

Telecom Regulatory Authority of India

TRAI releases recommendations on “Use of Street Furniture for Small Cells and Aerial Fibre deployment”

New Delhi, 29.11.2022: The Telecom Regulatory Authority of India (TRAI) today released its recommendations on **“Use of Street Furniture for Small Cells and Aerial Fibre deployment”**.

- 2 As India plans to launch 5G, small cells can play a pivotal role in network upgradation and expansion. Use of higher frequency bands for 5G rollout will have shorter coverage as signals in these bands cannot travel through buildings or obstacles. Therefore, the macro cells will be required to be complemented with extensive deployment of small cells so as to support all kinds of uses and applications, at all locations. Small cells will also be used for traffic offloading since the carrying capacity of lower frequencies, used by macro radio sites, are limited. Use of already available street furniture like poles etc. for mounting 5G Small Cells can obviate the need for erecting thousands of new towers resulting in economical and fast deployment of small cells. The Small cells will require backhaul connectivity which again can be provided very fast through aerial fibre deployment using street furniture.
- 3 The deployment of small cells and aerial fiber on street furniture can face many issues like identifying the suitable street furniture based on availability of backhaul, power, capabilities of street furniture for mounting suitable equipment, scalability, and concerns related to local approval, and safety. The right of way procedure, sharing of the street furniture amongst various users, permissions needed for power supply under state electricity laws, exemptions or bulk permissions for small cell deployment will also be required to be addressed. To seek inputs from stakeholders on these issues, the Authority issued a Consultation paper on “Use of Street Furniture for Small Cell and Aerial Fiber Deployment” dated 23.03.2022.

4 With the objectives of developing cross sectoral framework which promotes sharing of street furniture infrastructure among various central, state and municipal authorities to develop state of the art 5G network, TRAI had simultaneously initiated pilots at Bhopal Smart City, GMR International Airport New Delhi, Deendayal Port Kandla and Namma Metro Bengaluru on use of street furniture for Small Cells and aerial fiber deployment. Based on the consultations process and learning from these pilots, TRAI has prepared its comprehensive recommendations to the Government on conducive regulatory and policy framework to ensure successful and rapid rollout of small cells and optical fiber using street furniture in all smart cities, other cities and towns, ports, airports, metro rails, Industrial parks, and estates etc. The emphasis of the recommendations is on creating a regulatory framework which facilitates collaboration and participation among various departments, central and state agencies, local bodies and service providers.

5 The salient features of the recommendations on **“Use of Street Furniture for small cell and aerial fibre deployment”** are as follows:

A. RoW issues and adequacy of current provisions in ROW Rules 2016, as amended

- While appreciating the efforts of DoT in bringing out the August 2022 Amendment to RoW Rules, 2022 the Authority has recommended to amend the rules further to bring clarity on the term “street furniture” (to include DoT clarification dated 26.10.2022 on the same) and also to include provision of bulk processing of applications.
- Enhance the scope of the proposed national portal to grant RoW permissions for all utility providers especially the power sector. A provision in the National RoW portal for accepting single application for bulk processing of sites for granting various permissions, including RoW and power connection.
- Creation of a catalogue of GIS mapped Street furniture assets in the National RoW portal capturing
 - ❖ Height, load bearing, and wind load capability of structure.
 - ❖ Wattage, type of power (AC/DC), voltage etc. if power is available.
 - ❖ Picture of SF.
 - ❖ Non-discriminatory terms and conditions offered for hiring.

- ❖ Contact details (Mobile number, landline number and email ID) of the nodal person for the particular Street Furniture.

Use of Drone based mapping in the GIS system should be considered for quick assessment of the location of small cell infrastructure and for the creation of the street furniture catalogue.

- Amend RoW Rules to incorporate provision that in case more than one TSP makes requests to use the same SF and there is insufficient space available to meet the demands of all the requesting TSPs, they should coordinate among themselves to work out a technically feasible solution for shared use of the structure for the installation of equipment. In case the TSPs fail to reach an agreement, they should accept the decision of the CAA which may use a fair and reasonable method to select the TSP(s) who will use the SF.
- The Draft Telecommunications Bill 2022 has provisions for countering vandalism of telecom assets. However, till the Bill is passed as a law, the Government should specifically monitor action taken by the police, for security of Telecommunications Asset, through a DoT & MHA joint committee.

B. Infrastructure sharing by the Controlling Administrative Authorities (CAA) with TSPs and IPIs

- DoT should issue advisory guidelines to States for mandating CAAs that own/control traffic lights to share these assets with TSPs/IP-Is for deployment of small cells subject to structural stability.
- All Central Government entities to earmark dedicated spaces in their existing and planned buildings/structures, for installing digital connectivity infrastructure (DCI) including small and macro cells. Dedicated spaces on rooftops should be identified for deploying small/macro cells. Such spaces are to be GIS mapped and made available on GatiShakti Sanchar portal for charge free use by TSPs/IP-Is on non-discriminatory basis. Advisory guidelines should also be issued to State Governments for similar action by their entities and local bodies. DoT should also follow up with State Governments for implementing the guidelines.
- Enabling provisions or suitable terms and conditions shall be introduced in all telecom licenses and IP-I registration agreement prohibiting the TSPs/IP-I providers from entering into any exclusive contract or right of ways with infrastructure owners/CAAs or any other authority.

- The Authority has reiterated its earlier recommendations on formation of National Fiber Authority (NFA) in priority and that the scope of NFA should be expanded beyond common ducts and telegraph posts, to undertake responsibilities related to above-ground contrivances, appliances, and apparatus.
- DoT should include the following in their advisory guidelines to States:
 - ❖ All CAAs or asset controlling authorities should prohibit entering into exclusive rights/exclusive tie-up with any licensee/registration holder. SF infrastructure should be offered in a non-exclusive and non-discriminatory manner.
 - ❖ In future, tenders for setting up new SF structures by the appropriate authorities, the possibility of sharing of SF on non-exclusive basis, for hosting DCI like small cells and aerial fiber, should be kept in mind.
 - ❖ In line with GatiShakti initiative, in all future projects of utility providers that are partially or fully funded by government to put-up new assets (such as gas pipelines, HT power lines, streetlights) or expand existing assets, provisions to host/support DCI such as small cells, towers, and aerial fiber should be in-built.
- DoT should immediately act on TRAI's letter dated 1st February 2022 and bring clarity on the provisions of sharing of infrastructure under different licenses to remove the ambiguity in infrastructure sharing provisions in Unified License mentioned in the Chapters related to generic conditions and authorization specific chapters.

C. Street furniture and small cell sharing among TSPs and IP1s

- To nudge service provider for sharing infrastructure, the Authority has recommended that charges paid by lessee TSP to lessor TSP for use of shared infrastructure should be reduced from the Gross Revenues of the lessor TSP to arrive at Applicable Gross Revenue (ApGR) of such Lessor TSP. Specifics for implementing the same have also been recommended.
- The guidelines and registration agreement of IP-I providers should be modified to exclusively mention the term 'poles' in their scope of work.

D. Permission exemption for small cells and standardization of small cells and installation practices

- Low Power Base Transceiver Stations (LPBTS) should be defined as those BTS that radiate EIRP \leq 600 W. Such equipment/small cells should be

exempted from seeking any kind of permission from any Authority except from the Street Furniture/building owning Agency at all places.

- DoT's simplified EMF compliance framework should redefine normally compliant class to include those LPBTS with EIRP > 2 and ≤ 600 Watt and TEC should accordingly modify the compliance tables for this class.
- Recent actions have been taken by DoT for simplifying the process for SACFA compliance, for low power equipment/small cell radiating $EIRP \leq 100$ W. DoT should increase this limit to 600 W to cover most of the Small Cells/LPBTSs that are being deployed.
- The criterion of audit of 10% sites by TERM Cells for which TSPs have submitted EMF self-certification may be relaxed. DoT should consult Ministry of Statistics and Programme Implementation (MOSPI) to come up with a scientific sample size for auditing BTS/small cell sites.
- Self-certification criteria for LPBTS should be relaxed to five years.

E. Power related issues and solutions

- DOT should take up the case with Ministry of Power, State governments and SERCs for implementation of following:
 - ❖ DISCOMs should make provisions to provide connections for telecom sites to TSPs/IP-Is on priority basis. The timelines for providing the connection should be fixed (preferably 15 days) and monitored through portal.
 - ❖ Given the importance of DCI for socio-economic development of States, DISCOMs should not charge the TSPs/IP-Is for installation/upgradation of transformer or for pulling the last mile of the electrical connection. If required, states should make necessary provisions for compensating DISCOMs for such waiver of charges.
 - ❖ As the power requirements for small cells remain almost flat throughout the day, DISCOMs should charge TSPs/IP-Is on the basis the running load and not on the sanctioned load.
 - ❖ All DISCOMs should treat Street Furniture Address as Commercial Address for the purpose of providing a power connection and allow multiple power connections at the same SF commercial address to different commercial entities.
 - ❖ DISCOMs should allow sub-letting of connections at street furniture locations.
 - ❖ Smart pre-paid electricity meters should be installed in all existing telecom installations on priority and in a time bound

manner. Also on all new installations, including that for small cells, DISCOMs should only install smart prepaid electric meters.

- ❖ Provision for one application for bulk processing of electric connection requests for multiple sites should be made available through portals for promoting ease of doing business.
 - ❖ Telecom sites should be provided electricity connection under Utility/Industrial tariff.
 - ❖ DISCOMs should adopt One DISCOM-One Bill-One Payment policy for all Telecom sector service/infra providers users that use electricity connections at multiple locations.
 - ❖ Open Access policy for using solar/renewable energy sources needs to be modified to incorporate provision to aggregate demand from all sites of a TSP/IP-I that are served by a DISCOM.
 - ❖ DISCOMs should share their maintenance schedules with TSPs/IPs (site owners) in advance so that site owners can be prepared in the event of power cuts. The actual duration of all power outages should also be made available area wise on their website.
- In line with PM GatiShakti initiative, to promote collaborative use of assets, DoT to take up with State that whenever land is provided on favorable terms to utility company and those utility company shares the same for utilization with other utility company, then terms of use of land should not change.

F. Institutional mechanism for enabling collaboration between Controlling Administrative Authorities and TSPs/IP1s

- The Authority has recommended for the expansion of the scope of the National Broadband Mission (NBM) committees and its constituent members to include monitoring small cell deployment on street furniture. The representation of the Broadband Steering Committee should be expanded to co-opt other Ministries or Departments like Civil Aviation, Defense, Ports, Shipping and Waterways, Power etc. as per requirement.
- In cities where street furniture is controlled by multiple agencies, the concerned State/Local government should nominate one of the asset owning agencies as lead/nodal Authority to monitor the permissions related to small cells.
- The Authority has reiterated its earlier recommendation in the context of defining clear roles for the Central, State, and Local Body authorities in

the RoW portal and that the scope of e-market place using a common GIS platform, should be expanded to include small cells as well

6. The recommendations have been placed on TRAI's website www.trai.gov.in. For any clarification/information, Shri Sanjeev Kumar Sharma, Advisor (Broadband and Policy Analysis), TRAI may be contacted at Tel. No. +91-11-23236119.



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