

4. I say that, the contents of the said Appendix-A annexed hereto is true and correct to my knowledge and belief and is based on the information/records maintained by RInfra and I believe them to be true.

5. The present affidavit is bona fide and filed in the interest of justice.

Solemnly affirmed at Mumbai)
30th day of September, 2015)

Deborah

Before me,

Mulla & Mulla & Craigie Blunt & Caroe

Mulla

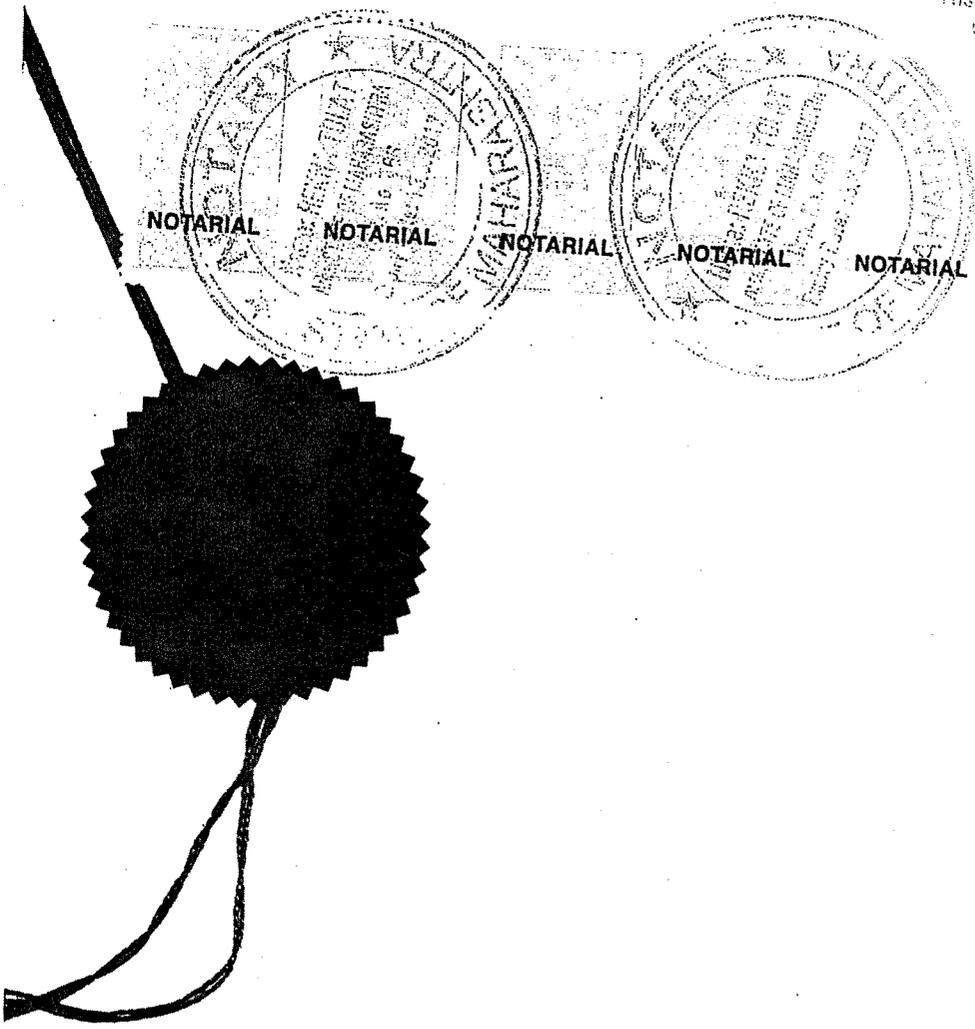
Partner

Advocates for Reliance Infrastructure Limited

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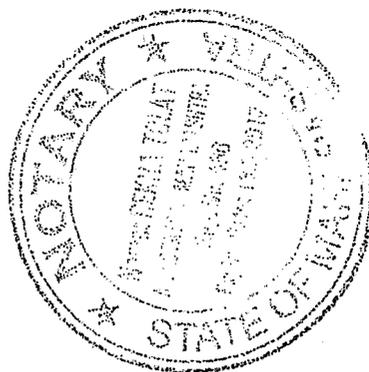
BEFORE THE MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION, MUMBAI
Case No. 182 of 2014

The Tata Power Company Limited

...Petitioner

AFFIDAVIT ON BEHALF OF
RELIANCE INFRASTRUCTURE LTD

Dated this 30th day of September, 2015



Mulla & Mulla & Craigie Blunt & Caroe,
Advocates for Reliance Infrastructure Ltd.
Mulla House, 51 M G Road, Fort
Mumbai 400 001

APPENDIX-A

SUBMISSIONS ON BEHALF OF RELIANCE INFRASTRUCTURE LIMITED (RINFRA), PURSUANT TO THE DIRECTIONS GIVEN BY THIS HON`BLE COMMISSION IN ITS DAILY ORDER DATED 22nd SEPTEMBER, 2015.

1. The present submissions are being filed on behalf of RInfra pursuant to the Daily Order passed by this Hon`ble Commission dated 22-09-2015, in Case No. 182 of 2014. RInfra, during the hearing held on 22-09-2015, had made a presentation in response to various submissions/presentation made by TPC on the issue of network laying by TPC in respect of New Connection/Existing Consumer and for improving Reliability. Copy of the final presentation dated 23-09-2015 is enclosed herewith and marked as **Exhibit "1"**. TPC, on 26-09-2015 at 10:50 PM, mailed their reply on the said presentation made by RInfra. RInfra is now making a common comprehensive response to submissions made by TPC on 02-09-2015, 04-09-2015, 15-09-2015 and 26-09-2015.
2. The submissions made by RInfra in the present proceedings emanating from Case No. 182 of 2014 are only for the limited purpose of considering the manner of implementation of the directions given by the Hon`ble Tribunal in the judgment dated 28-11-2014 in Appeal Nos.246 of 2012 and 229 of 2012 (hereinafter referred to as "the said judgment") and without prejudice to the submissions that RInfra is making and would be making in other proceedings including in Appeal No. 201 of 2014 pending before the Hon`ble Tribunal.
3. **At the outset, it is submitted that in the submissions dated 26-09-2015 made by TPC, it has completely changed its stand and has made a totally new argument (Paragraph 7(g)) that there are no physical constraints for it to lay its network. This point was never raised by TPC but infact the stand of TPC was to the contrary. In view of the above, there has been no hearing much less an effective hearing on the said issue and it is respectfully submitted that this Hon`ble Commission may be pleased to hear the parties on the said issue before passing any final order.**
4. It is submitted that submissions made by TPC in respect of network roll out are completely contrary to the principles laid down in the said

judgment of the Hon'ble Tribunal. TPC, in the submissions made so far, has based its interpretation of the said judgment and has proposed scenarios for network laying for new consumers, existing consumers and reliability improvement with the sole objective of increasing the loading of its existing network even if same amounts to duplication of network, burdening the consumers, stranding of existing RInfra network and laying down of "parallel network" as it chooses, when it chooses, to whom it chooses in what TPC labels as "consumer choice"

5. It is submitted that the judgment of the Hon'ble Tribunal was given in the context of the peculiar situation of Mumbai, the primary and fundamental basis of the said judgment being that TPC was facing difficulty in laying network in its area of supply in Mumbai as there were various constraints including physical constrains. It is submitted that it has been TPC's case since 2011, based on the submissions made before MERC during proceedings of Case No 151 of 2011 and subsequently in Case 85 of 2011, that there are practical difficulties in laying network in certain areas, MCGM permission for laying cables, space constraints for CSS, difficulty in installing transformer, difficulty in laying service line and space constraints for metering infrastructure. As mentioned above, same submissions were made before the Hon'ble Tribunal in Appeal No 246 of 2012. It was in the light of this basic feature that the said judgment proceeded and evolved the principle and methodology that in the common license areas of TPC and RInfra, where a reliable grid of RInfra already exists, there should be no duplication of network and TPC must use only RInfra's network to effect supply.
 - 5.1. In this regard, it is submitted that right from the TPC's submissions in Case No 151 of 2011 till the final submissions being made by TPC now in the present proceedings, to show how TPC has been trying to scuttle the process to get the best of all worlds:
 - 5.1.1. TPC made its submissions in Case No. 151 of 2011 and Case No. 85 of 2013 that they are facing significant physical constraints, issues of permissions, right of ways, etc. and therefore they cannot develop their distribution network and take on consumers on their network (since usage of RInfra's network, as held by the Hon'ble Commission was only temporary).
 - 5.1.2. The Hon'ble Commission categorically stressed that TPC have to meet their obligation of laying their own network in the common area of

supply and directed that TPC's network readiness in the 11 clusters should be such that any and every consumer can be served in such 11 clusters within a period of 1 year.

- 5.1.3. TPC challenged the said Order before the Hon'ble ATE (Appeal No. 246 of 2012) and in those proceedings also, extensively narrated as to how the said Order of the Hon'ble Commission is un-implementable due to physical constraints in developing the distribution network.
- 5.1.4. The Hon'ble Tribunal, based on the submissions of TPC, gave a judgment in said Appeal, observing the physical constraints put forth by TPC in developing network and directed that because of such physical constraints in a congested Metropolitan such as Mumbai, the distribution networks should not be duplicated as there will be high cost incidence of the same and it will not therefore be in the interest of either Licensee's consumers. The Hon'ble Tribunal categorically directed that, in order to protect consumer interest, the existing consumers of RInfra should be served using the network of RInfra only. The Hon'ble Tribunal also found that in case switchover of consumers from RInfra network to TPC network is allowed, the wheeling charges of RInfra would go up due to reduction in consumer base the wheeling charges of TPC would also go up due to increase in cost incurred to duplicate the network and therefore such network duplication will not be in the interest of either RInfra's consumers or TPC's consumers. The very underlying basis of the said judgment is the existence of physical constraints as contended by TPC.
- 5.1.5. As per the directions of the Hon'ble Tribunal, TPC filed its petitions for approval of Network Rollout plan before this Hon'ble Commission. However, in the said submissions, as has also been pointed out earlier, TPC is claiming that a consumer connected to RInfra's network can surrender its connection and connect to TPC's network and according to TPC that is not contrary to the judgment of the Hon'ble Tribunal. In its latest submissions, TPC has negated the presence of any physical constraints in order to effect such connections also and have gone on record stating that they are in a position to employ technological interventions to circumvent any physical constraints.
- 5.1.6. Further, TPC has been arguing vehemently that consumer choice is paramount and hence a consumer, whether connected to RInfra

network or a new consumer, if applies to TPC for connection, such exercise of choice should be honoured and such consumer should be connected by TPC and, as submitted above, they have gone on record stating that they can sort out any physical constraints.

- 5.1.7. Thus, effectively, the stand of TPC has evolved from one of not being able to develop network as per the directions of the Commission in Case No. 151 of 2011 due to physical constraints, to now, being ready to switchover existing consumers of RInfra and not finding any physical constraints therein. However, it is very important to note that still TPC stops short of committing to network development in the entire common area of supply.
- 5.1.8. The story that now emerges thus gives an impression that TPC is now trying to wriggle out of the restrictions on network development put forth by the Hon'ble Tribunal and want to load their existing network. The card of the so called "consumer choice" is being played by TPC precisely for that reason, for if that was not the case, TPC should have presented a rollout plan ready to take over any and every consumer in the area of supply and thus truly provide "choice" to any and every consumer. That should be possible now that they have admitted that they have ability to circumvent physical constraints.
- 5.1.9. It is obvious that TPC does not wish to implement the judgment of the Hon'ble Tribunal in the manner directed and wishes to keep the choice of network development with them, so that they can play that card in the "consumer choice" from time to time to develop network selectively and connect consumers as they choose. In other words, TPC's so called "consumer choice" is not consumer choice at all, but it is actually TPC choice, because consumer choice is unfettered, it cannot be available to a select few but is available to all. RInfra submits that the stand TPC is taking now actually comes around full circle to the same point of cherry picking and selective network development, from where it started. This is a deliberate attempt to dilute the law and should be emphatically prevented.
- 5.1.10. If it is the case of TPC as is now contended by them in paragraph 7 (g) of their submissions that the issue of physical constraints is no longer live or applicable then Section 14(6) proviso read with Section 43 operate in their full play and TPC is bound to rollout their network in the entire licensed area. The consequence must be that RInfra's

network should be forthwith returned to RInfra. The entire approach of TPC now undertaken discloses an intention on the part of TPC to progressively lay their network as it suits them and when it suits them and only in the interregnum to use the network of RInfra which will operate to the gross detriment of RInfra and its consumers. Till the time TPC is USO ready by laying down its network in the entire area for which it now claims there are no physical constraints either TPC should be restrained from supplying electricity to the consumers in the licensed area or should be mandated and directed to supply electricity only on RInfra's network till it lays down its network in the entire area. The approach of TPC is to put a premium on its default for a period of over 100 years in complying with its USO obligations. It is respectfully submitted that TPC by its present submissions is now attempting to persuade this Hon`ble Commission to put a premium on TPC's default.

6. RInfra repeats and reiterates the contents of its earlier submissions/affidavit made by it in the present proceedings as if the same form a part of the present submissions. The same are not being repeated for the sake of brevity.
7. The submissions made herein are without prejudice to one another. Nothing stated in the various submission filed by TPC, which is not specifically denied, should be deemed to have been admitted by RInfra.

Response to the additional submissions of TPC dated 02-09-2015 and 15-09-2015 in respect of Reliability of RInfra network.

8. TPC had filed its submissions in respect of analysis of Reliability data submitted by RInfra on 02-09-2015 and, subsequently on 15-09-2015, filed additional submissions giving details of TPC's plan for improving reliability of distribution network.
9. TPC, in its submissions dated 02-09-2015, has compared the Reliability Indices of TPC and RInfra to conclude that Reliability Indices of TPC are better than RInfra on all counts and there are reliability issues associated with RInfra Distribution network and reliability can be improved by utilizing the under loaded network of TPC, which TPC claims is, existing in the "vicinity". In reference to aforesaid submissions dated 02-09-2015, RInfra submits as follows:

- 9.1. With reference to paragraph 41 and 42, comparison sought to be made by TPC of Reliability Indices of TPC and RInfra has no basis. It is submitted that Reliability of Utilities' network cannot be simply compared on the basis of the Reliability Indices due to huge differences in the customer base, Customer Density, Load Density spread of the network, etc. RInfra is today serving more than 29 lacs consumers on its network in its area of supply whereas TPC is serving only 75000 consumers on its network in the entire area of supply common to RInfra as well as BEST. RInfra's network spread of 11000kMs (HT+LT), which is almost 4 times the network spread of TPC. RInfra's network connects to all unorganized dwellings (slums) in its area of supply and is predominantly serving LT connections, whereas TPC's network is mainly connecting HT consumers, let alone being spread out in any slum whatsoever. In view of the aforesaid, it is submitted that due consideration needs to be given to these variations in Customer Density/Load Density, type of network (LT or HT) and spread of Network while comparing Reliability Indices. RInfra, in its presentation dated 22-09-2015 in Slide 29 and 30, have explained the fact that mere comparison of Reliability Indices can be misleading and all these factors play a vital role in Reliability Indices. However, as was demonstrated in the presentation, even after these wide ranging differences in the two networks, the reliability of RInfra's network, after exclusion of external damages, is very similar to that provided by TPC's existing network.
- 9.2. With reference to paragraph 43, it is denied that Reliability Indices of RInfra are adverse and indicate ageing network leading to increased number of faults. It is submitted that Reliability of RInfra network is well within the norms specified by the Hon'ble Commission. RInfra-D has built a robust distribution network across HT and LT level in every nook and corner of its area of supply, brief details of which are given below:
- 9.2.1. 77 nos. of 33(22)/11kV substations with power transformer installed capacity of 3,297 MVA. These 33(22)/11kV substations are fed through a network of nearly 880kms of underground 33kV cable network spread across the supply area.
- 9.2.2. Installed capacity of distribution transformer as of May-June 2015 was about 4606 MVA in more than 6,700 nos. of distribution substations (i.e. more than 17 substations/sq.km and nearly 12 MVA of installed

capacity/sq. km). A meshed open-ring 11kV cable network, totalling to about 3,200 kms of circuit length, feeds the distribution substations.

9.2.3. At the LT level, the total LT mains network length is nearly 5,900 kms; irrespective of whether the consumer is from densely populated slum area of Shivaji nagar or premium residences in Khar, Juhu, Bandra areas, or remotely located fishermen colonies in Uttan area. The overall reliability of the network is amongst the best in the country with ASAI of 99.99% and is achieved as a result of distribution network, which is developed as an interconnected mesh, at various voltage levels and through deployment of state-of-the-art systems like SCADA (Supervisory Control And Data Acquisition), DMS (Distribution Management System), Integrated GIS (Geographical Information System) and OMS (Outage Management System) which support the physical network and are unparalleled in the country. The unique 11kV and LT Interconnected Mesh network is far more effective than the traditionally used 'ring' network to ensure that electricity is restored during a power outage, with the least delay or in-convenience to the customers. RInfra has already filed a detailed note on "*Network Reliability and Expansion Philosophy for RInfra-Distribution*" along with our submissions made on 11-08-2015 in Case No 182 of 2014.

9.3. With reference to paragraph 44, RInfra repeats and reiterates what is stated in paragraph 7.1 herein above. It is submitted that Reliability Indices of RInfra showed in the table herein below include interruptions due to cable faults and damages. The table also shows figures of Reliability Indices after excluding interruptions due to cable faults and external damages.

	Tata Power#	RInfra# (excl. damages)	RInfra# (incl. damages)	MSEDCL*	Torrent#	BEST*
SAIFI (nos)	1.10	0.86	1.69	12.05	5.63	3.60
SAIDI (mins)	17.83	19.23	53.94	82.36	274.80	151.11
CAIDI (mins)	16.16	22.37	31.91	6.84	48.81	41.51

* - MSEDCL and Best data is for FY2013-14

- Tata Power, RInfra and Torrent data is for FY2014-15

- 9.4. With reference to paragraph 45 and 46, it is submitted that (N-1) reliability at 33(22)/11kV substation level is maintained through interconnected 11kV network by forming clusters of nearby interconnected 33(22)/11kV substations, so that in case of failure of any of the incoming 33(22)kV feeds in the cluster, supply to the entire network within a cluster is restored with minimum number of operations. Further, even clusters are interconnected with one another, which facilitates transfer of load across clusters as well, in case the load interrupted is large and cannot be restored through diversions within the cluster. It is submitted that Cluster wise planning philosophy helps RInfra take advantage of diversity of load in case of any forced outages and helps in faster restoration of supply. Further, cluster wise planning minimizes capex to maintain (n-1) reliability for all the substations within that cluster as against maintaining the same for individual substation. It is denied that there are any reliability related issues associated with RInfra distribution network. It is submitted that RInfra has, over the years, put itself in a position where due to the strengths derived from the design and configuration of its network, not only is RInfra able to efficiently and reliably serve its existing load, but is also in a position to most optimally meet the load growth, with continuous assurance of efficient and reliable supply.
- 9.5. With reference to paragraph 47 to 52 in respect of loading of network, TPC has raised exactly same contentions in its additional submissions filed on 15-09-2015 and RInfra will deal with the same in its reply to the said submissions.
10. TPC in its additional submissions filed on 15-09-2015 has given details of its plan for improving reliability of distribution network by proposing loading of Power Transformer and Distribution Transformer as a key parameter to determine reliability of network. In view of the aforesaid, RInfra submits as follows:
- 10.1. With reference to paragraph 7 to 10, it is submitted that RInfra has already filed its submission in respect of regulatory framework qualifying of network in parallel license scenario on 03-09-2015 and craves leave to refer to them when produced.
- 10.2. With reference to paragraph 11 to 13, it is submitted that loading criteria put forth by TPC for assessing reliability has no merit as same is evident from the data submitted by TPC itself on 27-08-2015 (Format -

2) wherein 80% of total interruptions are on those 11kV feeders which are loaded less than 50% and 60% of total interruptions are on those 11kV feeders which are loaded less than 30%. TPC's own submissions show that loading and tripping are not directly related. RInfra, in its presentation dated 22-09-2015 in Slide 35, has shown graphical representation of TPC's loading and tripping of 11kV feeders. It is submitted that reliance of TPC on IPDS guidelines and MSEDCL Circular to justify the loading criteria has no basis and it cannot be the criteria for reliability improvement as such guidelines/circulars are not binding and do not carry any statutory force. It is submitted that every utility develops its network based on the planning criteria unique to it. It is submitted that reliability of supply to consumers of RInfra is ensured through overall planning of network to ensure N-1 redundancies so that in case of tripping, most consumers can be served through alternate feeding, thereby ensuring lower "minutes-off-supply". Further, network augmentation and up-gradation to ensure even further improvement in reliability is a continuous feature of RInfra's capex plans and for which RInfra is only required to undertake incremental capex. Therefore, in order to evaluate the rollout plan in the context of improvement in reliability, the Hon'ble Commission has to (a) arrive at an objective measure of reliability from the point of view of consumer, (b) determine what can be defined as "poor" reliability and (c) most importantly, considering the cost of improvement in reliability of both licensees to arrive at a decision which avoids high cost incidence on all consumers:

10.2.1. In this regard, it is further submitted that RInfra, in its presentation made on 22-09-2015, demonstrated that the so called "nearby" under-loaded receiving stations of TPC, which TPC claimed could serve part of the load of the purported over-loaded receiving stations of RInfra, are not so nearby after all. In fact, in some of the cases, the distances are in kilometers and across difficult terrain such as across the creek, etc. It is submitted that it is for this reason that the submissions of TPC cannot and should not be accepted on face value when it comes to taking important decisions about network development, as that could cause serious cost implications on all the consumers in the area of supply. In fact, the submissions of TPC indicate their sole desire to transfer load on their existing network, in blatant disregard to economic principles and without any demonstration of perceptible improvement in quality and reliability of supply to the end consumers. RInfra have submitted earlier and now re-iterate that there is no demonstration anywhere in

the proposal of TPC as to how the reliability of existing consumers would improve and by what extent it would improve if load is transferred to TPC network, as they propose. Further, there is no assessment whatsoever as to the fact that, even if according to TPC the network of RInfra in such areas is experiencing poor reliability, what cost it would take RInfra to improve such reliability, as against the cost to be entailed by TPC in doing so.

10.2.2. It is further submitted that assessment of reliability of supply of a given network is a fairly involved issue. It starts with the network development philosophy of the utility, the practices that the utility adopts about outage management, load diversions, the readiness of the utility in responding to breakdowns, etc. Reliability of supply is not an issue that can simply be decided on flimsy criterion such as loading of power transformers or distribution transformers. Consumers cannot be subject to significantly high cost of duplication of network by simply making assumptions about a network's reliability based on the loading of power transformers or distribution transformers, without looking at the overall picture as to how the network has been planned and interconnected.

10.3. With reference to paragraph 14 to 16, it is re-iterated that the principle proposed by TPC that loading of PT and DT is the key parameter to determine reliability of a network is based on completely wrong premise as is evident from the data submitted by TPC itself. Reliability is what is experienced by Consumer and as mentioned above, Hon'ble Commission has to arrive at an objective measure of reliability from the point of view of consumer. It is submitted that scenarios proposed by TPC to improve reliability of other distribution licensee are contrary to its own submission that *replacement, augmentation, strengthening, re-organisation of load may be adopted by as distribution licensee to improve reliability of its network*. With specific reference to paragraph 16 (b) and (c), it is again submitted that loading criteria of 60% for DT and PT as proposed by TPC is mainly to load its under loaded network without taking into consideration additional capex required to create parallel network to reach consumers. Loading of existing network of TPC in BEST area is 28%, which clearly reflects that historically TPC network is loaded to such an extent and now TPC, by conveniently interpreting the said judgment to increase the loading of its existing network, is seeking to switchover existing RInfra consumers thereby making RInfra's network redundant.

- 10.4. With reference to paragraph 17, it is submitted that the primary factor determining the network development in all the three scenarios proposed by TPC has to be the Utility which offers cost competitive solution to avoid burden on consumers. It is submitted that loading of under loaded network as propounded by TPC cannot be the criterion for network development which as per TPC's own submission will duplicate the entire downstream 11kV network and consumer substations.
- 10.5. With reference to paragraph 18 to 25, it is submitted that TPC has done mapping of RInfra DSS with its DSS in the vicinity and Distribution Transformers are being compared at Division level. TPC has proposed capital expenditure of Rs 245 Cr (only HT network) towards reliability improvement.
- 10.5.1. Contention of TPC that loading of each DSS has to be considered for allowing TPC to lay network and not cluster wise as proposed by RInfra (already explained herein above) is contrary to TPC's own submissions in Case No 151 of 2011 (dated 19-07-2012), wherein TPC itself has proposed cluster wise planning. Relevant extract of TPC's submission is reproduced herein below:

*"In the presentation made on 27th June 2012, **Tata Power-D has suggested the cluster-based development approach** for meeting the timelines under SOP Regulations. Accordingly, we have carried out the assessment of Tata Power-D network **in the clusters which have been carved out for stage-wise development**. It is submitted that, in order to assess the utility's readiness to supply within the time limits prescribed under the SOP regulation, it is necessary to broadly understand and consider the following, namely:*

(i) Availability of adequate number of DSS in that cluster in terms of spare capacity

(ii) DSS ring adequately laid out to enable tapping this ring to feed the CSS

(iii) Availability of CSS in the cluster

(iv) LT network in terms of LT cables and feeder pillars"

It is submitted that TPC is conveniently changing its planning criteria with the sole objective of loading its network.

10.5.2. It is submitted that Mapping of Power Transformers of TPC to individual DSS of RInfra in Common area has been done to mislead MERC and is contrary to TPC's own philosophy. Clusters, as identified by RInfra for network planning, are complying (n-1) requirement to ensure Reliability. Also, WIP schemes as per DPRs approved by MERC will reduce the loading of existing sub-stations only by rearranging the 11kV feeders. Without prejudice, even if IPDS Guidelines as put forth by TPC are considered, there are only two 33(22)/11 kV S/S above 80% loading. However, if respective cluster is considered, all satisfy (n-1) requirement for maintaining Reliability. RInfra, in its presentation dated 22-09-2015 in Slide 39 to 43, has shown GIS maps of location of TPC DSS mapped with RInfra DSS, which clearly show that TPC is attempting to duplicate the network and has conveniently ignored lightly loaded RInfra DSS in the same cluster/vicinity and connected with each other through robust 11kV network.

10.5.3. TPC has made comparison based on Division and concluded that TPC can lay network where RInfra DT loading is more than 70%. It is submitted that Division is a vast area and there is likely possibility that TPC's DT might not be in the vicinity of RInfra's alleged loaded DT which are allegedly affecting reliability. TPC has not considered physical constraints while proposing to relieve loaded DT's of RInfra. Further, TPC's submission is without taking into consideration capex requirement for RInfra to relieve loading by augmentation, re-organisation of load as against TPC's capex requirement to lay duplicate network.

10.5.4. It is submitted that there is no question of allowing any additional capex towards reliability improvement to TPC as part of its roll out plan as it would amount to unnecessary burdening of consumers. Even if the Hon'ble Commission perceives any issues related to reliability of RInfra's network, it would be in consumer interest to first evaluate the marginal cost of RInfra to undertake improvements for better of reliability, as in most situations, RInfra is likely to be better placed to take advantages offered by economies of scale.

10.6. With reference to paragraph 26, RInfra has already made elaborate submissions on definition of New Consumer/New Connections in its affidavit dated 03-09-2015. RInfra craves leave to refer to the same when produced. It is submitted that TPC's interpretation of New Consumer also means that every existing consumer in RInfra area of

supply is a new consumer once it approaches TPC by surrendering its existing connection. In this regard, following submissions are made:

10.6.1. This interpretation of TPC is contrary to TPC's own definition of Switchover Consumers as put forth in proceedings before this Hon'ble Commission in Case No 151 of 2011. Relevant extract of the said order is reproduced herein below for ready reference:

*“ 69. Further, TPC-D has classified '**switchover**' consumers as those consumers **who were taking supply from one Distribution Licensee through its distribution network, changing over to another Distribution Licensee for supply of electricity on the network of the second Distribution Licensee, i.e., consumers who have changed both the Supply Distribution Licensee as well as the Wheeling Distribution Licensee**”*

10.6.2. It is submitted that the Hon'ble Tribunal, in the said judgment, have used the terms 'Existing Consumer' and 'New Consumer' instead of using the term 'Consumer'. Interpretation, as put forth by TPC, would render the judgment of Hon'ble Tribunal otiose. The said judgment very clearly means that “existing consumer” is the one connected to “an existing network” and “new consumer” is the one not connected to any existing network of any licensee. This does not mean that an existing consumer can convert to new consumer by surrendering its existing connection as that would amount to circumventing the premise on which the judgment is based. The said judgment does not suggest ignoring the cost factor while allowing both the licensees to connect to new consumers. TPC/RInfra cannot lay network to New Connection/Redeveloped Premise irrespective of the cost involved in laying such network and giving supply. In this regard, relevant extract of the said judgment is reproduced herein below for ready reference:

*“58. **Laying down of parallel network in a congested metropolitan city like Mumbai where a reliable distribution network is already existing is to be viewed differently from situation in other areas in the country where there are deficiencies in the existing distribution network resulting in constraints in maintaining a reliable supply to the existing consumers and extending supply to new consumers. Practical difficulties in laying down the network and extending the 11/0.4 kV network all around the congested areas in multi-storeyed buildings and narrow lanes of slums and the extremely***

high cost involved in making an unnecessary expenditure has to be considered.”

10.6.3. RInfra, in its presentation dated 22-09-2015 in Slide 23 to 27, has clearly demonstrated the cost benefit for redevelopment project as well as laying network for new consumer when there already exists a reliable network.

Response to the additional submissions of TPC dated 04-09-2015 in respect of scenarios for network development.

11. TPC had filed its submissions in respect of scenarios for network laying in license area common to TPC and RInfra for New Consumers on 04-09-2015. In view of aforesaid, RInfra submits as follows:
12. The rules for laying of distribution network in the common license area must emanate from the principles as laid down in the said judgment of the Hon'ble Tribunal in Appeal No. 246 of 2012. No rule can be established which is in contravention to the principles of the said judgment and the principles themselves ought to be read from the overarching guidance provided in the said judgment. The principles laid down in the said judgment are as given below:
 - 12.1. The overarching principle laid down in the said judgment is protection of consumer interest by preventing wasteful incurrence of cost for duplication of distribution network in a congested Metropolitan, where it is all the more difficult to lay down a fresh electricity distribution network and is wasteful too as there already exists a reliable distribution network.
 - 12.2. Protection of consumer interest by prevention of wasteful capex mandates that existing, reliable distribution system is utilized optimally, instead of allowing paralleling of network.
 - 12.3. Network laying by both licensees in the common area is governed by the principles of the said judgment and hence network laying cannot be governed by consumer choice, but has to be guided entirely by protection of consumer interest at large, by preventing wasteful duplication of network and burdening of all consumers with additional, avoidable cost.

- 12.4. The preferred mode of supply by a licensee to an existing consumer of another licensee or even a new consumer is by way of change-over. In case of “new consumer”, this would mean that the licensee more optimally (cost-wise) placed to lay network will reach out and connect such consumer and then the consumer, if it wants, will change-over supply to the other licensee.
- 12.5. Accordingly, the judgment debars any existing consumer connected to the network of one utility to switch-over to the network of another utility, except where the same has been specifically permitted. In case of RInfra-TPC, this specific permission would be as given by the Hon’ble Commission under Para 59 of the said judgment for the capex which is yet to be commissioned and capitalised.

While on the subject of the so called “consumer choice” as has been repeatedly spoken of by TPC in its submissions and its presentations before the Hon’ble Commission, RInfra submits that TPC, in their submission, state that they should be allowed to duplicate networks even for those consumers who are connected to the network of RInfra, because they can terminate their connection and switchover to TPC’s network and thus exercise their choice. However, if that be the case, then any and every existing consumer of RInfra has a right to choose and if that be the case why TPC has not proposed to duplicate the network in the entire area of RInfra and magnanimously provide “choice of network” to all consumers, rather than a limited few. In fact, in its original submission of roll-out plan, TPC had not proposed to lay network in the entire BEST area also and had instead proposed to apply the same principles as laid down by the ATE, in the BEST area as well. Only after the Hon’ble Commission pointed out the anomaly, did TPC change their rollout plan and proposed network development in the entire BEST area. The question to be asked therefore is whether TPC’s earlier plan was not providing customer choice in BEST area fully and whether the revised plan now provides customer choice to all?

This begs the question as to what is the definition of TPC’s so called “customer choice”? Is that definition dependent on TPC’s ability and willingness to serve a particular customer and thus provide a choice to such consumer? TPC has made elaborate claims before the Hon’ble Tribunal as to how physical constraints inhibit it from laying network in the 11 clusters in which it was originally mandated to do so and, based on these submissions, the Hon’ble Tribunal laid down certain specific principles for development of network in the common license area. It is

submitted that in the presence of specific principles as laid down in the judgment, there can be no question of unfettered customer choice of network. In fact, the judgment proceeds on the premise that for protection of consumer interest, network laying in the common license area of RInfra and TPC needs to be governed by specific principles so as to prevent wasteful duplication of network.

It appears, however, that TPC wants to disregard the economic principles of network development so categorically held by the Hon'ble Tribunal because a true adaptation of those principles leads to restrictions on duplication, which TPC does not wish to now accept and hence the idea of "customer choice" is now being mooted by TPC, so that under the garb of consumer choice, they could extend connection as they choose, to whom they choose and when they choose. The Hon'ble Commission is requested to reject the interpretation of TPC, which is so in the teeth of the judgment and, in fact, seeks to go back to the very situation of cherry picking, which gave rise to the whole issue, in the first place.

13. TPC has based its network laying scenarios based on the availability of DSS and its loading. It is submitted that scenarios proposed by TPC based on DSS loading are contrary to principles laid down by the said judgment. DSS Loading cannot be criteria for network development as it would lead to duplication of entire 11kV network, CSS and LT network. It is contended by TPC that its DSS are considerably under loaded and adopting a criteria as proposed by TPC will not permit any other licensee to lay network till loading of DSS reaches a particular percentage as envisaged by TPC. It is submitted that when there is an existing reliable network in every nook and corner of the area of supply, bottoms up approach needs to be adopted for laying of network starting from LT network, CSS, HT network and then DSS.
14. RInfra now proceeds to reply on the Scenario's proposed by TPC for network development:

Scenario 1:- New Consumer approaching Distribution Utility having adequate DSS infrastructure in the vicinity:

TPC proposal: In this case, where sufficient infrastructure of the Distribution Utility exists; the Distribution Utility should be allowed to

connect the consumers to its network, even if it means creating CSS infrastructure.

RInfra Response: TPC has proposed that since consumer has approached a utility with adequate capacity at a 33/11kV Substation (DSS), such utility should be allowed to connect such consumer, even if it means incurring capex to create downstream infrastructure. As evident from the analysis of the said judgment, such approach could lead to network duplication and wasteful capital expenditure by the utility, if the other utility already has adequate downstream infrastructure (CSS, LT pillars, etc.), which could simply be used to connect such consumer.

Scenario 2:- New consumer approaching a Distribution Utility with inadequate DSS infrastructure in the vicinity

TPC proposal: In this case, a consumer has approached a Distribution Utility which does not have enough DSS capacity. However, it may be possible that the other Distribution Utility has sufficient DSS capacity in the vicinity and is in the position to provide the connectivity. Under such conditions, the Distribution Utility to whom the consumer has approached would approach the other Distribution Utility who would be obliged to provide the connectivity to the consumer. As per the General Conditions of Distribution Licence Regulations 2006, the Distribution Utility may request the other Distribution Utility to utilize his network to serve the new consumers. Thus, in the interest of the consumers and to optimize the capital investments in network, all utilities must share their network. In this scenario, the tariff to the consumer will be the wheeling charges of the Distribution Utility whose network is used and all the other charges shall be of the Distribution Utility who will Supply to the consumer.

RInfra Response: Decision on which utility would lay network to connect the consumer will have to be based only on economics of network laying / up-gradation and whichever utility is able to offer a more cost effective solution, depending on the vicinity and adequacy of its network, should be allowed to connect the new consumer.

Scenario 3:- New consumer approaching utility with inadequate infrastructure in the vicinity with possibility of developing DSS infrastructure

TPC proposal: In this case, a consumer approaches the Distribution Utility which does not have adequate DSS capacity, however, the consumer is willing to provide sufficient space to create a DSS infrastructure. Here, it is pertinent to note that availability of space for establishing DSS is of prime importance in a city like Mumbai where space is a huge constraint. Hence, an opportunity to establish a DSS should not be lost. Further, in such case, as the consumer has indicated his preference to the particular Distribution Utility, hence, that particular Distribution Utility shall be permitted to create the DSS infrastructure that may serve that particular consumer as well as other adjoining consumers.

RInfra Response: As said above, the decision on which of the two utilities should connect the new consumer must be based entirely on the consideration of not allowing network duplication and thus preventing wasteful capex and protecting consumer interest, as per the said judgment. This, therefore, has nothing to do with whether the new consumer is willing to provide space for DSS or not. The decision on whether DSS is required to serve the new consumer should be based on technical considerations and not space considerations. Hence, if DSS is technically required by both utilities to serve such new consumer, it can be naturally assumed that both utilities would be equally placed to serve such new consumer and hence, in that case, the utility to which the consumer approaches should lay network to connect such consumer. Further, if the consumer approaches a utility with inadequate DSS infrastructure, it does not mean that such utility is automatically entitled to connect such consumer by creating the DSS, in case the consumer is willing to provide space. Such utility should approach the other utility to understand whether the other utility has adequate infrastructure to serve the consumer. Just because the consumer is providing the space, it does not mean that all consumers in the area of supply can be burdened with additional cost of duplicating network infrastructure.

Scenario 4: Consumer approaches a Distribution Utility whose network is overloaded & needs augmentation to improve Reliability

TPC proposal: In this case a consumer approaches a utility with overloaded network which needs augmentation, whereas in vicinity

there exists network of other utility which is under-loaded, then, the existing under-loaded Distribution Network should be first loaded before taking up any augmentation of network by the utility which has overloaded network. This will ensure network optimization and economical utilization which will benefit consumers through lower wheeling charges. For e.g. Tata Power has made substantial investments in developing Distribution Network during the MYT Control Period under specific directions of the Hon'ble Commission and such network is presently under-loaded. In such areas, this existing under loaded network should be loaded first before any augmentation of network is taken up by R-Infra.

RInfra Response:

a) Even if the network of the existing utility is sub-optimally loaded, it does not necessarily mean that such network renders poor reliability as reliability of supply is ensured through overall network planning and ensuring that N-1 contingencies exist for a given set of load, so that within such given area, load can be diverted and rearranged in the event of an interruption.

b) In case a “new consumer” applies to a utility whose existing infrastructure in the vicinity is inadequate and needs augmentation to serve the new load, the capex for such augmentation will have to be seen against the proposal of the other utility to connect the consumer, either from its existing network or by creation of CSS and related infrastructure. In any event, whichever utility’s proposal is least cost, without compromising on the technical standards of distribution system development, should be allowed to connect such new consumer.

c) In case of existing consumer facing “poor” reliability as per the thresholds defined by the Commission, the cost of improvement of reliability by the existing utility to which such consumer is connected will have to be evaluated against the cost of creation of infrastructure by the other utility in order to connect such consumer and permission to switchover will be granted only if the latter is less than the former.

Scenario 5:- Consumer connected to a Distribution Utility seeks migration on network of the other Distribution Utility having adequate DSS infrastructure in the vicinity:

TPC proposal: In this case, a consumer who is connected to the network of one utility seeks migration to the network of another utility; the consumer should be provided connectivity to the Distribution Utility of its choice. The Distribution Utility should be allowed to connect the consumers to its network, where sufficient infrastructure of the utility exists, even if it means creating CSS infrastructure.

RInfra Response: TPC's proposal is in complete contravention to the said judgment, which entirely debars switchover of any consumer connected to network of an existing utility, to the network of the other utility. TPC, in fact, suggests that it should be allowed to connect such a consumer even if it requires creation of CSS and other downstream infrastructure. This gives a complete go bye to the said judgment, which is based on the principle of not allowing duplication, in view of the same not being in consumer interest. RInfra submits that by this logic, TPC has negated the entire judgment, which only permits switchover of consumers if the same is expressly permitted by the Commission under para 59 of the said judgment.

RInfra repeats and reiterates what is stated in its presentation dated 22-09-2015 in Slides 44 to 54 in respect of network development scenarios proposed by TPC.

15. RInfra submits that bottoms up (LT network to DSS) approach as proposed by RInfra will minimize Capex and also optimize utilization of the available network. This approach gels with actual field conditions, as the load applied is not realised immediately and thus investing in creation of CSS or DSS based on potential load will result in capacities remaining idle in the system for long and burdening the consumer. It is submitted that optimisation of cost is the only principle for network laying as per ATE judgment, Accordingly, the scenarios proposed by RInfra consider the following:
 - 15.1. Utility with network in the immediate neighborhood of a potential consumer (HT or LT, depending on voltage level at which supply is to be released) should extend network to "connect" such consumer/premise
 - 15.2. In case both utilities have adequate network in immediate neighborhood (not requiring augmentation) for connecting such consumer, utility to which such consumer approaches should extend connection to such consumer/premise

- 15.3. In case network requires augmentation, utility more optimally placed should extend network to “connect” such consumer/premise.
16. RInfra in its revised presentation submitted on 23-09-2015 in Slide 56 to 58 has proposed Network laying Scenarios based on the principle as mentioned above.

Response to the reply dated 26-09-2015 filed by TPC in respect of Presentation made by RInfra on 22-09-2015

17. With reference to paragraph 7(a) and (b), it is submitted that the Hon’ble Tribunal, in the said judgment, have ruled that possibility of cherry picking cannot be ruled out and issued certain directions to Hon’ble Commission while approving network roll out plan. It is further submitted that RInfra had set out the background to show that submissions made by TPC in respect of network rollout in Case No 151 of 2011 and Case No 85 of 2013 before the Hon’ble Commission and in Appeal No 246 of 2012 before the Hon’ble Tribunal are exactly the same submissions made in the present Case i.e. TPC will lay network as and when demanded by the Existing/New Consumer and such network would be laid only if there are no physical constraints thereby giving a complete go by to the principles laid down in the said judgment. It is submitted that Hon’ble Tribunal in the said judgment has only protected TPC to the extent of investment made as per directions of Hon’ble Commission which is yet to be commissioned and capitalized i.e Rs 67 Crs (as submitted by TPC in Case No 50 of 2015). It is submitted for the network which is commissioned and capitalized, TPC is already recovering Wheeling Charges for the same.
18. With reference to paragraph 7(c) (i) and (ii), it is submitted that Hon’ble Commission has not allowed Switchover of changeover consumers as the same is evident from the submissions made by TPC and this Hon’ble Commission in Appeal No 246 of 2012. Copy of the relevant extract of the submissions made by TPC and the Hon’ble Commission are annexed herewith and marked as **Exhibit “2”**.
19. With reference to paragraph 7(d) and (e), it is submitted that RInfra has only reiterated the submission made by TPC itself during the proceedings before MERC in Case No 151 of 2011 and Case No 85 of 2011.

20. With reference to paragraph 7(f), it is submitted that roll out plan submitted by TPC does not take into consideration physical constraints faced by TPC when the said judgment is primarily based on the submission of TPC itself that it is facing physical constraints to lay distribution network. RInfra repeats and reiterates the submissions made hereinabove in respect of scenarios proposed by TPC for network development.
21. With reference to paragraph 7(g)(i) and (ii), it is submitted that TPC has made complete volte face and is now making an submission that TPC has evolved many innovative initiatives to address physical constraints and all these initiatives are designed to address physical space constraints. Such submission made by TPC is contrary to its submissions made before this Hon'ble Commission and before the Hon'ble Tribunal in Appeal No 246 of 2012 and the directions given by the Hon'ble Tribunal in the said judgment are entirely based on TPC submissions on physical constraints. Relevant extract of the said judgment is reproduced herein below for ready reference:
- “50.Tata Power has made submissions regarding difficulties in laying down the distribution network due to space constraints and problem in getting permission from the Municipal Authorities for digging for laying cables. Difficulties in laying service line, installing transformers in the premises of the consumers and space constraints for metering arrangements are also brought to our notice*
- 58. Tata Power itself has stated that it is facing practical difficulties to lay down the distribution network.....”*
22. With reference to paragraph 8 and 9, RInfra repeats and reiterates submissions in its affidavit dated 03-09-2015 and craves leave to refer to the same when produced.
23. With reference to paragraph 12, it is denied that RInfra submissions relating to switchover of consumers are erroneous. It is submitted that Hon'ble Tribunal in the said judgment has held that it is in overall consumer interest to get supply from TPC only through RInfra's network even if a 33/22 kV sub-station of Tata Power is available in the vicinity.

24. With reference to paragraph 13, it is submitted that Hon'ble Tribunal in the said judgment has protected TPC to the extent of investment made as per directions of Hon'ble Commission which is yet to be commissioned and capitalized i.e Rs 67 Crs (as submitted by TPC in Case No 50 of 2015). It is submitted for the network which is commissioned and capitalized, TPC is already recovering Wheeling Charges for the same.
25. With reference to paragraph 14, it is submitted that the said judgment is based on the fact that all the consumers in an area where reliable network already exists will not be able to exercise their choice of network due to physical constraints. Therefore in the circumstances of the present case, Hon'ble Tribunal has held that it would be in consumer interest to take supply from RInfra network only. Hon'ble Tribunal in the said judgment has directed State Commission that any direction to the licensee is bound to ensure that such direction is in the interests of the consumer and directions as per the said judgment are for continuation of changeover arrangement irrespective of category or consumption of consumers. It is submitted that Consumer Choice has to be seen in the context of larger consumer interest and Hon'ble Tribunal has held that consumer interest is to take supply from RInfra network only.
26. With reference to paragraph 15, RInfra repeats and reiterates what is stated herein above.
27. With reference to paragraph 17(a) and (b), it is submitted that RInfra has presented a scenario to demonstrate that Consumer Density plays a vital role for Reliability Indices and comparison sought to be made by TPC to show that TPC's Reliability Indices are better than RInfra have no basis.
28. With reference to paragraph 17(c) and (d), RInfra repeats and reiterates the elaborate submissions made hereinabove.
29. With reference to paragraph 17(e), it is submitted that improvement of its distribution network to maintain high levels of reliability is an continuous process. In view of the same, RInfra carries out capex as approved by the Hon'ble Commission. TPC, under the guise of loading

its network cannot ask Hon'ble Commission to review the approved DPR's.

30. With reference to paragraph 17(f), RInfra repeats and reiterates what is stated in Slide 34 of the presentation.
31. With reference to paragraph 17(g), RInfra repeats and reiterates what is stated in Slide 35 of the presentation. It is submitted that Reliability is what is experienced by the Consumer and Consumer is not concerned with the loading of the network. Comparison sought to be made by TPC in respect of loading of Transmission System is not germane to issue of reliability of distribution system.
32. With reference to paragraph 17(f), RInfra repeats and reiterates what is stated in Slide 36 of the presentation. It is submitted that Hon'ble Tribunal in the said judgment has protected TPC to the extent of investment made as per directions of Hon'ble Commission which is yet to be commissioned and capitalized i.e Rs 67 Crs (as submitted by TPC in Case No 50 of 2015).
33. With reference to paragraph 17(i) and (j), RInfra repeats and reiterates what is stated in Slide 37 of the presentation and the elaborate submissions made hereinabove.
34. With reference to paragraph 17(k) and (o), it is submitted that cluster based approach adopted by RInfra helps in maintaining (n-1) reliability across entire area of supply. Cluster wise planning philosophy also helps RInfra in taking advantage of diversity of load in case of any forced outage and helps in faster restoration of supply. Further, cluster wise planning minimizes capex to maintain (n-1) reliability for all the substations within that cluster as against maintaining the same for individual substation. It is submitted that even if IPDS Guidelines as put forth by TPC are considered, there are only two 33(22)/11 kV S/S above 80% loading. However, if respective cluster is considered, all satisfy (n-1) requirement for maintaining Reliability. RInfra repeats and reiterates what is stated in Slide 37 to 43 of the presentation and the elaborate submissions made hereinabove
35. With reference to paragraph 19 and 20, RInfra repeats and reiterates what is stated in Slide 13, 23 to 43 of the presentation and the

elaborate submissions made on 03-09-2015 and hereinabove in respect of New Connection/Consumer.

36. With reference to paragraph 21 and 22, RInfra repeats and reiterates what is stated in Slide 15, 44 to 59 of the presentation and the elaborate submissions hereinabove in respect of scenarios for network development. It is denied that scenarios proposed by RInfra are in contravention of provisions of EA03 and principles set out in the said judgment. It is further denied that RInfra's submission is devised to perpetuate its monopoly and deny choice to consumer on one pretext or the other. On the contrary, submission made by TPC are contrary to the said judgment with the sole objective of increasing the loading of its existing network even if same amounts to duplication of network burdening the consumers, stranding of existing RInfra network and lay down "parallel network" as it chooses, when it chooses, to whom it chooses in what TPC perceives as being "in consumer interest".
37. With reference to paragraph 23, RInfra repeats and reiterates what is stated in Slide 16 and 17 and elaborate submissions hereinabove.

Exhibit-1

RELIANCE

Case No 182 of 2014

September 22, 2015

RELIANCE

Background

- ❑ TPC is a parallel licensee in common area of supply of RInfra and BEST
- ❑ In Case 50 of 2009, TPC allowed to use RInfra network for supplying consumers
- ❑ In view of selective network laying and cherry picking by TPC, RInfra filed the Petition before MERC being Case No 151 of 2011
 - In proceedings before MERC, TPC expressed difficulties in laying network, space constraints etc. (*Para 49, 52 and 56 of Order*)
 - TPC submitted it will lay network on consumer demand or else supply on existing RInfra network
- ❑ MERC order dated 22-08-2012 in Case No 151 of 2011
 - TPC to focus on laying network in 11 identified clusters.
 - Clusters identified considering highest number of low end residential consumers
 - Switchover only to low end consumers
 - TPC has to meet its USO by supplying to consumers in such clusters on its network within 30 days

Background

- ❑ MERC order in Case No 151 of 2011 challenged by TPC before Hon'ble Tribunal in Appeal No 246 of 2012
 - In respect of network laying, TPC's submission were as follows:
 - TPC to lay network upon consumer demand
 - Practical difficulty in laying distribution network in certain areas
 - Problem in getting permission from the Municipal Authorities for digging for laying cables
 - Space constraints for CSS/Difficulty in installing transformer
 - Difficulties in laying service line
 - Space Constraint for metering infrastructure 

- ❑ MERC initiated suo moto proceedings being Case No 85 of 2013 i.e. review of its order in Case No 151 of 2011
 - TPC again in Case No 85 of 2013 reiterated difficulties in laying network, space constraints for CSS and metering infrastructure etc (*Para 14 of Order*)
 - MERC in its order continued its directions issued in order in Case No 151 of 2011

ATE Judgment and TPC Submissions

- ❑ ATE in No 246 of 2012 (28-11-2014) laid down principles for network laying:
 - Cost Optimisation – No burden on Consumers 
 - No Duplication of Network/Use of Existing network only 
 - Consumer Interest to be protected 
 - No Cherry Picking by TPC and undue commercial advantage to TPC 

- ❑ TPC submissions in respect of network laying post ATE Judgment:
 - Consumer has choice to elect both its source (Supply Licensee) & mode of supply (Wires Licensee)
 - Parallel network to be laid **if** there are no physical constraints, **if** it improves reliability and **if** in Consumer interest
 - Cater to the demand by an existing consumer of RInfra and
 - Supply to New consumer

TPC's submissions same as made before MERC in Case No 151 of 2011

Network Roll Out

- ❑ Network Laying for existing Rlnfra Consumers
- ❑ Network Laying for improving Reliability
- ❑ New Consumer/Connection
- ❑ Scenarios for Network Laying

Network Roll Out

- ❑ Network Laying for existing Rlnfra Consumers
- ❑ Network Laying for improving Reliability
- ❑ New Consumer/Connection
- ❑ Scenarios for Network Laying

Network Roll Out - Existing RInfra Consumers

TPC Submission

- ❑ No restriction to lay network to cater to demand of existing RInfra consumer

RInfra Submission

- ❑ ATE judgment restricts switchover of existing consumers (*Para 56,61,80(ii)*)
- ❑ No consideration of physical constraints by TPC in the present submissions (TPC's earlier contentions before MERC and ATE)  21, 22
- ❑ Switchover permitted only to the extent of capex which is **yet to be commissioned and Capitalised** (*Para 59*)

Whether TPC be allowed to use RInfra network till it lays its own network to make RInfra network redundant ???

Network Roll Out

- ❑ Network Laying for existing Rlnfra Consumers
- ❑ Network Laying for improving Reliability
- ❑ New Consumer/Connection
- ❑ Scenarios for Network Laying

Network Roll Out - Improving Reliability

TPC Submissions

- ❑ Reliability Indices of TPC better than RInfra
- ❑ Loading of Power Transformer and Distribution Transformers – Key Parameter
- ❑ TPC to be allowed to incur capex of Rs 245 Crs (Only HT network) towards reliability improvement
- ❑ Mapping of DSS (Areawise) and CSS (Divisionwise)

Network Roll Out - Improving Reliability

Rlnfra Submissions

- ❑ Reliability of Rlnfra is well within the SOP norms specified by MERC
- ❑ Reliability Indices cannot be compared due to huge differences in the customer density/load density, spread of the network, etc.
- ❑ Reliability is what is experienced by Consumer and is not related to loading of the network **28 to 30**
- ❑ Cluster wise approach adopted by Rlnfra ensures (n-1) criteria for reliability so as to reduce Capex requirement and to utilise the strength of its robust 11 kV Network. **31 to 33**
- ❑ TPC's contention that loading of each DSS to be considered, instead of cluster wise approach proposed by Rlnfra, for allowing TPC to lay network – Contrary to TPC's own submissions in Case No 151 of 2011 **34**
- ❑ Loading and Tripping has no relation (TPC own data substantiates the same) **35 to 38**
- ❑ Mapping done by TPC is without considering already existing Rlnfra DSS in the same or nearby cluster with 11kV interconnection **39 to 43**

Network Roll Out

- ❑ Network Laying for existing Rlnfra Consumers
- ❑ Network Laying for improving Reliability
- ❑ New Consumer/Connection
- ❑ Scenarios for Network Laying

Network Roll Out - New Connection

TPC Submissions

- ❑ New Consumer is:
 - Any Person who has made application for Supply of Power
 - The said person is not Permanently connected, for the time being, to the works of a licensee for the purpose of receiving such supply
- ❑ Any existing Rlnfra consumer surrenders Rlnfra connection and applies to TPC, it will be treated as new consumer/new connection.
- ❑ In case of redevelopment of a premise/structure, new structure/premise is erected. The owner or occupiers of such new premise become 'new consumer/new connection'
- ❑ All green field load is new connection

Network Roll Out - New Connection

RInfra Submissions

- ❑ “New connection/New Consumer” has to be read and defined in the context of and in the light of and directions given in the ATE judgment
- ❑ ‘New connection/New consumers’ means a consumer/premise which has never been connected to the distribution system of any licensee and is seeking connection for the first time
- ❑ TPC’s interpretation of New Consumer also means that every existing consumer in RInfra area of supply is new consumer once it approaches TPC by surrendering existing connection. This is contrary to TPC’s own definition of Switchover Consumers (*MERC Order in Case No 151 of 2011*)

*“ 69. Further, TPC-D has classified 'switchover' consumers as those consumers **who were taking supply from one Distribution Licensee through its distribution network, changing over to another Distribution Licensee for supply of electricity on the network of the second Distribution Licensee, i.e., consumers who have changed both the Supply Distribution Licensee as well as the Wheeling Distribution Licensee**”*

- ❑ Such an interpretation by TPC would render ATE judgment otiose. ATE judgment has used the terms ‘Existing Consumer’ and ‘New Consumer’ for Consumer
- ❑ Even in case of redeveloped premise/structure, there is an existing network supplying to that premise/structure.
- ❑ ATE judgment do not suggest to ignore cost factor while allowing both the licensees to connect to New Consumers(*Para 58 of ATE*) 

Network Roll Out

- ❑ Network Laying for existing Rlnfra Consumers
- ❑ Network Laying for improving Reliability
- ❑ New Consumer/Connection
- ❑ Scenarios for Network Laying

Network Roll Out - Scenarios

RInfra Submissions

- ❑ All the scenario's proposed by TPC based on DSS loading are contrary to principles laid down by ATE judgment
- ❑ TPC has not considered physical constraints while proposing the scenario, which is the basis of ATE judgment
- ❑ DSS Loading cannot be criteria for network development. Such a criteria would lead to duplication of entire 11kV network, CSS and LT network and increase wheeling charges of RInfra
- ❑ TPC's DSS are under loaded (as per TPC submissions). If such an criteria is adopted it will not permit any other licensee to lay network till loading of DSS reaches a particular percentage as envisaged by TPC
- ❑ When there is an existing reliable network in every nook and corner of the area of supply, **bottoms up approach** needs to be adopted for laying of network starting from LT network, CSS, HT network and then DSS.

44 To 59

TPC's Submissions – As per Convenience

TPC's earlier submissions	TPC's present submissions
<p>Not able to connect to Consumer in view of difficulties in laying network, space constraints for CSS and metering infrastructure etc (Case No 151, 85, Appeal No 246)</p>	<p>Inspite of constraints, TPC created considerable capacity and now intending to connect consumers under the guise of under loaded network</p>
<p>TPC Network planning is as per cluster based approach (Case No 151 of 2011)</p>	<p>Loading of each DSS has to be considered for allowing TPC to lay network and not cluster wise as proposed by Rlnfra</p>
<p>TPC's submission in Case No 151 of 2011 – Definition of Switchover Consumer <i>“ 69. Further, TPC-D has classified 'switchover' consumers as those consumers who were taking supply from one Distribution Licensee through its distribution network, changing over to another Distribution Licensee for supply of electricity on the network of the second Distribution Licensee, i.e., consumers who have changed both the Supply Distribution Licensee as well as the Wheeling Distribution Licensee”</i></p>	<p>Existing Rlnfra network consumer who has surrendered the connection and has opted for TPC network is New Consumer and not Switchover Consumer</p>

TPC's Submissions – Contradictions

TPC's Submissions	TPC's submissions
Consumer has a choice of network	Scenario 2 and 3 proposed by TPC – No choice to Consumer as utility will approach other utility to lay network
Creation of infrastructure always creates extra capacity during initial period which is essential for and in the interest of competition and consumers in the long run	The said principle is contradictory to TPC's own submission that there capacity is under loaded when historically the loading has been around 25% to 28%
IPDS guidelines as criteria for laying network	TPC has considered RInfra DSS loading above 60% to lay duplicate network completely contrary to IPDS Guidelines wherein DSS Loading criteria is 80%

Conclusion

- ❑ Cost Optimization is the over all objective of ATE Judgment
- ❑ Switchover of existing RInfra consumers is prohibited and TPC to use **only** RInfra network for supply to changeover as well existing RInfra consumers. However, Switchover is allowed only where considerable investment has been made by TPC and those assets are not yet commissioned and capitalised (Only Rs 67 Crs)
- ❑ Reliability Indices of Utilities cannot be compared with others in view of wide variations in consumer density/load density, spread of network etc
- ❑ For redevelopment projects, there is an existing network. Utility with lower Capex for augmenting the existing network or laying new network be allowed to supply.
- ❑ Laying network to New Consumers to be governed by Marginal Cost Principle of the Utilities so as to reduce the burden of Wheeling Charges
- ❑ For assets which are commissioned/capitalised, TPC is already recovering wheeling charges. Loading criteria put forth by TPC is contrary to ATE judgment and against the larger interest of consumers

RELIANCE

Thank you

RELIANCE

TPC Submissions – Constraints in Network Laying

“50.Tata Power has made submissions regarding difficulties in laying down the distribution network due to space constraints and problem in getting permission from the Municipal Authorities for digging for laying cables. Difficulties in laying service line, installing transformers in the premises of the consumers and space constraints for metering arrangements are also brought to our notice

58. Tata Power itself has stated that it is facing practical difficulties to lay down the distribution network.....”

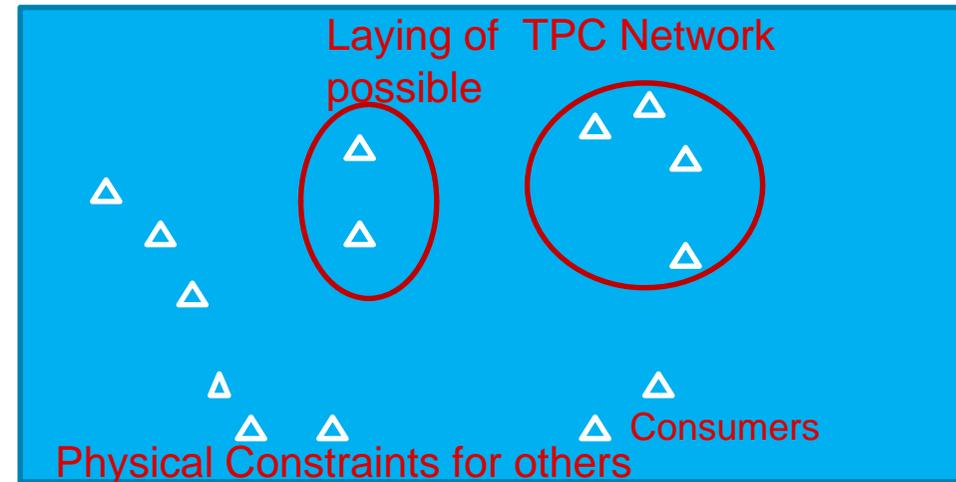
3

ATE Judgment in entirely based on TPC Submissions of Physical Constraints

Network Roll Out – RInfra Submissions

Scenario

- ❑ All Existing RInfra Consumers apply to TPC for supply on TPC Network
- ❑ TPC able to lay to only 40% of consumers, for remaining 60% (low end in slums) there are physical constraints



RInfra Submissions

- ❑ Consumer choice denied for 60% of Consumers who opted for TPC Network
- ❑ Intent of ATE judgment is not to provide choice to 40% and not for remaining 60%
- ❑ Duplication of network for 40% of consumer will make RInfra network stranded
- ❑ Results in increase of Wheeling Charges of RInfra due to depletion of consumer base and TPC due to addition of high cost duplicate network (*Para 55, 74 of ATE*)
- ❑ Consumer having choice of TPC Network will increase wheeling charges for remaining consumers of RInfra who are denied choice

Under the garb of Consumer Choice can TPC be allowed to connect only high end consumers while denying low end consumers due to practical constraints

Network Roll Out – RInfra Submissions

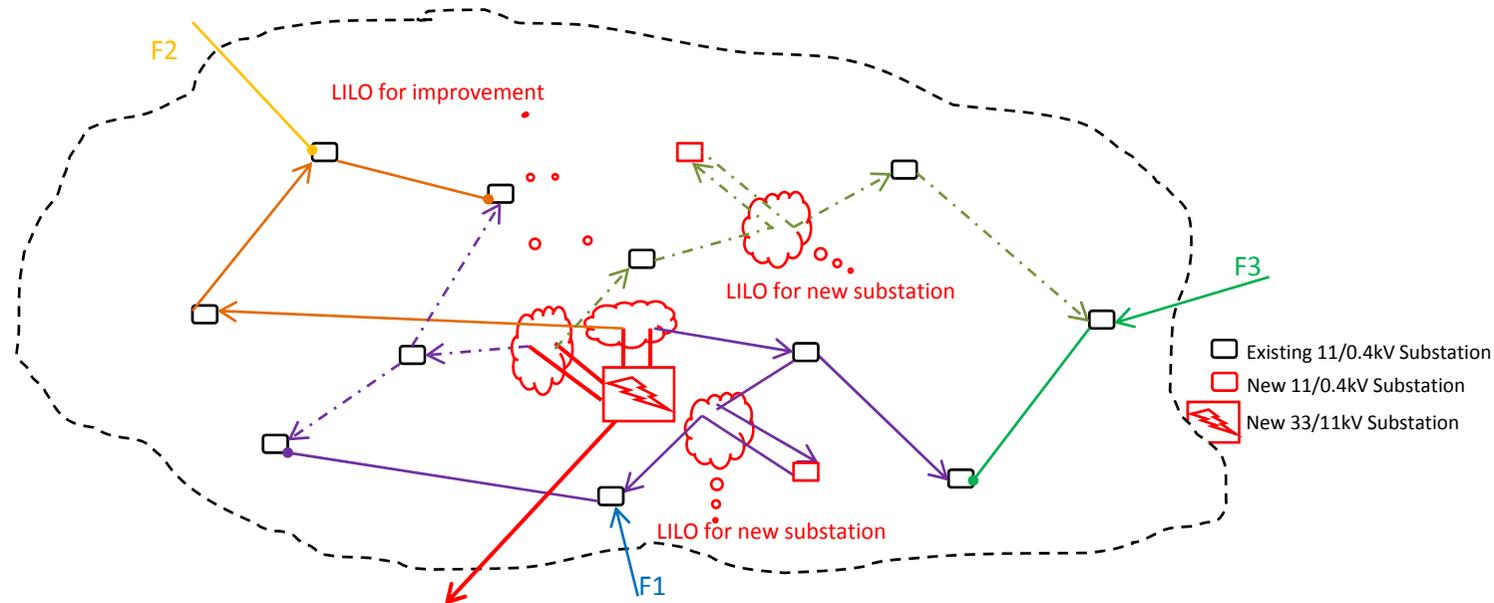
- ❑ Laying of duplicate network to only 40% of consumers will lead to undue commercial advantage and cherry picking by TPC *(Not permitted as per Para 57 of ATE)*
- ❑ ATE judgment has proceeded on the footing that TPC is unable to lay network for connecting each consumer to fulfill USO obligation of a distribution licensee. *(Para 50,51,52 of ATE)*
- ❑ ATE held that it is in overall interest of consumers of TPC and RInfra to continue to get supply from TPC on RInfra network where RInfra network exists and vice versa. *(Para 56, 61, 80(ii) of ATE)*
- ❑ ATE has therefore restricted TPC and RInfra to not lay network to consumers where there already exists reliable network.
- ❑ Existing Consumers of RInfra and TPC do not have choice of network and this will require amendment of license.

New Connections– RInfra Submissions

- ❑ As per ATE judgment, TPC/RInfra cannot lay network to New Connection/Redeveloped Premise irrespective of the cost involved in laying such network and giving supply.
- ❑ Relevant Para of ATE Judgment is as given below:
“58. Laying down of parallel network in a congested metropolitan city like Mumbai where a reliable distribution network is already existing is to be viewed differently from situation in other areas in the country where there are deficiencies in the existing distribution network resulting in constraints in maintaining a reliable supply to the existing consumers and extending supply to new consumers. Practical difficulties in laying down the network and extending the 11/0.4 kV network all around the congested areas in multi-storeyed buildings and narrow lanes of slums and the extremely high cost involved in making an unnecessary expenditure has to be considered.”
- ❑ While there is no restriction on RInfra and TPC to connect to New consumer, ATE Judgment clearly implies that high cost and existing network has to be considered even for New Connection

Network Planning - Cost for New Consumer

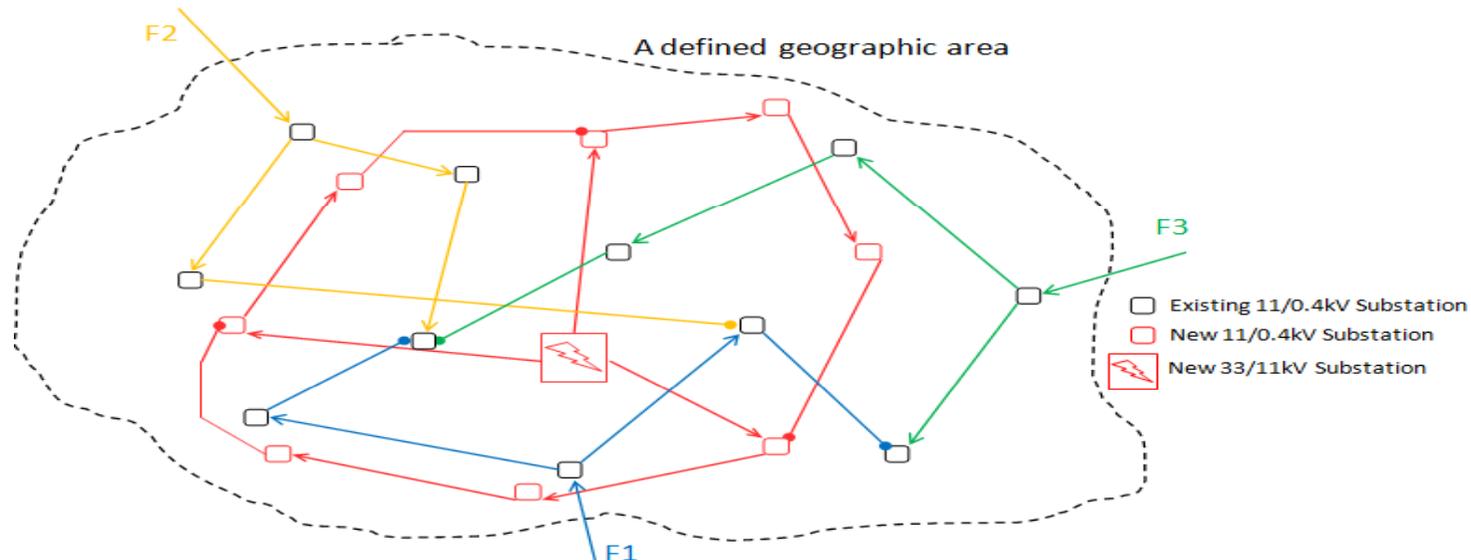
Cost for new consumer by RInfra – Existing Licensee



- New 11kV feeders are created by LILO of existing nearby 11kV cables (about 0.2 to 1.0 km cable is required per run)
- New 11/0.4kV substations are commissioned to cater to specific new loads by LILO of nearby 11kV cable network (about 0.2-0.3 km cable is required per run)
- The switch positions of the 11kV network is reconfigured to optimally supply to the load in the defined area
- The total 11kV cable laying required is about 5-7 kms per 2x20MVA installed capacity in order to fully utilize the new capacity.
- **Incremental capex required (only cost of 11kV cable laying considered, other costs for commissioning of 33/11kV substation being common to both utilities) is about Rs. 7.7 Crs.**

Network Planning - Cost for New Consumer

Cost for new consumer by another Licensee – Whose network does not exist



- Completely new network (including 33/11kV substation, 11/0.4kV substation, HT and LT cable network) is developed by the licensee to feed the consumers within the defined area
- About 32 km of new 11kV cable (reference Component-3, Section 4.2.2 of “Network Rollout Plan for Tata Power-D” dated February 2015) will be laid in order to utilize the capacity of the 33/11kV substation commissioned in the defined area.
- **Incremental capex required (only cost of 11kV cable laying considered, other costs for commissioning of 33/11kV substation being common to both utilities) is about Rs. 27.82 Crs.**

Additional Capex required for another licensee will be approximately Rs. 20 Crs compared to Rlnfra-D

Network Planning - Cost for Redevelopment Project

Assumption

- An existing building having RInfra-D's substation within its layout goes for redevelopment
- The said substation houses a 630kVA distribution transformer which is loaded to about 55% (i.e. 346 kVA) out of which 250 kVA is the existing load of the said building itself, while the balance load is of some other building in the vicinity
- Post redevelopment the estimated load of the said building will be about 500 kVA (i.e. double of existing load)

Network Planning - Cost for Redevelopment Project

Scenario – 1 : RInfra Supplies

- In order to meet the additional load of the redeveloped building, RInfra-D will have to upgrade the existing substation DT size from 630 kVA to 990kVA.
- The new loading of the substation DT, post actual realization of the estimated load will be about 60% (i.e. 596kVA; 500kVA of redeveloped building plus 96kVA of existing external loads)
- On the 11kV network, the additional 250kVA load will be easily absorbed without need of any upgradation/augmentation due to the available margins
- The total cost required would be about Rs. 0.17 Cr. (excluding the cost of LT network laying for new supply, which will be common for both the utilities)

Scenario – 2 : Another Licensee Supplies

- In order to meet the load of the redeveloped building, the other licensee will have to lay 11kV network from its nearest available network.
- Assuming that there is a nearby network of the other licensee at 2km distance from the said project, the other licensee will have to lay minimum two runs of 11kV cable for a length of 2km.
- A new 11/0.4kV substation with 990kVA DT will have to be commissioned in the said project by the other licensee
- The total cost required would be about Rs. 3.67 Cr. (excluding the cost of LT network laying for new supply, which will be common for both the utilities)

Additional capex required by a licensee other than RInfra-D will be approximately Rs. 3.50 Crs for 600kVA

Reliability Indices

	Tata Power#	RInfra# (excl. damages)	RInfra# (incl. damages)	MSEDCL*	Torrent#	BEST*
SAIFI (nos)	1.10	0.86	1.69	12.05	5.63	3.60
SAIDI (mins)	17.83	19.23	53.94	82.36	274.80	151.11
CAIDI (mins)	16.16	22.37	31.91	6.84	48.81	41.51

- FY2014-15; * - FY2013-14

- For comparing Reliability Indices due considerations to be given to variation in Customer Density/Load Density and spread of Network

Reliability of RInfra is well within the norms specified by MERC

Reliability Indices

	Units	RInfra	TPC
Total Consumers	Nos.	29,26,196	74,780
PT Installed Capacity	MVA	3,297	995
Consumers per MVA	Nos/MVA	888	75

Scenario

- ❑ Due to Tripping – 20 MVA of Capacity affected
- ❑ Duration of interruption – 60 Min
- ❑ Consumers Affected
 - ❑ TPC – 1503
 - ❑ RInfra - 17750

- ❑ Reliability Indices for same capacity and duration of interruption

	Units	RInfra	TPC
Consumer affected - A	Nos.	17751	1503
Consumer Hrs Lost - B	Min	1065039	90186
Total Consumers - C	Nos.	2926196	74780
SAIFI D = (A/C)	Nos.	0.01	0.02
SAIDI E = (B/C)	Min	0.36	1.21

Comparison of Reliability Indices could be misleading

Reliability Indices

- In a slum dominated area, interruption to 20 MVA capacity will affect almost 75,000 consumers
- For same duration of interruption of 60 Min, Reliability Indices will change considerably

	Units	RInfra	RInfra (Less Consumers)
Consumer affected - A	Nos.	75,000	17,751
Consumer Hrs Lost - B	Min	45,00,000	10,65,060
Total Consumers - C	Nos.	29,26,196	29,26,196
SAIFI $D = (A/C)$	Nos.	0.03	0.01
SAIDI $E = (B/C)$	Min	1.54	0.36

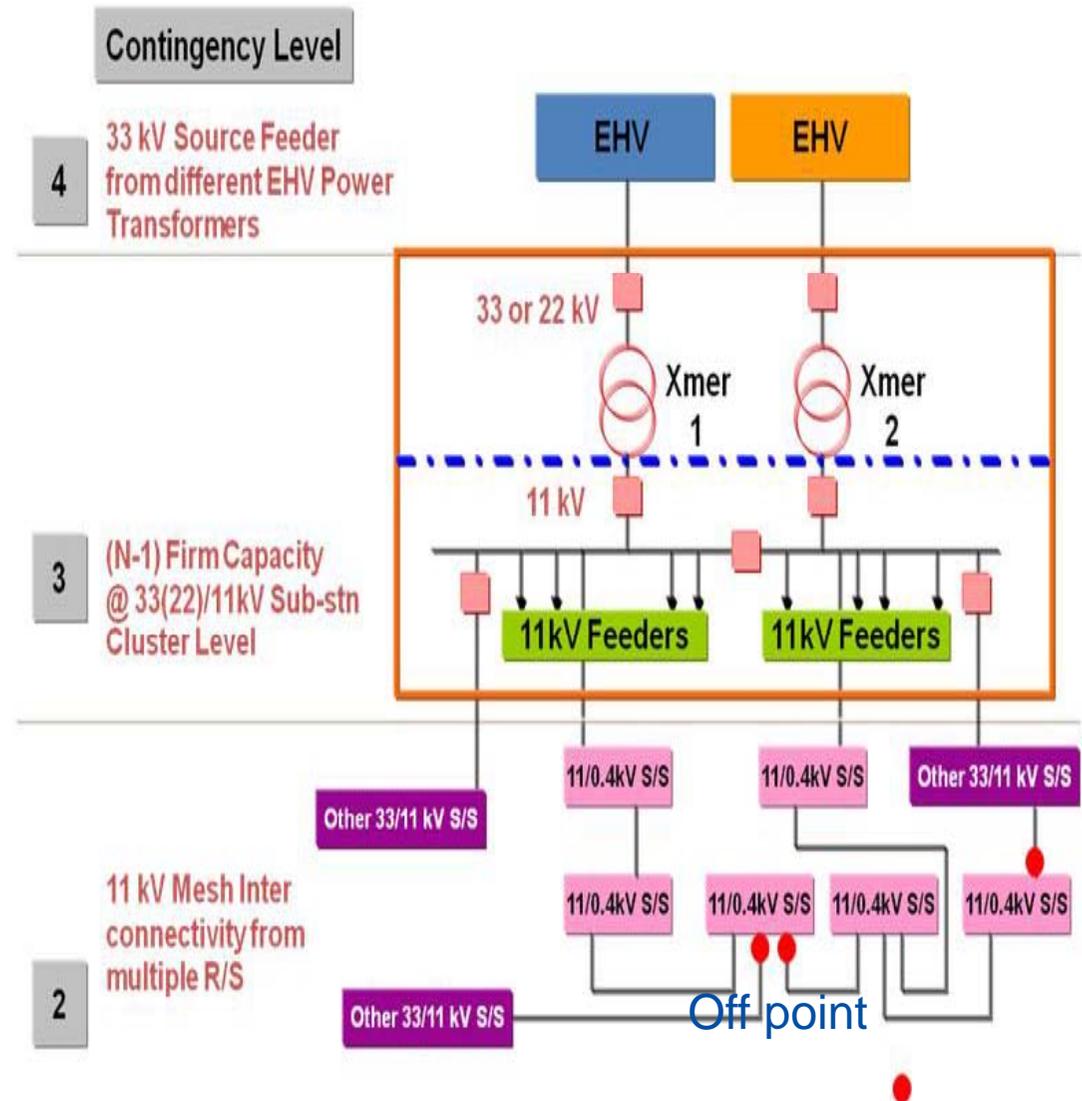
Consumer Density plays vital role in Reliability Indices

RInfra-D's Typical HT Network

4. Different 33(22)kV bus feed each 33(22)/11kV substation

3. (n-1) reliability through 11kV open ring network on cluster basis

2. Meshed open ring 11kV network

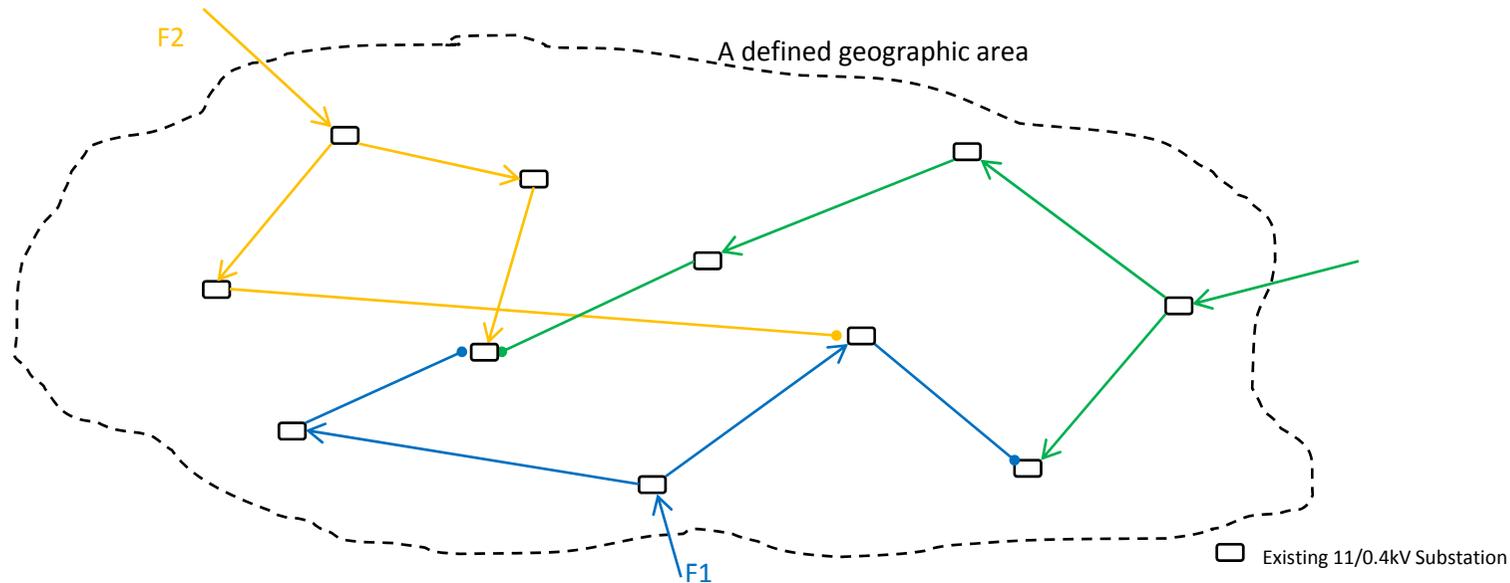


33 (22)/11 kV S/S Reliability

Division	Name of 33(22)/11kV Sub Station	Power Transformer No.	Installed capacity	% Peak Loading	Total Post WIP installed capacity	% Peak Loading after WIP	Cluster No.	Cluster Capacity (MVA)	Cluster % Peak Load	Cluster (N-1) at Peak (Y/N)*	Cluster % Peak Load after WIP
SD	Juhu	16 MVA 1	16.0	78.5	25.0	50.3	1	112	68%	Y	59%
SD	Juhu	16 MVA 2	16.0	71.1	16.0	55.5					
SD	Juhu North	20 MVA 1	20.0	53.1	20.0	53.1					
SD	Juhu North	20 MVA 2	20.0	71.7	20.0	71.7					
SD	Saraswati Road	20 MVA 1	20.0	67.1	20.0	67.1					
SD	Saraswati Road	20 MVA 2	20.0	68.5	20.0	57.6					

- ❑ All 3 Substations mentioned above serve primarily area of Juhu and are considered as one cluster for the purpose of network planning
- ❑ 3 Substations are connected to each other through strong 11 kV Mesh Network
- ❑ Rlnfra ensures (n-1) reliability of 33(22)/11kV substation through interconnected 11kV network by forming clusters and take advantage of diversity of load
- ❑ Ensuring (n-1) reliability at each 33(22)/11kV substations:
 - Will require additional Capex
 - Not utilize strength of 11kV network
 - Not possible due to space constraints

11kV Network Reliability



- The area is fed by 3 nos. of 11kV feeders from 33/11kV substations outside the limits of the defined area
- These feeders are configured in a Meshed network to feed 11/0.4kV substations which in turn supply to the LT consumers through the LT Main Line and Services.

Cluster wise Planning

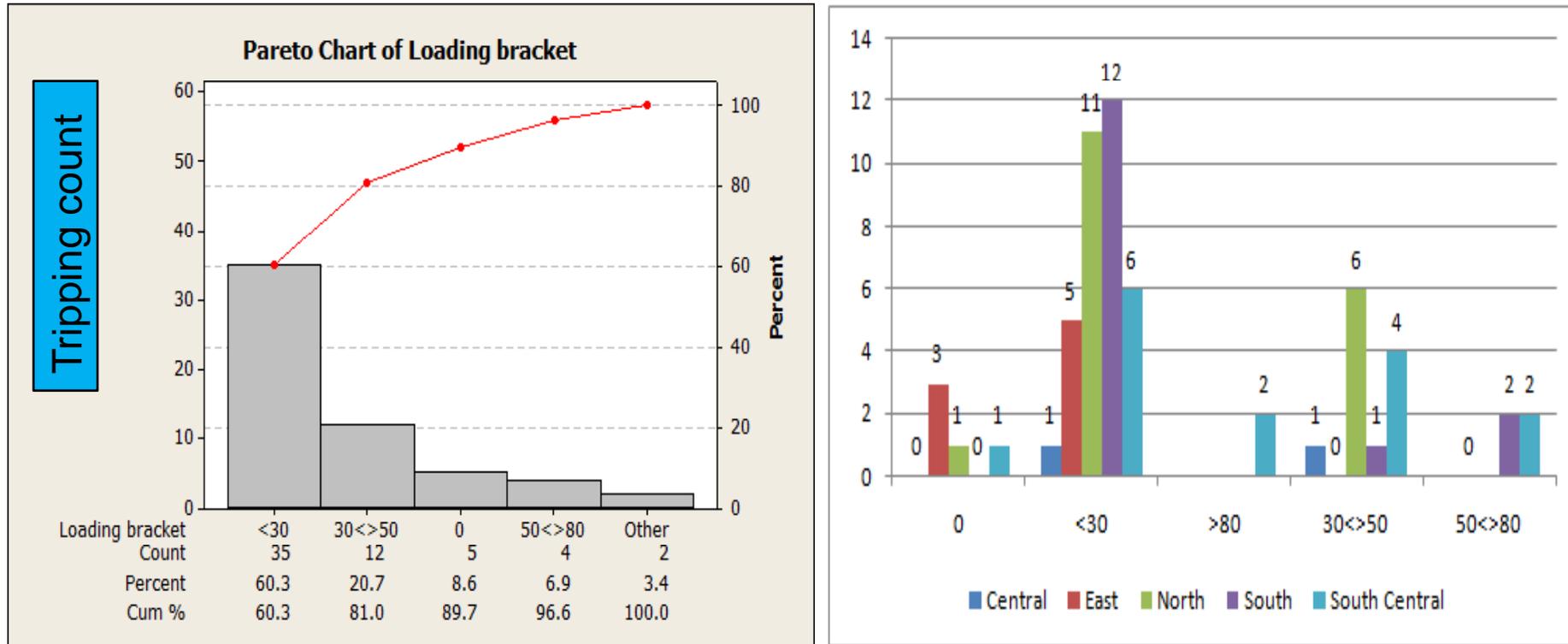
- ❑ TPC is contending that loading of each DSS has to be considered for allowing TPC to lay network and not cluster wise as proposed by Rlnfra
- ❑ This is contrary to TPC's own submissions in Case No 151 of 2011 (dated 19-07-2012), wherein TPC itself has proposed cluster wise planning

*“ In the presentation made on 27th June 2012, **Tata Power-D has suggested the cluster-based development approach** for meeting the timelines under SOP Regulations. Accordingly, we have carried out the assessment of Tata Power-D network **in the clusters which have been carved out for stage-wise development**. It is submitted that, in order to assess the utility's readiness to supply within the time limits prescribed under the SOP regulation, it is necessary to broadly understand and consider the following, namely:*

- (i) **Availability of adequate number of DSS in that cluster in terms of spare capacity***
- (ii) **DSS ring adequately laid out to enable tapping this ring to feed the CSS***
- (iii) **Availability of CSS in the cluster***
- (iv) **LT network in terms of LT cables and feeder pillars**”*

TPC conveniently changing planning criteria to increase loading of its network

TPC - 11kV feeder Loading vs Tripping



Source: Format -2 submitted by TPC on 27-08-2015

- 80% of 11kV feeders tripped have loading < 50% and
- 60% of 11kV feeders tripped have loading <30%
- Even though 86% of total feeders are loaded less than 30%, number of trippings are more

TPC Own submission show that Loading and Reliability has no relation

Network Roll Out – Loading of TPC Network

- ❑ TPC submissions are:
 - it has created distribution network which is considerably under loaded and
 - it should be the criteria for laying network for new consumers/improving reliability
- ❑ As mentioned earlier, TPC inspite of all difficulties in laying network, constraints etc has created significant upstream network without connecting to consumers
- ❑ TPC has already commissioned and capitalised almost all its investment and is recovering Wheeling Charges for the same. Loading criteria put forth by TPC is contrary to ATE judgment and against the larger interest of consumers
- ❑ TPC is now contending under the guise of ATE judgment to utilise the so called under loaded network without taking into consideration additional capex required to create parallel network to reach consumers
- ❑ TPC own tripping data shows Loading and Reliability has no relation
- ❑ Historically, TPC's network loading has been around 28% (BEST area loading) and network in RInfra area is already loaded 23%
- ❑ ATE in its judgment has nowhere specified that loading has to be criteria for network laying

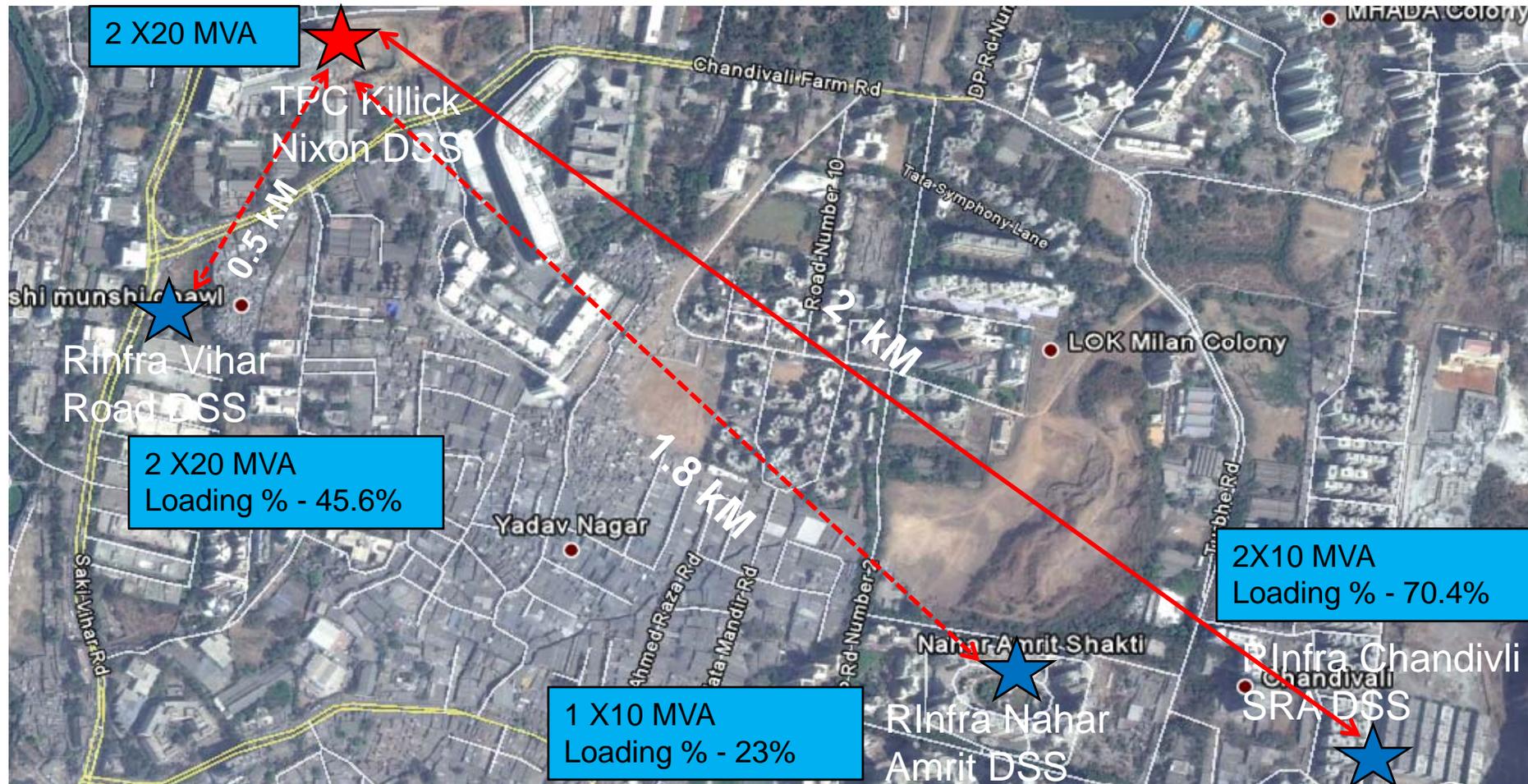
Power Transformer Loading

- ❑ Rlnfra has adopted cluster wise approach to ensure (n-1) reliability so as to reduce Capex requirement and to utilise the strength of its 11kV Network
- ❑ Clusters as identified by Rlnfra for network planning are complying (n-1) requirement to ensure Reliability. Also, WIP schemes as per DPRs approved by MERC will reduce the loading of existing sub-stations only by rearranging the 11kV feeders
- ❑ Mapping of Power Transformers of TPC to individual DSS of Rlnfra in Common area is to mislead MERC and contrary to its own philosophy
- ❑ Without prejudice, even if IPDS Guidelines are considered, there are only two 33(22)/11 kV S/S above 80% loading. However, if respective cluster is considered, all satisfy (n-1) requirement for maintaining Reliability

Distribution Transformer Loading

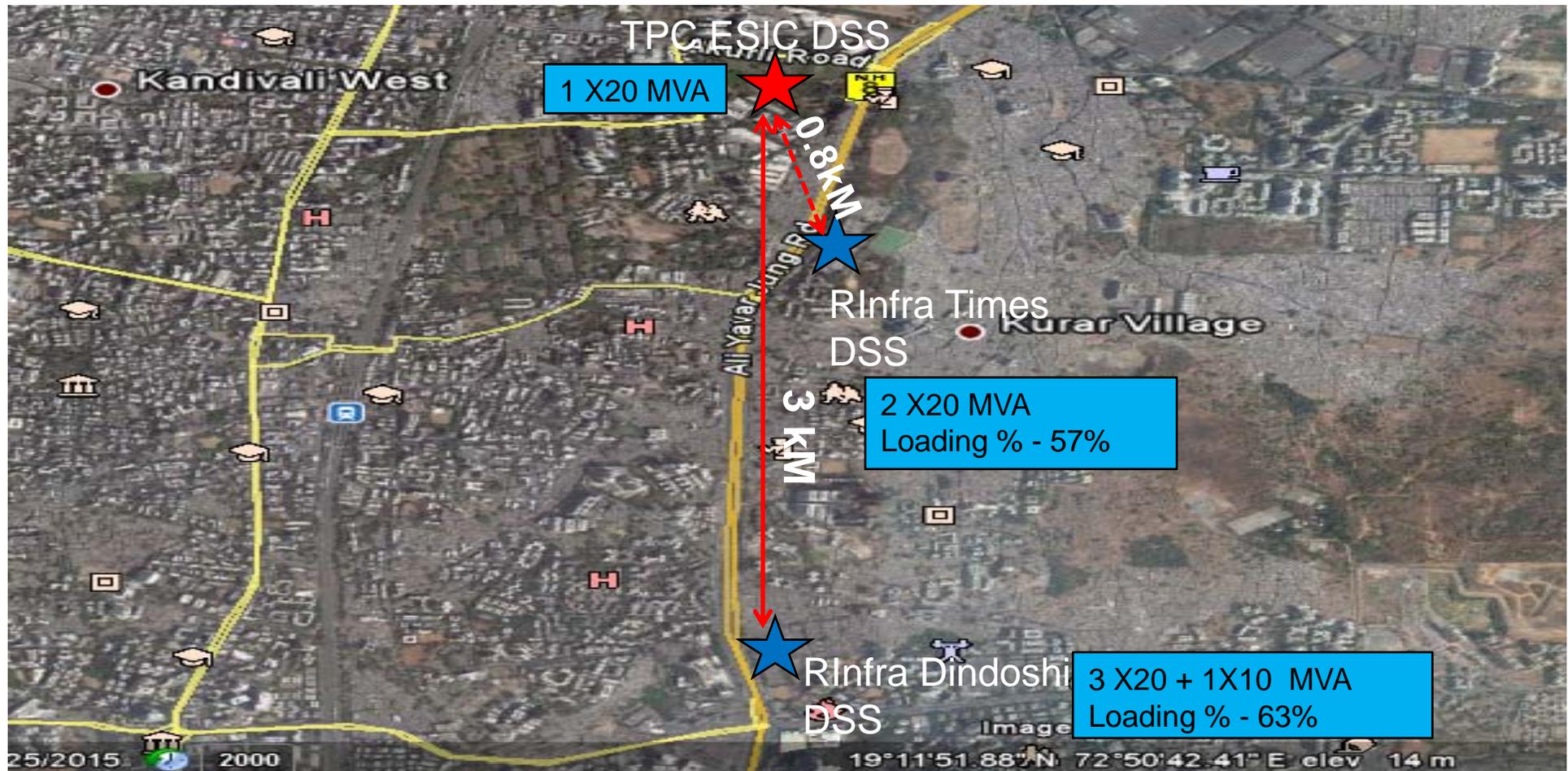
- ❑ TPC has made comparison based on Division and concluded that TPC can lay network where Rlnfra DT loading is more than 70%
- ❑ Division is a vast area and there is likely possibility that TPC's DT might not be in the vicinity of Rlnfra's alleged loaded DT which are allegedly affecting reliability
- ❑ TPC has not considered physical constraints while proposing to relieve loaded DT's of Rlnfra
- ❑ TPC's submission is **without** taking into consideration capex requirement for Rlnfra to relieve loading by augmentation, re-organisation of load as against TPC's capex requirement to lay duplicate network

Power Transformer Mapping



- ❑ TPC has mapped Killick Nixon DSS with RInfra Chandivali SRA DSS
- ❑ TPC has conveniently ignored RInfra Vihar and RInfra Nahar Amrit Shakti DSS (Lightly loaded) in the vicinity which are nearer and connected with each other through robust 11 kV network
- ❑ All RInfra DSS satisfy IPDS Guidelines of PT loading as putforth by TPC

Power Transformer Mapping



- ❑ TPC has mapped ESIC DSS with RInfra Dindoshi DSS
- ❑ TPC has conveniently ignored RInfra Times DSS (Lightly loaded) in the vicinity which is nearer and connected with each other through robust 11 kV network
- ❑ All RInfra DSS satisfy IPDS Guidelines of PT loading as putforth by TPC

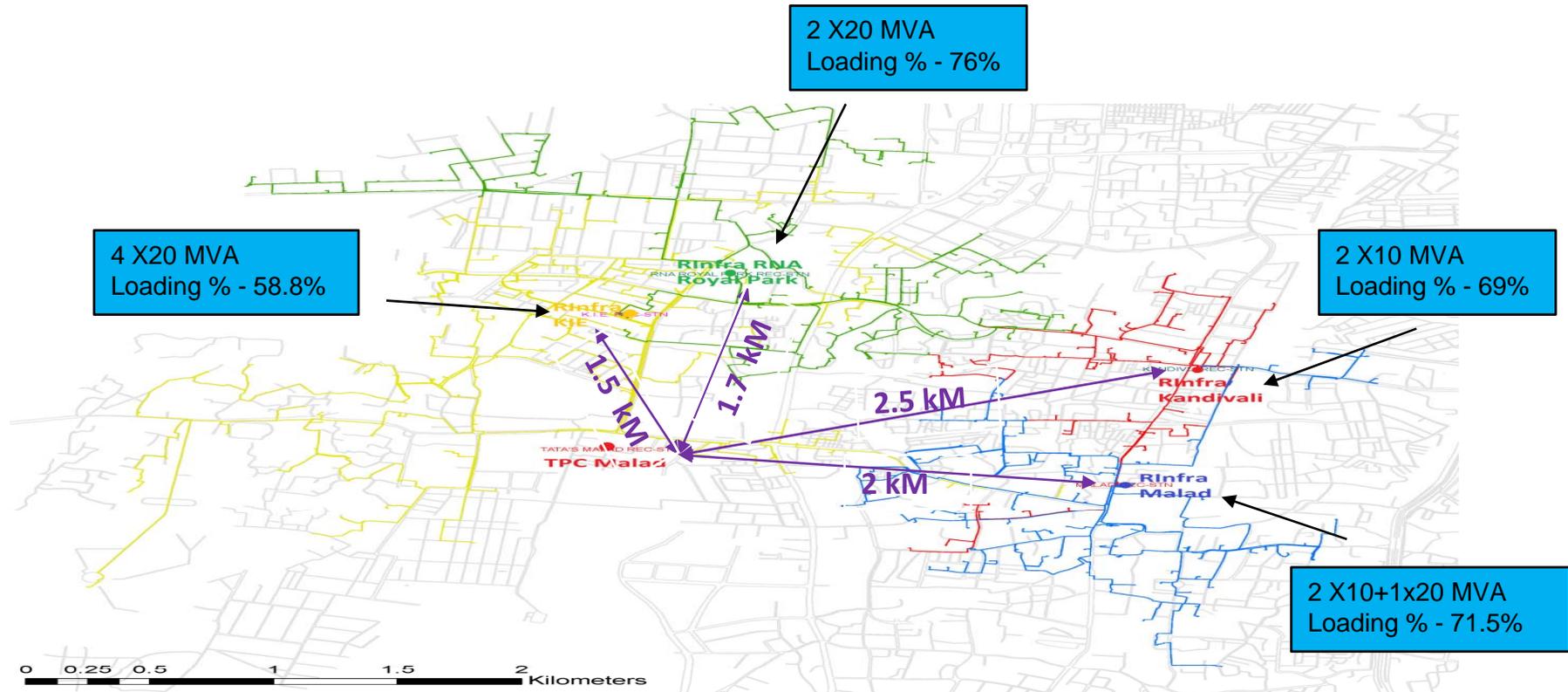
Power Transformer Mapping

RELIANCE



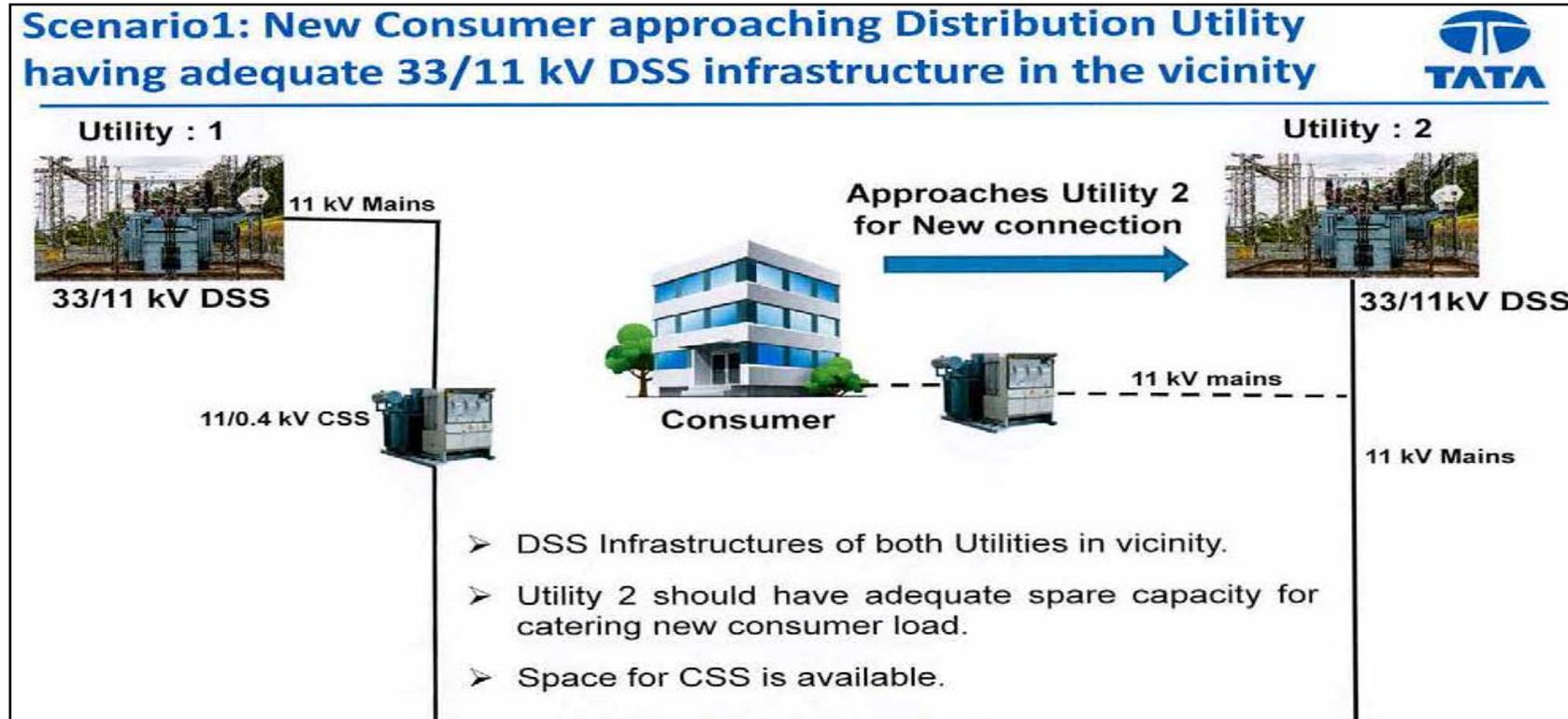
- ❑ TPC has mapped BKC DSS with RInfra Bandra Terminus DSS
- ❑ TPC has conveniently ignored RInfra MMRDA and Kalanagar DSS (Lightly loaded) in the vicinity which are nearer and connected with each other through robust 11 kV network
- ❑ All RInfra DSS taken together satisfy IPDS Guidelines of PT loading as putforth by TPC

Power Transformer Mapping



- ❑ TPC has mapped – Malad DSS against Kandivali , Malad and Royal RNA Park DSS of RInfra
- ❑ TPC wants to duplicate network and cater to the area served by these 3 DSS.
- ❑ TPC has conveniently ignored KIE DSS of RInfra in the vicinity which is connected with other 3 DSS through robust 11 kV network.
- ❑ All 4 RInfra DSS satisfy IPDS Guidelines of PT loading as putforth by TPC. Further, there is WIP as per DPR's approved by MERC to reduce the loading.

Scenarios of Network Development



TPC Proposal:

Since consumer has approached utility:2 with adequate capacity at 33/11kV Substation (DSS), utility:2 should be allowed to connect such consumer, **even if it means incurring capex to create downstream infrastructure by utility:2 (CSS, associated HT and LT network)**

More cost added in the system. Against ATE judgment and consumer interest

Scenarios of Network Development – Scenario 1

- ❑ As per ATE Judgment, such approach would could lead to network duplication and wasteful capital expenditure by the **utility: 2**
- ❑ If the **utility:1** already has adequate downstream infrastructure (CSS, LT pillars, etc.), it could be more economically used to connect such consumer
- ❑ An LT consumer requesting for a load of say 100kW can easily be released by either extending LT Mains network from nearby CSS and if necessary, augmenting the nearby CSS by **utility:1**- This would be the more cost economic option
- ❑ Even in case of prospective consumers having larger load requirements making commissioning of a new CSS mandatory, it would be more optimal to commission such a CSS by LILO of existing 11kV network by **utility:1**
- ❑ If required, strengthening of the associated 11kV network by laying short distance interconnecting cables can be carried out by **utility:1** for accommodating the increased load and create margins for contingencies, rather than creating a new 11kV network from a comparatively longer distance by **utility:2**

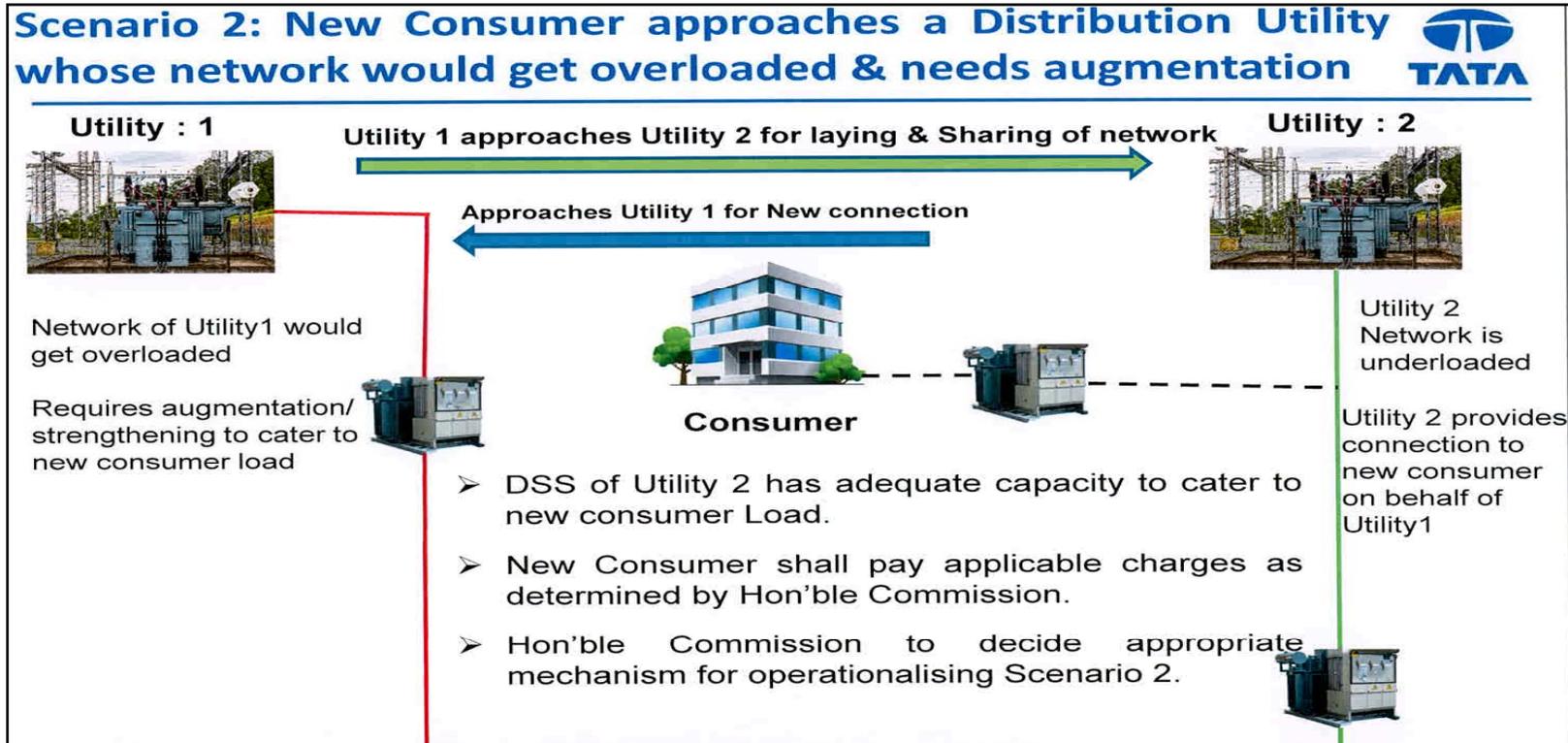
Scenarios of Network Development – Scenario 1

- Supply to commercial as well as residential complexes takes 2-3 years to develop

- If TPC's proposed approach is accepted, huge spare capacities will remain idle in the system:
 - Since CSS commissioning will be a must to release even small loads
 - Untimely Capex investment will lead to increased tariff on consumers

Connection by utility:1 results in lower incremental cost into the system

Scenarios of Network Development



TPC Proposal:

Consumer approaches **utility:1** with overloaded network which needs augmentation, whereas in vicinity there exists network of **utility:2** which is under-loaded, then, the existing under-loaded Distribution Network of **utility:2** should be first loaded before taking up any augmentation of network by **utility:1** having overloaded network.

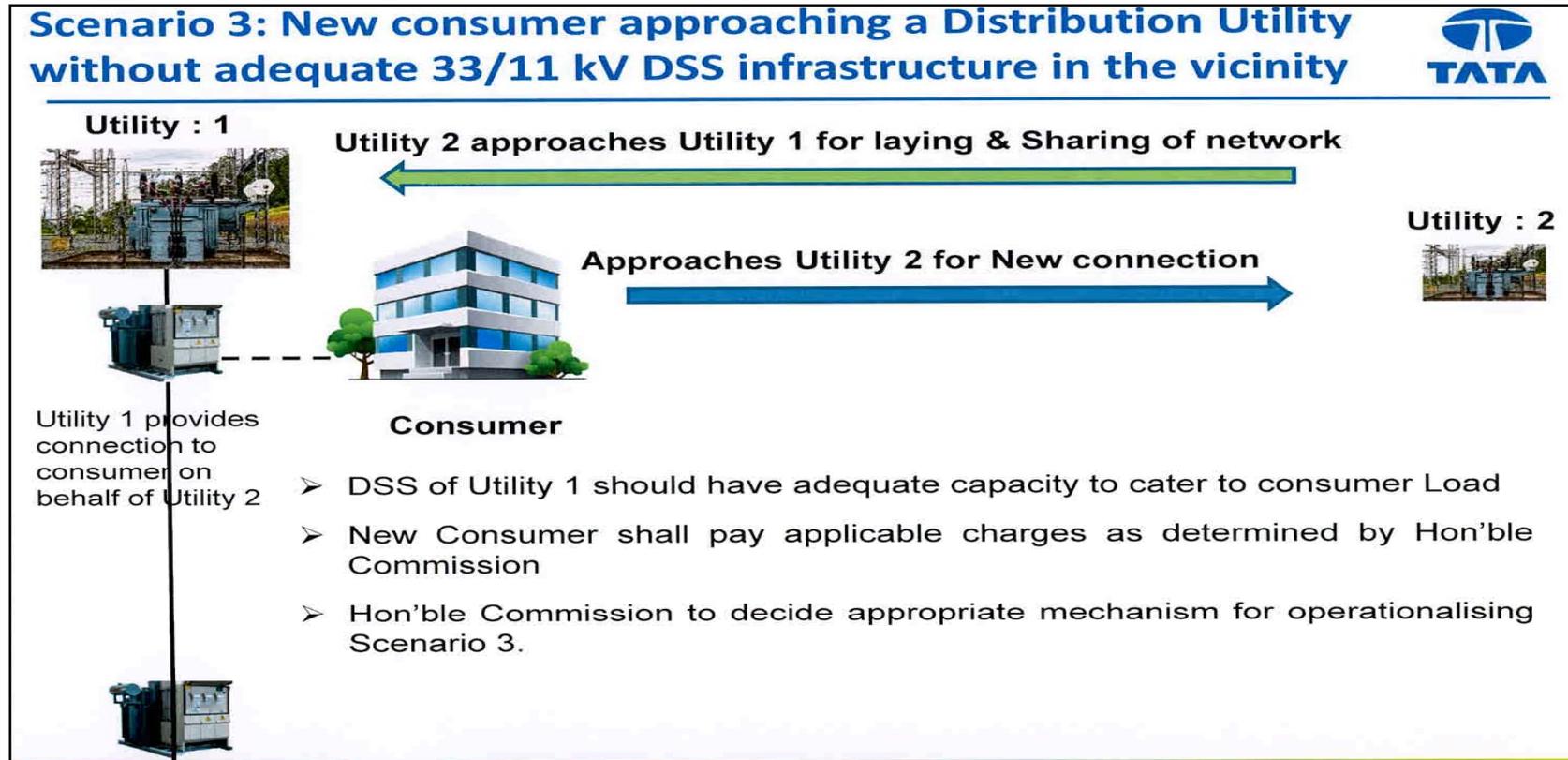
Consumer Choice for Network ???

Scenarios of Network Development – Scenario 2

- ❑ **Utility:2** with under loaded DSS will have to create downstream infrastructure (CSS, LT pillars, etc.) resulting in incurrance of additional cost
- ❑ **Utility:1** with overloaded network will also need to incur cost to augment the network to supply the consumer
- ❑ Capex required for augmentation by **utility:1** will have to be compared with Capex required by **utility:2** from its existing network or by creation of CSS and related infrastructure
- ❑ Utility having least cost should be allowed to connect such new consumer

Utility having optimum cost shall connect the consumer

Scenarios of Network Development



TPC Proposal:

Consumer has approached a Distribution Utility which does not have enough DSS capacity. However, it may be possible that the other Distribution Utility has sufficient DSS capacity in the vicinity and is in the position to provide the connectivity

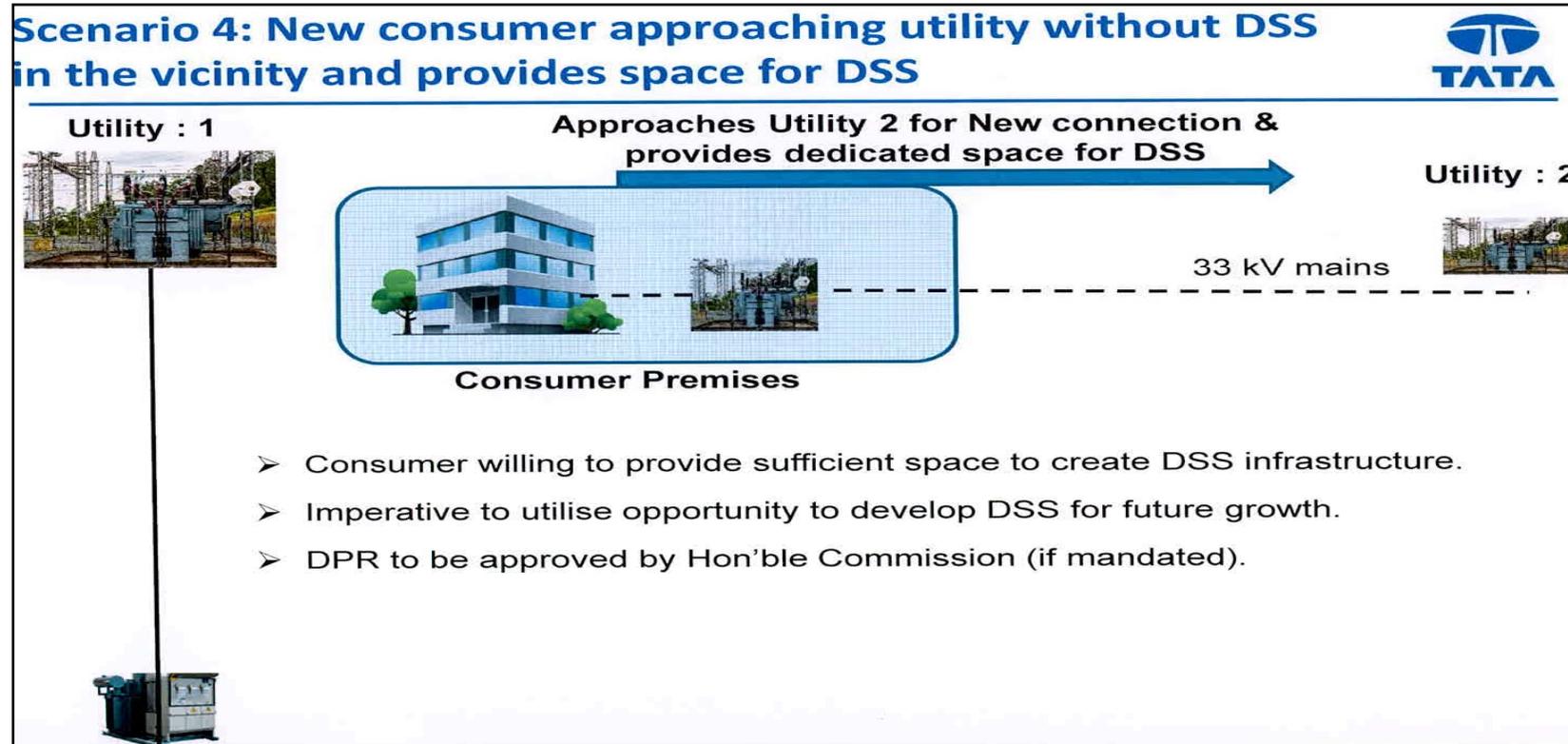
Consumer Choice for Network ???

Scenarios of Network Development – Scenario 3

- Decision on which utility would lay network to connect the consumer will have to be based only on economics of network laying / up-gradation and whichever utility is able to offer a more cost effective solution, depending on the vicinity and adequacy of its network.

Network laying driven by optimal cost and not consumer choice

Scenarios of Network Development



TPC Proposal:

Consumer approaches **Utility:2** which does not have adequate DSS capacity, however, the consumer is willing to provide sufficient space to create a DSS infrastructure hence, **Utility:2** shall be permitted to create the DSS infrastructure and to connect such consumer

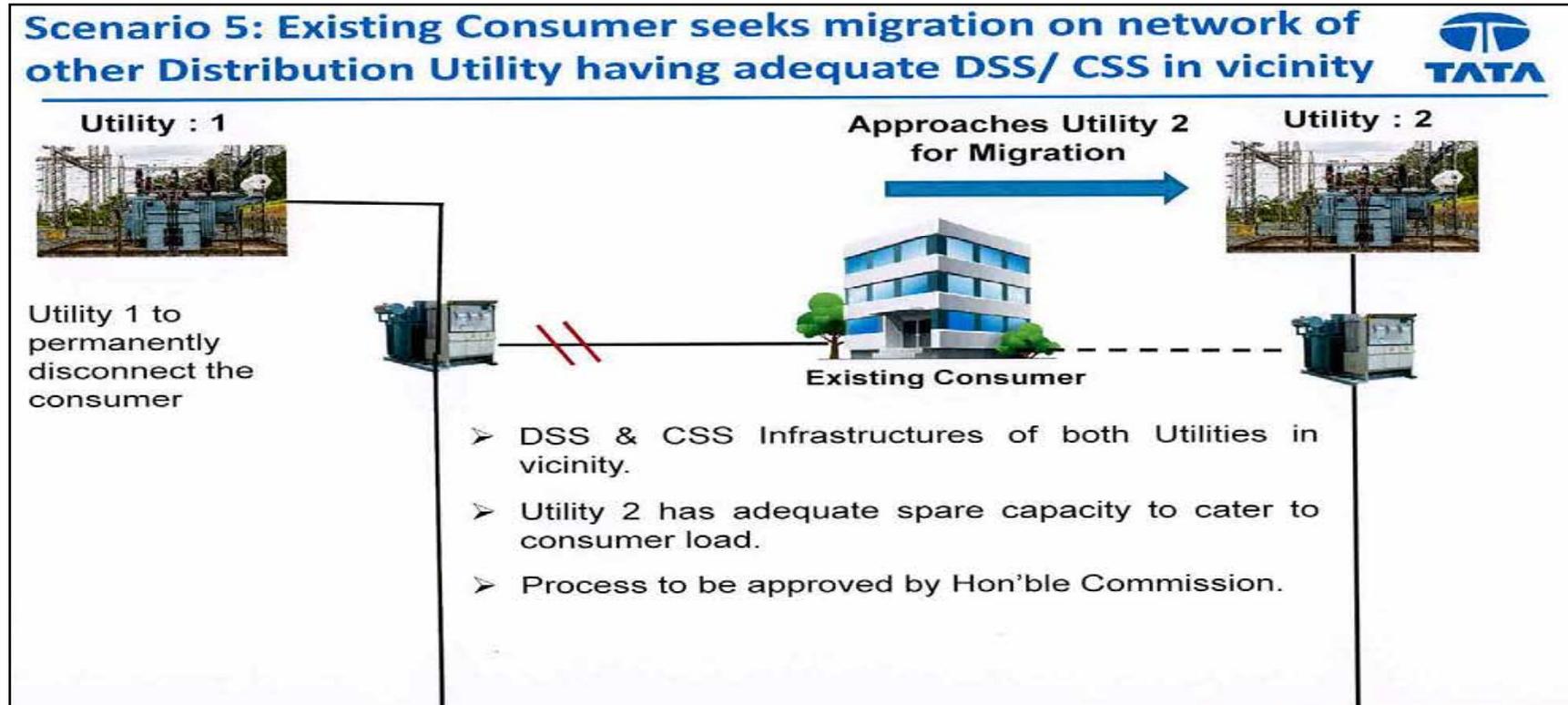
Sub-optimal network development by utility:2 against larger consumer interest

Scenarios of Network Development – Scenario 4

- ❑ Decision on which utility should connect the new consumer must be entirely based on economic consideration by not allowing network duplication and wasteful capex
- ❑ The decision on whether DSS is required to serve the new consumer should be based on technical considerations and not space considerations
- ❑ Need for commissioning of the DSS by **utility:2** would arise only if the available capacity of **utility:1** in the vicinity has exhausted or utilization of such space by **utility:1** for creating its DSS will result in higher cost compared to that by **utility:2**

- 1) With common consumer base and freedom to use each other's network, the incremental cost of network should be least possible
- 2) While allowing Consumer choice ignoring economic principle is against larger consumer interest

Scenarios of Network Development



TPC Proposal:

Consumer who is connected to the network of **utility:1** seeks migration to the network of **utility:2**; the consumer to be provided connectivity to the Distribution Utility of its choice.

Against ATE judgment. Promotes cherry picking

Scenarios of Network Development – Scenario 5

- ❑ TPC's proposal is in complete contravention to the said judgment, which entirely debars switchover of any consumer connected to network of an existing utility, to the network of the other utility
- ❑ Switchover is allowed only where considerable investment has been made by TPC and those assets are not yet commissioned and capitalised (Only Rs 67 Crs as per TPC's submissions)

Principles for Scenarios of Network Development - RInfra

Network laying Scenario is applicable only for “New Connection/Consumer” i.e. a consumer/premise which has never been connected to the distribution system of any licensee and is seeking connection for the first time.

- ❑ Optimisation of cost is the only principle for network laying as per ATE judgment, **Accordingly, the scenarios proposed consider the following:**
 - ❑ Utility with network in the immediate neighborhood of a potential consumer (HT or LT, depending on voltage level at which supply is to be released) should extend network to “**connect**” such consumer/premise
 - ❑ In case both utilities have adequate network in immediate neighborhood (not requiring augmentation) for connecting such consumer, utility to which such consumer approaches should extend connection to such consumer/premise
 - ❑ In case network requires augmentation, utility more optimally placed should extend network to “**connect**” such consumer/premise
- ❑ Bottoms up (LT network to DSS) approach as proposed by RInfra will minimize Capex and also optimize utilization of the available network
- ❑ This approach gels with actual field conditions, as the load applied is not realised immediately and thus investing in creation of CSS or DSS based on potential load will result in capacities remaining idle in the system for long and burdening the consumer
- ❑ **Assumption in all Scenarios Proposed: Utility-1 is Consumer’s choice for New Connection (Utility-1 in each scenario could be either of the two licensees).**

Scenarios of Network Development - RInfra

Case-1: Supply to be given on Low Voltage without CSS

Scenario-1 Utility-1 has its LT network in the immediate neighborhood of the prospective consumer's premises	Scenario-2 Utility-1 does not have but Utility-2 has its LT network in the immediate neighborhood of the prospective consumer's premises
<ul style="list-style-type: none"> • Utility-1 carries out LT improvement, if required and extends supply from its nearest LT feeding point (LT Feeder Pillar) • Subsequently in future, as the load on its CSS transformer increases beyond a specified limit, the same is either upgraded or a new transformer is installed depending on feasibility • Tariff Applicable to Consumer: <ol style="list-style-type: none"> a. Fixed Charges of Utility -1 b. Energy Charges of Utility -1 c. Wheeling Charges of Utility-1 d. Regulatory Asset Charge of Utility -1 e. Other Statutory Charges as applicable for Utility-1 	<ul style="list-style-type: none"> • Since, Utility-1 does not have its LT network in the vicinity, Utility-1 will approach Utility-2 to do the needful to connect the consumer as per Case-1, Scenario-1. • Utility-1 should keep consumer informed as charges would vary for different utilities. Such consumer may opt for changeover later. • Tariff Applicable to Consumer: <ol style="list-style-type: none"> a. Fixed Charges of Utility -1 b. Energy Charges of Utility -1 c. Wheeling Charges of Utility-2 d. Regulatory Asset Charge of Utility-2 e. Cross Subsidy Surcharge of Utility-2 f. Other Statutory Charges as applicable for Utility-1/2

Scenarios of Network Development - RInfra

Case-2: Supply to be given on LT and requires commissioning of CSS (*Entire load applied is not realised immediately and immediate load requirement is met through existing LT network*)

Scenario-1 Utility-1 has its LT network in the immediate neighborhood of the prospective consumer's premises and CSS commissioning possible from existing 11kV network in the vicinity	Scenario-2 Utility-1 does not have but Utility-2 has its LT network in the immediate neighborhood of the prospective consumer's premises and CSS commissioning possible from existing 11kV network in the vicinity
<ul style="list-style-type: none"> Utility-1 carries out LT improvement, if required and releases initial load requirement from its nearest LT feeding point (LT Feeder Pillar) Utility-1 may decide on commissioning of CSS based on load realization in future, so as to avoid unnecessary capacity addition and for optimum use of available capacity. This also offers the advantage of deferring capex, rather than incurring immediately which will lead to sub-optimal loading of CSS created Tariff Applicable to Consumer will be same as mentioned in Case-1, Scenario-1 	<ul style="list-style-type: none"> Since, Utility-1 does not have its LT network in the vicinity, Utility-1 will approach Utility-2 to do the needful to connect the consumer as per Case-2, Scenario-1. Utility-1 should keep consumer informed as charges would vary for different utilities. Such consumer may opt for changeover later. Tariff Applicable to Consumer will be same as mentioned in Case-1, Scenario-2

Scenarios of Network Development - RInfra

Case-3: Supply to be given on LT and requires commissioning of CSS as well as DSS *(Entire load applied is not realised immediately and immediate load requirement is met through existing LT network)*

Scenario-1 Utility-1 has its LT network in the immediate neighborhood of the prospective consumer's premises and CSS/DSS commissioning possible with optimal Capex	Scenario-2 Utility-1 does not have but Utility-2 has its LT network in the immediate neighborhood of the prospective consumer's premises and CSS/DSS commissioning possible with optimal Capex
<ul style="list-style-type: none"> Utility-1 carries out LT improvement, if required and releases initial load requirement from its nearest LT feeding point (LT Feeder Pillar) Utility-1 may decide on commissioning of CSS and/or DSS based on load realization in future, so as to avoid unnecessary capacity addition and for optimum use of available capacity. This also offers the advantage of deferring capex, rather than incurring immediately which will lead to sub-optimal loading of CSS/DSS created Tariff Applicable to Consumer will be same as mentioned in Case-1, Scenario-1 	<ul style="list-style-type: none"> Since, Utility-1 does not have its LT network in the vicinity, Utility-1 will approach Utility-2 to do the needful to connect the consumer as per Case-3, Scenario-1. Utility-1 should keep consumer informed as charges would vary for different utilities. Such consumer may opt for changeover later. Tariff Applicable to Consumer will be same as mentioned in Case-1, Scenario-2

Scenarios of Network Development - RInfra

Case-4: Supply to be given on HT and requires commissioning of DSS *(Entire load applied is not realised immediately and immediate load requirement is met through existing HT feeder)*

Scenario-1

Utility-1 has its HT network in the immediate neighborhood of the prospective consumer's premises and DSS commissioning possible with optimal Capex

- Utility-1 carries out HT improvement, if required and releases initial load requirement from its nearest 11kV network
- Utility-1 may decide on commissioning of DSS based on load realization in future, so as to avoid unnecessary DSS capacity addition and for optimum use of available capacity of HT network.
- This also offers the advantage of deferring capex, rather than incurring immediately which will lead to sub-optimal loading of DSS created
- Tariff Applicable to Consumer will be same as mentioned in Case-1, Scenario-1

Scenario-2

Utility-1 does not have but Utility-2 has its HT network in the immediate neighborhood of the prospective consumer's premises and DSS commissioning possible with optimal Capex

- Since, Utility-1 does not have its HT network in the vicinity, Utility-1 will approach Utility-2 to do the needful to connect the consumer as per Case-4, Scenario-1.
- Utility-1 should keep consumer informed as charges would vary for different utilities. Such consumer may opt for changeover later.
- Tariff Applicable to Consumer will be same as mentioned in Case-1, Scenario-2

Cost Optimization

“52.Even if the parallel distribution network is laid in and around a cluster, it will be at an extremely high cost, which will be ultimately borne by the consumers. The cost of laying a distribution network in a congested metropolitan city will be much more than the normal cost.”

*55. Let us examine a situation where the parallel network is laid by Tata Power also in all the cluster including, where a reliable system of Rlnfra is already existing. **In that case, 50% of the total network of Rlnfra and Tata Power will remain redundant, the cost of stranded distribution system will be borne by the consumers of Mumbai.** If some of the consumers who have migrated to Tata Power using the Rlnfra’s network (changeover consumers), switch over to Tata Power, the Rlnfra’s network will become redundant for which it was earlier getting wheeling charges from the changeover consumer. **The fixed charges of the redundant system of Rlnfra which was earlier earning revenue will then be borne by the consumers of Rlnfra.***

*56. Therefore, in the circumstances of the present case where a reliable distribution system of Rlnfra is already existing and physical constraints in laying down of network by Tata Power and **very high cost involved in the same**, it is in the **overall interest of consumers** of Tata Power and Rlnfra that the changeover consumers continue to get supply from Tata Power on the Rlnfra’s network.”*

Cost Optimization

4

“58. Practical difficulties in laying down the network and extending the 11/0.4 kV network all around the congested areas in multi-storeyed buildings and narrow lanes of slums **and the extremely high cost involved in making an unnecessary expenditure has to be considered.**

74.Laying of parallel network in every nook and corner of the city **irrespective of the requirement and cost** and where a reliable distribution system of Rlnfra is already existing would not be in the interest of the consumers of both Tata Power and Rlnfra as the existing network can be used for changeover. **Wheeling charges of the Tata Power would increase due to un-necessary CAPEX and wheeling charges of Rlnfra would also increase due depletion of the consumer base.** In changeover, Rlnfra recovers wheeling charges from changed over consumers and its consumer base, for evaluating wheeling charges, would remain intact.

75. In this regard we are of the view that the approach adopted by the State Commission in case number 113 of 2008 dated 15.6.2009, ruling that incurring heavy capital expenditure for the network roll-out is not the only option available to Tata Power in its efforts to supply electricity to different consumers in its licence area, and the provisions of the EA 2003 relating to Open Access and the provisions of the MERC (General Conditions of Distribution Licence) Regulations, 2006 relating to use of the distribution network of another distribution licensee, need to be explored by Tata Power, **so that the cost is optimised**, was the correct approach.

Use of Existing Network Only / No Duplication

*“56. Therefore, in the circumstances of the present case where a reliable distribution system of Rlnfra is already existing and physical constraints in laying down of network by Tata Power and very high cost involved in the same, **it is in the overall interest of consumers of Tata Power and Rlnfra that the changeover consumers continue to get supply from Tata Power on the Rlnfra’s network.** It will also be convenient and economical for the consumer to changeover back to Rlnfra in case Rlnfra’s tariff becomes more attractive in future.*

*61.However, **Tata Power can supply power to the existing consumers of Rlnfra** irrespective of category of consumer on the request of the consumers **only through Rlnfra’s network** by paying the necessary wheeling charges as well as the other compensatory charges including the cross subsidy charges to Rlnfra.*

*80 (ii) Therefore, it is in the interest of consumers of Tata Power and Rlnfra that the **changeover consumers of Tata Power continue to get supply from Tata Power on the Rlnfra, even if a 33/22 kV sub-station of Tata Power is available in the vicinity.....”***

Consumer Interest

*“56. Therefore, in the circumstances of the present case where a reliable distribution system of Rlnfra is already existing and physical constraints in laying down of network by Tata Power and very high cost involved in the same, **it is in the overall interest of consumers of Tata Power and Rlnfra that the changeover consumers continue to get supply from Tata Power on the Rlnfra’s network.** It will also be convenient and economical for the consumer to changeover back to Rlnfra in case Rlnfra’s tariff becomes more attractive in future.*

*74. The Act has mandated the State Commission to protect the interests of the consumers. The State Commission, while giving any direction to the licensee is bound to ensure that **such direction is in the interests of the consumer.** Tata Power has expressed difficulties in laying down parallel network in the common licence area with Rlnfra. **Laying of parallel network in every nook and corner of the city irrespective of the requirement and cost and where a reliable distribution system of Rlnfra is already existing would not be in the interest of the consumers** of both Tata Power and Rlnfra as the existing network can be used for changeover. Wheeling charges of the Tata Power would increase due to unnecessary CAPEX and wheeling charges of Rlnfra would also increase due depletion of the consumer base. In changeover, Rlnfra recovers wheeling charges from changed over consumers and its consumer base, for evaluating wheeling charges, would remain intact.*

*80 (ii) Therefore, **it is in the interest of consumers of Tata Power and Rlnfra that the changeover consumers of Tata Power continue to get supply from Tata Power on the Rlnfra, even if a 33/22 kV sub-station of Tata Power is available in the vicinity....***

Cherry Picking by TPC

“50. In the light of above discussions we feel that it is not established conclusively that Tata Power in laying network selectively for high end subsidizing consumers. **However, such possibility is also not completely ruled out.**

*57. Consumer interest is one of the main features of the Electricity Act, 2003. It is also to be ensured that **no undue commercial advantage is gained by Tata Power** by selectively laying down network to cater to only high end consumers. **The interest of Rlnfra has to be safeguarded to avert any cherry picking by Tata Power for switchover consumers.**”*

Exhibit-2

IN THE APPELLATE TRIBUNAL FOR ELECTRICITY AT NEW DELHI

APPELLATE JURISDICTION

APPEAL NO. 246 OF 2012

IN THE MATTER OF:

The Tata Power Company Limited

... Appellant

VERSUS

Maharashtra Electricity Regulatory Commission & Ors...

Respondents

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Filed by



TRILEGAL

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Date: 1.2.2013
Place: New Delhi

RECD : BY POST/HAND/COUR/Regd. A.D.
DATE : 01-02-13 TIME : 17:15 hrs.
SIGN :
MULLA & MULLA & CRAIGIE BLUNT & CAROE
Advocates & Solicitors

under Section 23. It is submitted that the said directions are in fact arbitrary and cannot be said to have been issued under Section 23.

- 9.3 It is further submitted that the directions purportedly issued under Section 23 contravene the provisions of Section 43 in as much as they interdict the Appellant from fulfilling its obligations under the said provision. It is well settled that courts cannot issue directions that contravene statute and the same principle applies to statutory authorities. The contention of the 1st Respondent – Commission that the directions issued under Section 23 are saved by Section 43(1), which is circumscribed by the words “Save as otherwise provided in this Act” is misconceived. It is submitted that the said words could permit a distribution licensee to refrain from supplying electricity upon demand where the Act expressly provides otherwise. Section 23 is not such a provision.
- 9.4 It is further submitted that the power of the Commission to issue orders under Section 23 of the Act has to be read harmoniously with the other provisions of the statute, the objects and purpose thereof. Section 23 does not empower the Commission to defeat other provisions under the statute. It is submitted that directions may not be issued under Section 23 requiring a distribution licensee to omit to comply with its obligations under the Act under Section 43 thereof.
- 9.5 It is pertinent that as a result of the Impugned Order, the Appellant has inter alia been deprived of its ability to connect to consumers to supply electricity, which it is entitled and obligated to do, pursuant to its authorization under the Act and the conditions of its license, in the following cases:

- (a) any Group I consumer having monthly consumption over 300 units in the entire common license area, wherever situated;
- (b) any Group I consumer consuming less than 300 units/month in the 9 clusters;
- (c) any Group II consumer over 300 units/month wherever situated, if it has not applied for switchover before the date of Impugned Order.

As far as supply of electricity through the 2nd Respondent's network is concerned, the Commission has disallowed future changeover except for residential consumers consuming less than 300 units/month and those consumers who had already applied for changeover as on the date of the Impugned Order.

As a result, the Appellant's license stands restricted to connect only to the following consumers in the common license area:

- (a) Consumers with consumption below 300 units / month in the 11 clusters;
- (b) Group II consumers consuming above 300 units / month in the 11 clusters, who have applied for switchover before the date of the Impugned Order;
- (c) New (direct) consumers in 11 clusters.

Effectively, the two forms in which a distribution licensee is able to supply to consumers, both stand restricted in the case of the Appellant by the Impugned Order. This in essence amounts to modification of the Appellant's license and takes away the obligation under Section 43 and the authorization under the license to supply to any consumer. It is submitted that to exercise such powers, the Act contains separate provisions for amendment of license, suspension of license etc. The

IN THE APPELLATE TRIBUNAL FOR ELECTRICITY
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Commission & Ors. Respondents

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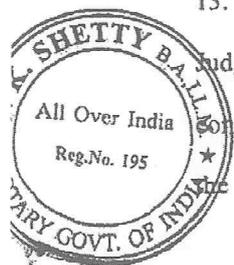
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New Delhi
Dated: 15.01.2013

Respondent Commission could not have directed the Appellant not to lay down its network outside the clusters as identified by the Respondent Commission for giving supply to consumers having demand of more than 300 units per month. It is respectfully submitted herein that the provisions of Section 43 entitling a distribution licensee to give supply of electricity and to lay down its distribution network etc., is circumscribed with a saving provision in the following words "Save as otherwise provided in this Act". It is respectfully submitted that this saving clause would take in the power of the Respondent Commission under Section 23 of regulating supply, distribution, consumption or use of electricity for maintaining the efficient supply, securing equitable distribution of electricity and promoting competition. It is submitted that in view of the well-established position that the Appellant does not have a full-fledged distribution network and lays down network only for very high-end consumers is manifestation of the existence of inefficient supply, inequitable distribution of electricity and demotion of competition. Accordingly, for maintaining the efficient supply, securing equitable distribution of electricity and promoting competition, if the Respondent Commission by its impugned Order has regulated for a period of one year from the date of impugned order, the changeover and switchover of consumers below 300 units for keeping the level playing field amongst two parallel licensees for discouraging cherry-picking, in consumer interest, the impugned Order of the Respondent Commission dated 22.8.2012 cannot be faulted.

13. It is respectfully submitted that this Hon'ble Tribunal in its recent judgment dated 21st December 2012 has held that when a consumer connected to the wires of Respondent No.2 takes supply of electricity from the Appellant, it is open access within the meaning of section 42 of the



2003 Act. Hence, it is submitted that the Respondent Commission was entitled to stipulate the provision of this open access "in such phases and subject to conditions". Accordingly, it is submitted that the Order dated 15.10.2009 was an interim Order laying down an interim arrangement and while passing the impugned Order dated 22.8.2012, the Respondent Commission was entitled to stipulate a period of one year during which a phase-wise approach of changeover would be allowed, viz., only those residential category consumers having demand of 0 to 300 units per month could change over to supply from the Appellant while being connected to the distribution network of Respondent No.2. Hence, it is the submission of the Respondent Commission that Section 23 read with the saving clause of Section 43 entitles the Respondent Commission to restrict the switchover (means disconnected from one distribution licensee and connected on the wires of other licensee) only to consumers having demand of 0 to 300 units residential category only in selected clusters/wards of the Appellant. However, the Universal Service Obligation on the Tata Power Co Ltd in its entire area of supply, remains. The table (particularly the third row) at page 75 of the impugned Order captures the position, as follows:-

