



Confederation of Indian Industry

**CII Submission on
TRAI Consultation Paper on “Review of
Scope of Infrastructure Providers Category-I
(IP-I) Registration”**

Confederation of Indian Industry (CII) would like to compliment TRAI for its efforts in bringing out this consultation paper on “Review of Scope of IP-1 Registration” which is one of the strategies identified under National Digital Communications Policy (NDCP) 2018 for “Establishing a ‘National Broadband Mission – Rashtriya Broadband Abhiyan’”. NDCP envisages enhancement in the scope of Infrastructure Providers in clause 1.1(f) reproduced below:

“Encourage and facilitate sharing of active infrastructure by enhancing the scope of Infrastructure Providers (IP) and promoting and incentivizing deployment of common sharable, passive as well as active, infrastructure.”

Also, CII sincerely appreciates efforts of the TRAI for uninterrupted and continued growth of telecom sector and introduction of modern telecom services, towards building the national economy. The success of many Government programs and initiatives aimed at achieving inclusive growth through use of ICT in Education, Health, MSME, Banking & Finance, E-Governance, etc. heavily depends upon the growth and larger penetration of Telecom Infrastructure in nook & corner of the Country.

Further, towards this objective, the policy guidelines and regulations should encourage communications infrastructure sharing and discourage duplication of expensive infrastructure by multiple players in all areas. Also, it is important that concrete steps be taken to support infrastructure sector by facilitating/encouraging investment. This is necessary to expand the present telecom infrastructure in the country which will aid the telecom sector in the implementation of such Government programs such as Digital India, Smart Cities and futuristic technologies, IoT, M2M, Artificial Intelligence, cloud computing and others.

According to International Telecommunications Union (ITU), *“the single biggest reason for Infrastructure sharing is to lower the cost of deploying ICT broadband network to achieve widespread and affordable access to broadband services”*

In India, Telecom Infrastructure sector is represented by IP-1s who are permitted to provide only the passive infrastructure limited to Towers, Dark Fibre, Duct Space and Right of Way for sharing between the licensees under s(4) of Indian Telegraph Act.

CII feels that to achieve actual benefits of infrastructure sharing, active infrastructure sharing which at present is permitted only among TSPs should be allowed through IP-1s, wherein the active infrastructure thus created/established would also be owned by the IP-1 for sharing among only the service providers licensed/under Section 4 of the Indian Telegraph Act.

Further, given the need for huge investments and continued affordability of service, we feel that the enhanced form of infrastructure sharing i.e. Active Infrastructure Sharing through IP-1 is very desirable as it will allow investments to flow into the sector. The cost-saving potential of Active infrastructure/network sharing is also much higher than passive infrastructure sharing.

Response to Specific Questions:

Q1. Should the scope of Infrastructure Providers Category–I (IP-I) registration be enhanced to include provisioning of common sharable active infrastructure also?

CII View: Yes, the Scope of IP-1 should be enhanced immediately, without any delay as the same is already envisaged by the Government and provisioned under the NDCP-2018 released in Oct'2018. TRAI too, in its recommendations dated 2nd February 2018 regarding “Input for formulation of NTP-2018”, has recommended to the Government for enhancement of IP-1 scope.

Active sharing will be in interest of the telecom sector which is likely to bring in more investment in the sector required to achieve various national missions such as Digital India, Smart Cities etc. Infrastructure Sharing has following advantages:

- i. Capex and Opex saving
- ii. Faster time to roll-out services
- iii. Cost & Energy efficiencies
- iv. Increased Connectivity
- v. Reduces entry barriers and increase competition

Q2. In case the answer to the preceding question is in the affirmative, then

- i) What should be common sharable active infrastructure elements which can be permitted to be owned, established, and maintained by IP-I for provisioning on rent/lease/sale basis to service providers licensed/ permitted/ registered with DoT/ MIB? Please provide details of common sharable active infrastructure elements as well as the category of telecommunication service providers with whom such active infrastructure elements can be shared by IP-I, with justification.**

CII View: CII recommends that the same active elements that are presently permitted to be shared by TSPs should be allowed to be provided by the IP-Is. These elements include:

- i. Antenna
- ii. Feeder cable
- iii. Node B/Base Station
- iv. Radio Access Network (RAN)
- v. Transmission system

Such common sharable active infrastructure as mentioned above should be permitted to IP-1 for provisioning on rent/lease/sale basis to service providers licensed under the Indian Telegraph Act, subject to an agreement with such licensed service providers. However, it needs to be ensured that the access to such infrastructure is provided on non-discriminatory, fair, reasonable and transparent manner on B2B basis and in no case, is any service provided by the IP-1s.

ii) Should IP-1 be allowed to provide end-to-end bandwidth through leased lines to service providers licensed/ permitted/ registered with DoT/ MIB also? If yes, please provide details of category of service providers to it may be permitted with justification.

CII View: IP-1 should not be allowed to provide end-to-end bandwidth through leased lines as that has been deemed to be a licensed activity and is currently permissible to license holders.

iii) Whether the existing registration conditions applicable for IP-1 are appropriate for enhanced scope or some change is required? If change is suggested, then please provide details with reasoning and justification.

CII View: To ensure a light touch regulation on telecom infrastructure sector and encourage and incentivize further investment, CII feels that for the above scope enhancement, there is no need of any change in existing registration conditions of the IP-1.

Further, it is very clear that IP-1 are not permitted to acquire/provide services to the end customer/subscriber directly.

iv) Should IP-1 be made eligible to obtain Wireless Telegraphy Licenses from Wireless Planning and Coordination (WPC) wing of the DoT for possessing and importing wireless equipment? What methodology should be adopted for this purpose?

CII View: CII recommends that IP-1 should be made eligible to obtain Wireless Telegraphy Licenses from WPC wing for possessing and importing wireless equipment, subject to an agreement with the telecom licensee and within the present prevailing conditions applicable to other service providers.

v) Should Microwave Backbone (MWB) spectrum allocation be permitted to IP-1 for establishing point to point backbone connectivity using wireless transmission systems?

CII View: CII recommends that Microwave Backbone (MWB) spectrum allocation should not be permitted to IP-1 for establishing point-to-point connectivity using wireless transmission systems. The MWB can be allocated only to holders of access spectrum, this is also evident from the fact that the terms & Conditions for allocation of MWB are based on charging on an AGR basis.

Q3. In case the answer to the preceding question in part (1) is in the negative, then suggest alternative means to facilitate faster rollout of active infrastructure elements at competitive prices.

We believe that incentivizing and encouraging fibre rollout is desirable as this will also facilitate the Government mission & NDCP objectives.

Q4. Any other issue relevant to this subject.

Given the need for huge investments as envisaged under NDCP-2018 and for 5G deployments, it is desirable that the scope of IP-1 be enhanced to offer passive and active infrastructure on fair, reasonable, non-discriminatory terms to the service providers as suggested above.

As already brought out by TRAI in its consultation paper, infrastructure sharing including the active network elements allows numerous benefits to the industry especially the service providers such as:

1. Facilitate upgradation to 5G

Upgradation of existing mobile networks to 5G will require huge investments especially for deployment of large number of small cells, which will result in massive increase in the number of Base Transceivers Stations as compared with existing networks. Allowing active infrastructure sharing to IP-1 will ease the deployment process and also make it more cost effective

2. Reduced Cost of 5G Rollout

5G networks are expected to incur a higher cost of deployment to meet throughput requirement and demand. Radio access networks already comprise the largest portion of the cost in network deployment and operation. 5G is likely to be offered on higher frequency radio spectrum above 6GHz. This means that cell offers smaller radius of coverage and so achieving widespread coverage may be challenging.

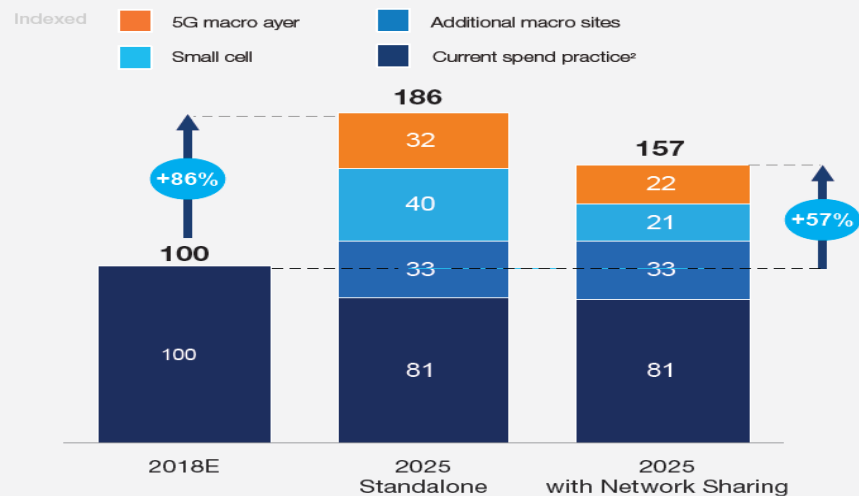
According to GSMA Network Economics model, number of sites in 5G will increase by 50%. Therefore, operators should consider both sharing of passive infrastructure (e.g., physical site and power systems) and sharing of active infrastructure (e.g., antenna and transceivers) to cost-effectively achieve the performance of sites and 5G capability.

A Mckinsey study has estimated the cost reduction of upto 40%. The major cost reduction is observed in rollout of small cells. The following graph depicts the saving break up for rolling out 5G network.

Exhibit 2 Network sharing can reduce 5G cost by more than 40 percent.

35% Annual traffic growth assumed

Access network TCO¹ evolution



Network sharing is a lever that can reduce ~40% the cost of 5G related access network domains (small cells and 5G macro layer)

¹ Total cost of ownership includes both operational and capital expenditure.

² Total cost of ownership of current network footprint, including capacity LTE & LTE-Pro upgrades.

Source: McKinsey analysis

3. Accelerate Smart Cities

The Government has launched Smart city mission in 100 cities. The purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart outcomes. The active infrastructure sharing can enhance the pace of infrastructure development in smart cities by enabling investments by IP-1, which can then be used on a shared basis by the TSPs.

In view of the above, CII feels that there is immediate need to permit active infrastructure sharing through a neutral host like IP-1.