

Dear Mr. Lav Gupta,

We have come across a consultation paper no. 1/2011 in TRAI website on issues related Telecom Infrastructure policy. We being one of the largest Design/manufacture and Telecom infrastructure provider in India and outside, we thought we can give our opinion on certain issues related to this.

We have provided some of our responses to select queries in the paper.

a) Do you consider that the existing framework of different civic authorities to grant permission for telecom towers is adequate and supportive for growth of telecom infrastructure?

Aster: NO. We feel that the existing framework of different civic authorities to grant permission for telecom towers is not adequate and supportive for growth of telecom infrastructure

b) Is there a need to set-up a single agency for approval and certification of towers? Is there an existing agency that can do this work? If a new agency is proposed, what should be its composition and framework?

Aster: YES. There is a need for single agency. Currently there is no existing agency that can do this work. The new agency should consist of representatives from Municipality concerned, certified structural engineer from the same city, a representative from RWA (applicable only in case of multi-storied building). The requirements of Urban Art Commission, AAI, ASI etc would have been taken by the agency which standardized the Tower.

c) Is it feasible to have a uniform framework of guidelines including registration charges, time frame, single window clearance etc for granting permission for installation of telecom towers and laying of optical fibre cables? If so, can it be prescribed by the Licensor or the Regulator?

Aster: YES. The very purpose of approaching local authorities as is being done currently (except in case where such building belongs to the local authority) is to ensure the safety of the building, public safety while erecting tower etc. It was never considered as a source of commercial income by such local authorities nor such condition laid while granting the Telecom Operating License. The various local authorities have started exploiting this as a source of revenue making operators gullible in the hands and are made to part with their revenue thereby not able to make such cost advantage to the consumers. The same is applicable to power tariffs also. As such it is felt that there should be uniform guideline for the registration charges, time frame etc. which should be based on the number of sites and not the location/administration concerned.

Yes. This can be prescribed by the regulator which shall be binding by a law on the local authorities.

d) What can be an appropriate time frame for grant of permission for erection of towers?

Aster: The time frame for grant of permission for GBT – 21 days, RTT – 30 days from the date of registration.

e) How can a level playing field be ensured for telecom service providers vis-à-vis other utility service providers especially in reference to tower erection?

Aster: In case of other utilities like Transmission & Distribution tower structure provider for Power as they are mostly cross-country and outside city limits. Inside city limits, the present day trend is to provide underground HV cables. As regards to the level playing field for UG utility provider Vs Fiber Optic Cable for telecom, the requirement for FOC is simple as it requires a shallow depth narrow trench which can be implemented quicker compared to other utilities like power, sewerage. So, for issuing ROW for FOC, the norms followed should be different than for other UG utility providers. So, there is no question level playing field between these.

f) Which agency is best suited to inspect the buildings and certify the structural strength of the buildings in case of roof based towers?

Aster: A govt. certified structural engineer, the certificate given by whom shall be formatted by the approval agency as indicated in “b” above.

g) Would you agree that the design of towers can and should be standardised?

Aster: YES, we agree that the design of towers can and should be standardised

h) If yes, how many different types of towers need to be standardised?

Aster:

To start with, the standardization of design of towers for rooftop applications is an immediate necessity in view of the fact that multi-various design architectures and types makes the city skyline very un-aesthetic. It is also a practical experience that the rooftop towers do not exceed in height more than about 21 mtrs and mostly are in between 9 & 15 mtrs. As such monopoles are a very good solution, to eliminate the very clumsy appearance of mushrooms of lattice/delta type of towers over the rooftops. Monopoles have been designed by leading Indian Tower supply companies like Aster to the extent of sharing upto 4 operators along with the requirement of Microwave antenna for all of them with a maximum dia of 0.6m i.e., 12 panel antennas and 8 microwave antennas of 0.3/0.6 m dia. The general factor is that the Monopoles require simpler foundation and so there is a saving in the foundation cost and the superstructure costs about 10% higher than the lattice type of tower. Overall, the monopoles

upto 18 mtr rooftop height are comparable in cost with the conventional types. The monopoles can be designed with improved aesthetic structure like tree using the RF transparent materials for the leaves, fruits etc, which hides the antenna part without harming the radiation. Some of the Middle-East countries have made it mandatory to use such structures over buildings. China is another such country which uses such structures in city areas. But, many operators in India are not going vigorously for use of monopoles for the mere fact that it is marginally costlier and requires little higher effort for erection in city areas due to the usage of cranes. However, a regulatory mechanism as it has been already done in certain parts of Delhi shall compel the operators to use such structures over buildings in cities to provide aesthetic look. It might be not difficult for the regulatory authority even to replace the existing structures with the monopoles.

It is felt that the standardization of the GBT need not be implemented due to the fact that these towers vary in height, wind loads, antenna carrying capacity, platform designs etc and as such standardization to accommodate all the needs will prove difficult.

i) What are the important specifications that need to be included in these standards?

Aster: The following are to be considered for drafting of specifications to be included in these standards

The tower architecture (lattice/monopole/4-legged/3-legged/RTT/GBT),

Wind-zone,

Height

Loading capacity of antennae (in terms of number, type and size)

Soil Bearing Capacity of the foundation

Camouflaging in selected locations

j) Which is the best Agency to standardize the tower design?

Aster: We feel SERC is better suited as an agency for tower design.

k) What is the likely cost of camouflaging the towers?

Aster: Currently we don't have any inputs regarding this aspect. However we have sought such inputs from suppliers of such antenna in China and await reply. We presume it can be anywhere 5 to 10 % of antenna cost. The absolute cost also depends on what extend the material used should be RF transparent.

l) Can camouflaging be made mandatory? If so, can this be made part of the design standards of the towers?

Aster: YES. We feel camouflaging should be made mandatory to preserve the aesthetics of the environment. This can be facilitated by making camouflaging as part of the design standards of the towers.

Thanks and regards,
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