent HT demand 2% shall be added to the recorded maximum demand on the LT side".</p> <p>REL are not charging any additional charges to such consumers.</p>
1.5	Up to what limit such load above 150 KW can be catered through LT network, considering technical feasibility.	It was suggested that existing limit of 187 kVA load be increased to 600 kVA for giving LT supply in case of multiple consumers in the same premises. and to the single consumer, in case, he is willing to give adequate space to licensee for substation for public transformer.
1.6	Whether the voltage limits specified in the SoP need to be revised to address the problem (particularly considering the physical / space constraints in providing HT supply to individual consumer in commercial / industrial complexes).	The load requirement and load density in urban and rural areas being different, there is need to define separate voltage limits for loads in urban and rural areas. Because of physical / space constraints faced by applicants in metropolitan region, voltage and load levels specified in SoP needs to be revised.
2.0	Letter of MCCIA : 74/E/Petition/335 dated 14.1.2008	
A (i)	Whether a common transformer for all or a separate transformer for each HT consumer within same premises need to be provided?	<p>As per MERC's (Supply Code& Other Conditions of supply) Regulations 2005 in case of an HT consumer Point of Supply means the point of the outgoing terminals of Distribution Licensees, metering cubicle placed before such HT consumers' apparatus.</p> <p>As per BEST & REL, a common transformer for all HT consumers cannot be</p>

		<p>considered. for supply for each individual consumer. Hence a separate transformer for each HT consumer needs to be provided.</p> <p>However, TPC suggested that for a group of HT customers (i.e. having demand load above 600 KVA each) in the same premises can jointly install and use the HT equipments for their combined HT power requirements. In such case metering will be on LT and formula will be applied for adding the losses as per item 1.4 above.</p>
(i i)	<p>Whether each transmission OA consumer need a separate line running up to Transmission System or a common line for group of Transmission OA consumers in the same premises can be planned ?</p>	<p>Regulation 4.2 of MERC (Transmission Open Access) Regulations 2005 provides eligibility criterion for consumer to avail Transmission Open Access.</p> <p>Regulation 3 of MERC (Distribution Open Access) Regulations 2005 provides the eligibility criteria for availing Distribution Open Access (DOA) by an Individual consumer.</p> <p>The Distribution System of the Distribution Licensee provides the connectivity between Intra State Transmission System (InSTS) & Installations of the consumers.</p> <p>Regulation 15 of MERC (Distribution Open Access) Regulations 2005 provides for connection to the transmission network directly by the eligible Open Access consumer.</p> <p>In view of the above, to run separate service line up to InSTS either by an individual Open Access consumer or group of Open Access consumers is not permissible.</p> <p>However, though technically, it is possible to give one OA line for many consumers in same plot/area or individual OA lines as per consumers' request, this committee does not recommend the same.</p>
iii)	<p>Can Non – OA consumers / persons get their supply through / on OA transmission connection planned by the owner of the premises for his requirement in following cases.</p>	<p>As mentioned in 2(ii) above since owner / occupant of the premises (Eligible Open Access Consumer) can have direct transmission connectivity with InSTS, the committee does not recommend it since non eligible Open Access consumer (i.e. less then 1 MVA demand load) may also use such transmission connectivity.</p>

<p>(a)</p> <p>(b)</p> <p>(c)</p>	<p>Distribution Licensee has not laid distribution back-bone.</p> <p>Unable to supply required power.</p> <p>Unable to supply required power in allowed time under the Act.</p>	<p>(a) Distribution Licensee is obliged to extend its Distribution System to facilitate connectivity between InSTS & Installation of the consumer.</p> <p>(b) Distribution Licensee is obliged to meet the power supply requirement of the consumer. However shortfall in supply, if any, is required to be shared by all the consumers of that concerned licensee in accordance with the directions given by the Commission</p> <p>(c) Distribution Licensee is required to comply with the provisions of Standards of Performance Regulations.</p>
<p>(iv)</p>	<p>In case Standby DG sets for ensuring un-interrupted power is planned by the owner of the above premises for all the tenants / leave – licensees whether the complex in it’s capacity as generator can have single point supply?</p>	<p>The Point of Supply of HT and LT consumer would be as per the definition. The Distribution Licensee is responsible for laying Service Lines up to each consumer’s Point of Supply except in respect of Group Housing societies / Franchisee.</p> <p>In view of the fact that number of consumers availing backup / standby support from DG sets are likely to be large in number, Distribution Licensee can facilitate, if technically feasible, connectivity of DG sets to its incoming HT or LT point of supply to the premises at customer’s cost.</p> <p>However we would clarify that consumers served through franchisee arrangement are consumers of the distribution licensee and such consumers for the purpose of tariff applicability shall be treated at par with the other consumers of the distribution licensee. Additional reliability on account of DG set or otherwise should be accounted separately and paid for by such consumers.</p> <p>Since DG set would provide standby/ backup support to the consumer, a suitable metering arrangement with auto changeover switch for DG set will have to be provided by consumer for accounting energy supplied by DG set.</p> <p>The complex can not act as a generator for distribution of electric supply as it requires distribution license. Alternatively DG sets in its</p>

		capacity can be used as a single point supply subject to implementation of all criteria applicable for Captive Power Plant.
B	<p>To allow Open Access to all consumers in Commercial Building / Industrial complex with mixed load at single point supply if required, in case Licensee does not permit Franchisee route.</p> <p>Alternatively and otherwise owner / manager of the premises that is Commercial building / Industrial complex having mixed load be treated as a limited trader for supply to members on his premises.</p>	<p>It is the prerogative of the concerned Distribution Licensee to appoint Franchisee.</p> <p>However, if all consumers are eligible (i.e. above 1000 KVA demand load) to obtain power supply under Open Access then they can take supply at a single point. Down the line supply arrangements shall be made by each individual consumer as per their requirements. Concept of Limited trader is not available under the law.</p>
3.0	Letter of K. Raheja Corp. dated 26.12.2007	
	<p>Due to impracticability of having large number of HT connection in single building and providing independent DG back up for each connection, it is proposed to provide single HT connection and assessment of individual consumer through metering panel.</p> <p>The electric panel for backup power coupled with metering panel so that standby power supply can automatically be switched on in the event of failure of main supply.</p> <p>Since the metering of the power by the Service Provider (i.e. the Electricity Supply Co.) shall be done at HT level, metering arrangement for the IT Park Clients has to be provided by the Infrastructure Service Provider (i.e. the Developer)</p>	<p>It is not practicable to give multiple HT connections and independent backup for each consumer.</p> <p>In order to have single HT connection by Distribution Licensee and power distribution to individual consumer through panel (by the Developer), Distribution Franchisee arrangement needs to be finalized which is at the option of the Licensee.</p> <p>The suggestion of providing DG set as standby/ backup support to the individual consumer through a metering panel would create difficulty in separately assessing electric supply consumption, supplied by Distribution Licensee and DG set.</p> <p>Therefore, a suitable metering arrangement with auto changeover switch between metering panel and DG set will have to be provided by consumer for accounting energy supplied by DG set.</p>

Part II : Proposed modifications in the Regulations No.5 – Quality of Supply and System of Supply in the Standards of Performance (SoP) Regulation, 2005.

There is need to modify existing voltage and load levels. Because of the terminologies of "sanctioned load" and "contract demand" in the definitions 5.3 of (i) – A.C. System, it is an impression that above these demands, it is mandatory for the licensee to provide supply at respective voltages. It is necessary that the licensee has to provide the supply at appropriate voltage at the load centre, preferably at the premises of the consumers. The consumers can avail of the supply at required voltage depending on individual needs. It is therefore necessary to replace the word, 'classification of installation' by 'classification of premises'. This will also result in reduction in losses in system of the licensees.

- 1) No change in the voltage and load levels for single phase supply
- 2) It is proposed to change the upper limit of load demand to 480 KW (600 KVA) from existing 150 KW/187kVA in Municipal Corporation area only for giving LT supply to multiple consumers in the same buildings / premises as the load demand of the premises increases due to multiple consumers with individual loads above 187 kVA in the same building / premises resulting in physical space constraints due to requirement of no of sub-stations for HT supply. Supply to only such consumer's premises for loads up to 600 kVA be considered at LT. It is also proposed to give LT supply to the single consumer in case he is willing to give adequate space to licensee for substation for public transformer.
- 3) The existing voltage levels and load limits are 22kV up to 3000 kVA, 33 kV up to 5000 kVA and EHV above 5000 kVA.

BEST and REL have primary distribution voltage of 11kv whereas TPC has 6.6/11/22 kV and 11/22/33 kV for MSEDCL area. It is therefore, proposed that the voltage for supply to loads above 187kVA and load limit up to 15,000 kVA to be at 6.6/11/22/33 KV , and above 15,000 kVA at 33kV / EHT, with due consideration to the primary distribution voltage of the licensees and availability of network nearby to consumers' premises.

The existing SoP Regulations and proposed modification are as given below:

Regulation 5.3 (i) - A.C. System

Sr. No	Existing Regulations	Proposed Modifications
(a)	Two wires, single phase, 240 volts-General supply not exceeding 40 amperes.	No change in voltage and load levels in single phase supply.
Sr. No	Existing Regulations	Proposed Modifications
(b)	Four wire, three phase, 240 volts between phase wires and neutral general supply, exceeding 40 amperes and sanctioned load not exceeding 80 kW/ 100 kVA (107 HP) in all areas, except in Municipal Corporation areas where such limit would be 150 kW/ 187 kVA (201 HP) ;	<p>Four wire, three phase, 240 volts between phase wires and neutral general supply, exceeding 40 amperes and load demand at consumers' premises not exceeding 80 kW/ 100 kVA (107 HP) in all areas, except in Municipal Corporation areas where such limit would be 150 kW/ 187 kVA (201 HP) .</p> <p>For multiple consumers in the same premises, load demand upto 480 kW / 600 kVA (642 HP) LT supply may be considered.</p> <p>The request for LT supply of single consumer may be considered if he is willing to give adequate space for substation for public transformer.</p>
(c)	Three phase, 50 cycles, 11kV/22kV – all installations with contract demand above 80 kW/100 KVA (107 HP) in all areas, except in Municipal Corporation areas where such limit would be 150 kW/187 KVA (201 HP) and upto 1500 KVA.	<p>Three phase, 50 cycles, 6.6/11/22 /33 kV – all installations with load demand at the consumers premises above 80 kW/100 KVA (107 HP) in all areas, except in Municipal Corporation areas where such limit would be 150 kW/187 KVA(201 HP) and up to 15000 KVA.</p>
(d)	Three phase, 50 cycle, 22 kV – all installations with contract demand above 1500 kVA & upto 3000 kVA.	
(e)	Three phase, 50 cycle, 33 kV – all installations with contract demand above 1500 kVA & up to 5000 kVA.	

Sr. No	Existing Regulations	Proposed Modifications
(f)	Three phase, 50 cycle, extra high voltage – all installations with contract demand above 5,000 kVA.	<p>Three phase, 50 cycle, 33kV / Extra High voltage - all installations with load demand at the consumers premises above 15000 kVA –</p> <p>However, supply will be given to the consumers from the existing network available nearby to the premises subject to sufficient spare capacity available and at the primary distribution voltage of the Licensee.</p>

Note: The guidelines in respect of voltage and Load limits given above are for giving Supply at the premises of consumers

Any deviation to be referred to the commission by the Licensee.

Part III: Suggestion of working group in respect of "HT single point supply in the Commercial / Industrial / Malls - Buildings / Complexes / Premises / Estates"

In case of LT supply in the same building, the licensee has to establish his LT network by installing switchgears, transformer etc. and make LT supply available up to point of supply. In such cases, the consumers are charged as per the LT tariff.

In case of HT supply to the consumers, licensees' HT equipments are provided upto point of supply. Thereafter the consumer takes HT supply after installing his switchgears, transformers and associated LT equipments. In such cases, the consumers are charged as per the HT tariff.

In order to give electric supply to both LT & HT consumers in the same building, it cannot be provided without disturbing the requirements necessary in the applicability of HT tariff vis-à-vis meeting stipulated performance standard on voltage level and contract demand. It necessitates modifications in the SoP in respect of voltage and load levels by replacing the word of "installation " by "consumers premises " as suggested above in Part II.

It may be mentioned that as per Section 43 of the Electricity Act 2003 the Distribution Licensees is required to supply electricity directly to the owner or occupier of any premises on an application made by them.

In terms of The Electricity (Removal of Difficulties) Eighth Order, 2005 it has been specified that single point supply could be given only for residential premises on an application by cooperative group of Housing Society which owns the premises at a single point for making available electricity to such members of such society residing in the same premises. This order does not bar any individual consumer from also seeking supply directly from the Distribution Licensee. Moreover this will be applicable only in case distribution licensee has difficulty to supply individual residential premises.

It may be mentioned that the option of appointing a Franchisee lies with the Distribution Licensee. Even in a Franchisee arrangement individual consumer continues to remain the consumer of the Distribution Licensee and Distribution Licensee's obligation to serve individual consumer is absolute

To address the space constraint SoP needs to be suitably modified to say that in case of multi storied building housing multiple consumers with load demand above 150 KW/187kVA, the Distribution Licensee if technically feasible may consider extending LT supply to such consumers however such exemption will not be applicable if load demand of the consumers' premises exceeds 600 kVA.

There are no other provisions presently available on the basis of which the consumers in a commercial building can be supplied through common transformers only for the benefit of giving HT tariff to the consumers. As per TPC, a group of HT customers (i.e. having demand load above 600 KVA each) in the same premises can jointly install and use the HT equipments for their combined HT power requirements. In such case metering will be on LT and formula will be applied for adding the losses as per Part – I, Item 1.4 above
