19th November, 2024

Shri Akhilesh Kumar Trivedi,
Advisor (Networks, Spectrum and Licensing),
Telecom Regulatory Authority of India (TRAI),
New Delhi.

Subject: BIF's Comments on the TRAI Consultation Paper on The Terms and Conditions of Network Authorisations to be Granted Under the Telecommunications Act, 2023 dated 22 October 2024

Dear Sir,

With reference to the subject mentioned, please find enclosed BIF's comments on the above-mentioned Consultation Paper.

We earnestly request your kind consideration in this regard.

Best Regards,

T.V. Ramachandran,
President,
Broadband India Forum.

BIF's Comments on The Terms and Conditions of Network Authorisations to be Granted Under the Telecommunications Act, 2023

We thank the Authority for giving an opportunity to offer comments on the important consultation paper on Terms & Conditions of Network Authorisations to be granted under the Telecommunications Act 2023. Our submissions are detailed as under.

Preliminary Issues relevant to all the Questions in the Consultation Paper:

We would like to draw the Authority's attention to the following:

- Sections 2(d) and 3(1) of The Telecommunications Act, 2023 can be read to mean that authorisation for telecommunication services are separate from authorisation for telecommunication networks. Both telecommunication services and telecommunication networks have been defined under the Act. Section 2(t) of the Act defines 'Telecommunication Service' as any service for telecommunication. This definition does not mention about requirement of own telecommunication network. Further, VNOs have been recommended to be authorised under Section 3(1)(a) in TRAI's Recommendations dated 18.09.2024, where they can only provide services. Thus, a comprehensive scenario mapping of all the authorisations, service or networks, as envisaged under the Act should be provided, given the implications for both new entrants and existing license/registration holders who will migrate at some point of time to authorisation regime under The Telecommunications Act, 2023.

- In this regard, we refer to Clause 2.9 and 2.10 of the Consultation Paper, which states as follows:

  "2.9 In general, an entity establishes a telecommunication network for the following purposes:

  (a) *To provide telecommunication services to end consumers by using the telecommunication network; or*

  (b) *To provide the telecommunication network to other eligible entities so that such entities can provide telecommunication services to end consumers.*

  2.10 If an entity intends to provide telecommunication services to end consumers by using its telecommunication network, it will require a service authorisation under Section 3(1)(a) of the Telecommunications Act, 2023. A corollary to this statement is that under the authorisation to establish, operate, maintain, or expand telecommunication network, obtained under Section 3(1)(b) of the telecommunications Act 2023, an entity cannot provide telecommunication services to end consumers; it can only provide the telecommunication-network- as-a-service

to eligible entities, which are authorised under Section 3(1) of the Telecommunications Act, 2023."

- Accordingly, we respectfully submit the following questions on the key issues regarding the terms and conditions for network authorisations under Section 3(1)(b). A clarity on the same will ensure that the regulatory approach aligns with the statutory framework of the Act, providing certainty and promoting a robust, competitive telecommunications market:

1. Does the Act intend to keep Service and Network Authorisations distinct from each other?

Given the distinct definitions provided for "telecommunication services" and "telecommunication networks" in Section 2(d) of the Telecommunications Act, 2023, and the requirement for separate authorisations under Sections 3(1)(a) and 3(1)(b), does the Act intend to permit service and network authorisations to operate independently?

2. Does the Act require both authorisations for an entity intending to provide telecommunication services to end consumers by using its telecommunication network?

If an entity intends to operate a telecommunication network and also provide telecommunication services to end consumers, does the Telecommunications Act, 2023, require that the entity obtain both a service authorisation (under Section 3(1)(a)) and a network authorisation (under Section 3(1)(b))?

If the above is the case, which will be the relevant provisions under the Telecommunications Act, 2023 that indicate a single authorisation for an entity providing telecom service as well as operating telecom network?

3. Does the amendment to TRAI Act, under Section 59 of The Telecommunications Act, 2023, limit TRAI's recommendatory role to telecommunication services and corresponding service authorisations only?

Whether the amendments under Section 59 of the Telecommunications Act, 2023, which amend the definitions of "licensee" and "licensor" in the TRAI Act, now mentioning "telecommunication services", limit TRAI's role regarding recommendations to service authorisations under Section 3(1)(a)?

If so, what implications does this have for the TRAI's recommendations dated 18.09.2024, which dealt with service authorisation under Section 3(1)(a) of the Telecommunications Act, 2023 to the extent it covers telecommunication network?

Clarity on the above will enable certainty to the approach, aligning with the framework given in the Telecommunication Act, 2023, with respect to the present Consultation Paper.

Response to Questions:

Q1. Whether there is a need to merge the scopes of the extant Infrastructure Provider-I (IP-I) and Digital Connectivity Infrastructure Provider (DCIP) authorisation (as recommended by TRAI in August 2023), into a single authorisation under Section 3(1)(b) of the Telecommunications Act, 2023? Kindly provide a detailed response with justifications.

Q2. In case your response to the Q1 is in the affirmative, kindly provide a detailed response with justifications on –

(a)Eligibility conditions for the grant of the merged authorisation; and

(b)Area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the merged authorisation.

Q3. In case your response to the Q1 is in the negative, -

(a)What changes (additions, deletions or modifications) are required to be incorporated in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the IP-I authorisation under Section 3(1)(b) of the Telecommunications Act, 2023 as compared to the extant IP-I registration?

(b)Whether there is a need to make certain changes in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the DCIP authorisation (as recommended by TRAI in August 2023)? If yes, kindly provide a detailed response with justifications.

BIF's Response to Q1-3:

IP-1 registration holders are important and critical in establishing Telecommunication Networks

IP-1 registration holders provide assets such as Dark Fibers, Right of Way, Duct space and Towers on lease/rent-out/sale basis to the licensees of telecom services on mutually agreed terms and conditions. The IP-1 registration holders cannot provide active infrastructure.

Majority of the IP-1s possess the necessary skills for passive infrastructure but not for active infrastructure. The active infrastructure, which is included in DCIP, is very

different and will require different skill sets. IP-1s do not need to be regulated by a larger authorisation. Introducing a requirement for IP-1 holders to handle active infrastructure under a merged authorisation would necessitate a significant shift in their operational focus and capabilities, potentially leading to inefficiencies and service disruptions. IP-1s have created the world's largest passive infrastructure on a neutral host basis and guided infrastructure-sharing concepts globally. The IP-1 industry has supported cost-sharing among the TSPs, resulting in the world's lowest telecom tariffs.

As on date there are more than 1000 IP-1s in India, having different scales, set-ups and specializations, with most of them having local and regional presence. IP-1 specialize in managing power and real estate which requires a unique skill set. Power is a considerable Opex for Telecom Service Providers (TSPs) and requires not only efficiency but also the highest level of focus towards ESG (Environment, Social & Governance), in order to create sustainable telecom infrastructure.

Thus, IP-1s have important role in Telecommunication Networks in India and the framework should allow that to continue as it is under the Telecommunications Act, 2023.

A specific light touch authorisation under Section 3(1)(b) of the Telecommunication Act 2023 for IP-1 will be required for new entrants and for migration of existing IP-1s, as per the provisions of The Telecommunications Act, 2023. The scope and terms and conditions of such authorisation should be same as that for the IP-1 registration at present.

The scope of IP-1 under the present registration may be enhanced to include additional passive elements of a telecommunication network like RF Feeder cables, passive combiners, couplers, duplexers, triplexers, quadplexers, connectors to cover the scope of a passive IBS Solution. This will be beneficial for the growth of digital connectivity inside buildings and also in line with the mandatory requirement of telecom infrastructure being discussed under Chapter 8 of the forthcoming National Building Code-2025.

Entities like DCIPs are essential and are to be authorised under Section 3(1)(b) of The Telecommunications Act, 2023

As of now no entity has been permitted to work both in nfrastructure and network layer, even though TRAI had recommended DCIPs and even DoT had suggested the same under the name of 'Telecom Infrastructure License'. Thus, the need for DCIP has been acknowledged by both TRAI and DoT and such entities are required for overall growth of the sector.

As envisaged and recommended by TRAI vide its Recommendations dated 08.08.2023, DCIP will include the permission to own, establish, maintain, and work all such

apparatus, appliance, instrument, equipment, and system which are required for establishing all Wireline Access Network, Radio Access Network (RAN), Wi-Fi systems, and Transmission Links. However, it does not include spectrum and core network elements such as Switch, MSC, HLR, IN etc. The scope of the DCIP will also include Right of Way, Duct Space, Dark Fiber, Poles, Tower, Feeder cable, Antenna, Base Station, In-Building Solution (IBS), Distributed Antenna System (DAS), etc. within any part of India. DCIP will be permitted to install wired transmission link (but not wireless) to connect to its own BBU (Baseband Unit)/RU (Radio unit)/Antenna.

Section 3(1)(b) read with Section 2(d) of The Telecommunications Act, 2023 provides that any person intending to establish, operate, maintain or expand telecommunication network shall obtain an authorisation from the Central Government, subject to such terms and conditions, including fees or charges, as may be prescribed.

Thus, there is a clear provision for such entities in The Telecommunications Act, 2023 and they can be permitted under Section 3(1)(b) thereof. In fact, given the importance of creation of active and passive infrastructure, there is a need for having entities that can be in business of providing both active and passive infrastructure. For the above mentioned reasons, any person intending to establish or maintain such telecommunication network should be authorised and the same is to be done in Section 3(1)(b) of The Telecommunications Act, 2023.

The need for such entities is there in the wake of poor 'In-building Digital Infrastructure' and already steps have been initiated by DoT, TRAI and MOHUA to address the same.

DCIP should be allowed to install wired or wireless transmission link to connect to its own or TSP's BBU (Baseband Unit)/RU (Radio unit)/Antenna, as long as the wireless transmission links are under unlicensed bands and do not require allocation of any specific spectrum.

Further, to harness the true potential of digital telecom infrastructure and the economic benefits it brings, such entities should share relevant infrastructure with non-telecommunication entities like Data Centers for captive private use. This would enable data centres to efficiently manage their services, as configured and optimised to meet customer requirements. A detailed note on the same is provided in Annexure 1 to these comments.

IP-1 is distinct from DCIP with regard to the Scope of Service

It is submitted that IP-1 and DCIP have different scope of services, as mentioned above.

Both the authorisations i.e. IP-1 and DCIP should also be kept separate to maintain focus and flexibility, ensuring that the regulatory framework corresponds to the specific activities and services being provided.

It is important that the authorisation framework provides flexibility in terms of choices to provide different sets of network elements i.e. passive and active. The framework should correspond to the activities at the ground level and the required segmentation should be maintained.

Alternate - Unified Infrastructure Authorisation (Light Touch with option to provide active)

Alternatively, there can be a new Unified Infrastructure authorisation with separate individual authorisation for passive (IP-1) and separate one for active. If the IP1 chooses to operate purely in the passive domain (as he does not have the specialized skills for doing the active part), he can take this new Unified Infrastructure authorisation with Passive Infra Authorisation and continue as before. This would be subject to no new and additional onerous obligations being thrust upon it. The Unified Infrastructure authorisation for infrastructure providers should be light touch and they should be allowed to sell to end users (non-authorised entities like data centres, CSPs) and/or authorised entities. This will ensure options are increased, more choices for end users and reduces middle men margins. This will also motivate more investment in IT infrastructure by private players, utility players as they can monetize the assets directly. We propose that the infra players are the foundational layer for the digital connectivity so light regulations should be implemented to encourage infrastructure investments.

Our response to Question No. 3 is as follows:

The following terms & conditions (general, technical, operational, security etc.) for the respective authorisation may be considered:

i) There should be enabling provisions in the Rules or suitable terms and conditions regarding non-exclusivity with respect to contracts with property managers.

ii) To harness the true potential of digital telecom infrastructure and the economic benefits it brings, infrastructure provider companies should be generally permitted to share their passive infrastructure with authorised entities under Section 3(1)(b) of the Telecommunications Act.

iii) To harness the true potential of digital telecom infrastructure and the economic benefits it brings, infrastructure provider companies should be generally permitted to share relevant infrastructure (‘dark fiber’) with non-telecommunication entities like Data Centers. Current Indian law does not allow unlicensed entities to access

passive infrastructure such as dark fiber from IP-I companies for any purpose. This means that entities like Content Service Providers (CSPs) and Data Centres are unable to buy or lease dark fiber in order to construct, operate, and efficiently manage their own content and/or server systems (configured to their own specialist requirements and optimized for customers). Instead, CSPs are forced to procure generic network connectivity services from local TSPs. This is problematic because traditional networks operated by TSPs are principally designed for voice or public data services, such as IP services. This generic network connectivity is not suitable for cloud services, which require very high availability, bandwidth and low latency for extremely high amounts of data; and achieving these outcomes using TSP services is especially difficult given India's vast geography and relatively limited existing technology infrastructure and broadband deployment. The services provided by TSPs are also substantially more expensive than buying or leasing dark fiber from IP-I companies, and also significantly more expensive than similar services available in other countries. As a result, cloud services in India are generally slower, less reliable and more expensive than corresponding services in other countries. This discourages investment in technology and cloud businesses in India, and hinders growth of the technology industry. A detailed note on the same is provided in **Annexure 1** to these comments.

Q4.(a) Which telecommunication equipment/ elements should be included in the ambit of 'in-building solution'(IBS)?

(b) Whether there is a need to introduce a new authorisation under Section 3(1)(b) of the Telecommunications Act, 2023 for establishing, operating, maintaining or expanding in-building solution (IBS) by any property manager within the limits of a single building, compound or estate controlled, owned, or managed by it? If yes, what should be the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of such an authorisation? Please provide a detailed response with justifications.

BIF's Response to Q4 (a):

IBS (In-building solution) refers to a wireless system to provide coverage and capacity inside buildings. IBS makes it easier for people to connect and communicate even when they are indoors. It consists of repeaters, splitters, and small antennas in a distributed antenna systems (DAS) which are connected to sharing mobile operators' radio network.

The following telecommunication equipment/elements should be included in the ambit of 'in-building solution'(IBS):

i. RF Feeder Cables

ii. Fiber Cables
iii. Antennas
iv. RF Couplers
v. RF Splitters
vi. RF Combiners
vii. RF Repeaters
viii. RF Loads
ix. Points of Interconnect (POI)
x. Master Optical Units (MOU)
xi. Remote Optical Units (ROU)
xii. Shared Base Band Units (BBU)
xiii. Shared Remote Radio Heads (RRH)
xiv. Fiber Distribution Units
xv. Optical Networking Units (ONU)
xvi. Optical Line Terminals (OLT)
xvii. Fiber Access Terminals (FAT boxes)
xviii. Shared gNodeB for 5G
xix. Any other related accessories for setting up an in-building solution (IBS)

BIF's Response to Q4 (b):

There is no need to introduce new authorisation under Section 3(1)(b) of the Telecommunication Act, 2023 for establishing, operating, maintaining or expanding in-building solution (IBS) by any property manager within the limits of a single building, compound (campus) or estate controlled, owned, or managed by it. Considering that the building by-laws together with the provisions in the Rules under Telecommunications Act, 2023 will have provisions in this regard. DCI, including IBS, will be deployed at the stage of development of the property itself.

For the wireline telecommunication network, including Wi-Fi, inside the building there must be specific provisions in the respective Rules that property manager may establish, operate, maintain, or expand telecommunication network (not being a wireless telecommunication network) within the limits of a single building, compound or estate, provided that no part of such telecommunication network should pass over or under a public road. The same will be in line with Section 472 of the Indian Telegraph Rules, 1951 which had provided as under:

> *"Any person may without a licence establish, maintain and work a telegraph (not being a wireless telegraph) within the limits of a single building, compound or estate: Provided that no telegraph line pertaining to the telegraph shall pass over or under a public road."*

DCIPs will be and TSPs are authorised to deploy both wireless and wireline telecommunication network as per the prescribed framework. The Property Manager acts as a neutral host of the infrastructure.

With this framework, the authorisation under Telecommunications Act, 2023 for the Property Manager for IBS is not required.

The Model Building Bye Laws 2016 (Amended in 2023) are now aimed to address the DCI installation in the buildings, with the Property Manager duty bound to provide for the same in a neutral and non-exclusive manner and then and only then, the completion certificate is to be given.

Hence, any provision, requiring the Property Manager to be mandated to take a separate authorisation under the Telecommunications Act, 2023, shall be in conflict with the provisions of MBBL 2016, which already mandates DCI in buildings to meet the objective of increasing coverage inside the buildings.

Q5. Whether there is a need to make any changes in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the Content Delivery Network (CDN) authorisation, as recommended by TRAI on 18.11.2022? If yes, what changes should be made in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the CDN authorisation? Kindly provide a detailed response with justification.

BIF's Response to Q5:

It is submitted that a Content Delivery Network is not a telecommunication network.

Clause 2(s) of The Telecommunications Act 2023 defines Telecommunication Network as follows:

‟"telecommunication network" means a system or series of systems of telecommunication equipment or infrastructure, including terrestrial or satellite networks or submarine networks, or a combination of such networks, used or intended to be used for providing telecommunication services, but does not include such telecommunication equipment as notified by the Central Government.”

A CDN system cannot be used to provide telecommunication services. CDN is also not an Internet Service Provider. CDNs cache and deliver content rather than establishing end-to-end communication, therefore, they are different from telecommunication services. CDNs require appliances for computing and storage; and connectivity – depending on whether they build their own connectivity or not, CDNs are either a

customer of telecommunications providers (for internet access) or a private network interconnecting with telecommunications providers (through transit and peering). The content is replicated and stored throughout the CDN so that the data is stored at a location that is geographically closest to the user. CDNs are not involved in the delivery or provision of the bandwidth. CDNs improve the efficiency of content delivery by deploying advanced content compression technologies and caching content, and they do not provide direct connectivity to the internet for end-users. The quality of service of telecommunication services and net neutrality obligations are applicable only on authorised entities, i.e., those providing telecommunication services or establishing/operating/maintaining/expanding telecommunication network.

Therefore, a CDN system is not telecommunication network and hence, not covered under the ambit of the Telecommunications Act 2023. CDNs do not come under definition of 'service providers' under the TRAI Act either.

In the Recommendations on Regulatory Framework for Promoting Data Economy Through Establishment of Data Centres, Content Delivery Networks, and Interconnect Exchanges in India dated 18.11.2022, TRAI recommended that "there should not be any licensing framework for the CDN players." However, TRAI had recommended that CDN players should be registered with the DoT. The rationale given by TRAI was not within the ambit of the Indian Telegraph Act, 1885. In para 2.24 of the said Recommendations (dated 18.11.2022), it was mentioned as follows:

"2.24 As per allocation of business rules, 'data' is allocated to Department of Telecommunication (DoT). However, policies related to DCs are being handled by MeitY. The Authority is of the opinion that Data Centres, Content Delivery Networks, and Internet Exchange Points (IXPs) are integral components of "digital communication infrastructure and services". The policy aspects of these should be handled by Digital Communication Commission (DCC)."

The above rationale based on an interpretation of "policy", is not correct, and also not within the ambit of Indian Telegraph Act, 1885. Hence, it is submitted that the legal framework prescribed by the Telecommunications Act 2023 is very specific and clear as the subject matter of the same is telecommunication services and telecommunication networks. The Central Government under this Act, does not have power to authorise entities like CDNs, which are neither telecommunication networks nor telecommunication services under the Act. The above-mentioned rationale in TRAI's Recommendations dated 18.11.2022 which was made before the notification of the Telecommunications Act 2023 is not applicable in the current context and since CDNs do not fall under the purview of either Section 3(1)(a) nor Section 3(1)(b) of the Act, hence the answer to the Question stands clarified as follows:
(a)TRAI recommendations dated 18.11.2022 was made before the Telecommunications Act 2023 and hence are no longer valid;

(b)CDNs neither come under Section 3(1)(a) nor under Section3(1)(b) of the Act and hence need to be excluded from the purview of the Act.

For the same reason, the respective reference by DoT dated 26.07.24 which mentions that "Some of the recommendations of TRAI, which are under consideration presently, like recommendations on 'DCIP', 'IXP', 'CDN', 'SESG', 'IBS (In- Building Solutions)' etc., which primarily relate to establishing telecommunication networks, and these authorised entities would provide telecommunication networks as a service to authorised entities under section 3(1)(a) only" is incorrect, being against the provisions of The Telecommunications Act, 2023. It wrongly presumes that CDN is a telecommunication network which it is not, as explained above.

Any reliance on the Recommendations made prior to The Telecommunications Act, 2023 in the present Consultation Paper or in any recommendations/reference/decision issued after coming into effect of the Telecommunications Act, 2023 has to pass the test whether such a reliance is within the legal framework of the Telecommunications Act 2023 / amended TRAI Act or not.

It is reiterated that Content Delivery Networks (CDNs) were never within the ambit of the now-repealed Indian Telegraph Act, 1885. Under Section 4 of the Indian Telegraph Act, the Central Government held the exclusive privilege of establishing, maintaining, and operating telegraphs, with the option to grant licenses to other parties to do so, under specified conditions and payments. CDNs, however, neither establish, maintain, nor operate telegraphs.

Secondly, under Section 4 of the Indian Telegraph Act, the Central Government's exclusive privilege over telegraphs would imply that if CDNs were covered by the Act, the government alone could establish CDNs, unless it granted licenses, —an interpretation that would be unreasonable and absurd. Subjecting CDNs to authorisation/registration requirements of any sort, sets a problematic and unreasonable precedent, potentially implying similar regulations for other services like email providers or web hosting services.

Thirdly, given that CDNs have operated in India for decades without such licenses or authorisations, it is evident that the Central Government also does not consider them covered under these Acts.

Therefore, the Recommendations dated 18.11.2022 concerning CDN registration or licensing are invalid.

It is unfortunate that the issues of CDN licensing and authorisations are being debated for years, causing confusion, when the legal framework under the Telecommunication Act, 2023, and the repealed Indian Telegraph Act, 1885, clearly do not encompass CDNs or similarly placed entities.

Further, it is submitted that subjecting CDNs to authorisation/registration requirements of any sort, sets a problematic precedent, potentially leading to similar regulations for other internet services like email providers, web hosting services, and DNS providers. The internet's rapid growth and innovation have been driven by its largely unregulated nature, which should be preserved to maintain its strength. CDNs contribute to the development of the internet by improving performance, enhancing the ability to handle traffic loads and reduced bandwidth, load balancing and security.

This situation also underscores the importance of acknowledging the legal certainty provided by the definitions of telecommunication services, telecommunication networks, and telegraphs. Ignoring these provisions will perpetuate endless debates, which could be detrimental to India's economic goals, as they may deter serious investments in cloud, data centers, CDNs, IXPs, and other related sectors.

Q6. Whether there is a need to make any changes in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the Internet Exchange Point (IXP) authorisation, as recommended by TRAI on 18.11.2022? If yes, what changes should be made in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the IXP authorisation? Kindly provide a detailed response with justification.

BIF's Response to Q6:

It is submitted that an Internet Exchange Point (IXP) is not a telecommunication network. They do not transmit, emit, or independently receive data; rather, they facilitate inter-change of traffic without participating in the transmission of telecommunication services, in this regard, they act like managed service providers.

In the Recommendations on "Regulatory Framework for Promoting Data Economy Through Establishment of Data Centres, Content Delivery Networks, and Interconnect Exchanges in India" dated 18.11.2022, the rationale given by TRAI was not within the ambit of the Indian Telegraph Act, 1885. In para 2.24 of the said Recommendations (dated 18.11.2022), it was mentioned as follows:

> *"2.24 As per allocation of business rules, 'data' is allocated to Department of Telecommunication (DoT). However, policies related to DCs are being handled by MeitY. The Authority is of the opinion that Data Centres, Content Delivery Networks, and Internet Exchange Points (IXPs) are integral components of "digital communication infrastructure and services". The policy aspects of these should be handled by Digital Communication Commission (DCC)."*

The above rationale based on an interpretation of "policy" is not correct, and also not within the ambit of Indian Telegraph Act, 1885. Hence, it is submitted that the legal framework prescribed by the Telecommunications Act 2023 is very specific and clear as the subject matter of the same is telecommunication services and telecommunication networks. The above-mentioned rationale in TRAI's recommendations dated 18.11.2022, in our view, is not correct and is ultra vires the provisions of the Telecommunications Act 2023. IXPs do not come under the ambit of 'service providers' under the TRAI Act 1997.

For the same reason the **respective reference by DoT dated 26.07.24 which mentions that** *"Some of the recommendations of TRAI, which are under consideration presently, like recommendations on 'DCIP', 'IXP', 'CDN', 'SESG', 'IBS (In- Building Solutions) 'etc., which primarily relate to establishing telecommunication networks, and these authorised entities would provide telecommunication networks as a service to authorised entities under section 3(1)(a) only"* **is incorrect. It wrongly presumes that IXP is a telecommunication network.**

Any reliance on the recommendations made prior to the Telecommunications Act, 2023 in the present Consultation Paper or in any recommendations/reference/decision issued after coming into effect of the Telecommunications Act, 2023 has to pass the test that whether such a reliance is within the legal framework of the Telecommunications Act 2023 / amended TRAI Act or not.

Thus, the presumption in Question No. 6 in this Consultation Paper, that IXPs require authorisation is not correct. The recommendations dated 18.11.2022 with respect to IXPs, therefore, are not valid.

Given that IXPs have operated in India for decades without such licenses or authorisations, it is evident that the Central Government also does not consider them covered under these Acts. The National Internet Exchange of India (NIXI) was established in 2003, and there was no license requirement sought for its operation.

Therefore, the recommendations dated 18.11.2022 concerning IXP registration or licensing are not valid.

It is unfortunate that the issues of IXP licensing and authorisations are being debated for years, causing confusion. This situation underscores the importance of acknowledging the legal uncertainty. This perpetuates debates, which could be detrimental to India's economic goals, as they may deter serious investments in cloud, data centers, IXPs, and other related sectors.

The proposal (Recommendations dated 18.11.2022) to impose a license on Internet Exchange Points (IXPs) may inadvertently hinder their growth and operational efficiency in India.

Q7. Whether there is a need to make any changes in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the Satellite Earth Station Gateway (SESG) authorisation, as recommended by TRAI on 29.11.2022? If yes, what changes should be made in the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the SESG authorisation? Kindly provide a detailed response with justification.

BIF's Response to Q7:

SESG will come under the definition of Telecommunication Networks under The Telecommunications Act, 2023. There is no need to make any changes in the eligibility conditions, area of operation, validity period of authorisation and scope of the Satellite Earth Station Gateway (SESG) authorisation, as recommended by TRAI on 29.11.2022. As recommended by TRAI, we would like to reiterate the following:

- SESG authorisation holder should not be assigned spectrum. Instead, the SESG authorisation holder should utilize the spectrum (for configuration and provisioning purposes) assigned to the Service Licensee who has an agreement with the satellite operator/their Indian entity for providing satellite-based services.
- SESG authorisation holders should be permitted to own and operate SESG by entering into an arrangement with the satellite operator/their Indian entity (who either owns a Service License or SESG License).

The following amendments /modifications must be made in the terms and conditions:

- **SESG authorisation holder should be allowed to deploy baseband for the NGSO operator/their Indian entity (who has been assigned frequencies),** particularly since baseband is an integral component of the earth station infrastructure, and an enabling framework for the same would be welcoming.
- The Service Licensee should be permitted to apply for the necessary spectrum assignment from the DoT, consistent with the regime which is in place today. **The Service Licensee should also be permitted to enable the SESG authorisation holder to utilize the spectrum in order to operate the SESG.** This would be consistent with the operational set-up envisaged by the TRAI for Digital Connectivity Infrastructure Providers (DCIP), wherein the TRAI has recommended that while DCIPs may build, operate and maintain the equipment, but should not be permitted to own the spectrum.

- SESGs be permitted to connect to the PoPs of the TSPs through a fibre/leased line, without having to acquire any separate license/ authorisation.

This framework would provide Service Licensees with greater flexibility to serve customers (B2B or B2C).

Q8. Whether there is a need to introduce a new authorisation for establishing, operating, maintaining or expanding satellite communication network, which may be used to provide network as a service to the entities authorised under Section 3(1)(a) of the Telecommunications Act, 2023? If yes-
(a) What should be the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of such authorisation?
(b) Whether an entity holding such authorisation should be made eligible for the assignment of spectrum for both feeder link as well as user link? Kindly provide a detailed response with justification.

BIF's Response to Q8:

There is a need to introduce a new authorisation for establishing, operating, maintaining or expanding satellite communication network. Decoupling Satcom network from the service will enable creation of a new breed of Satcom infrastructure providers who can act as Netcos, thereby leaving the service provisioning (including Spectrum assignment/allocation) exclusively to the service providers who in any case are authorised under the Satcom Service Authorisation as recommended by TRAI's "Recommendations on the Framework for Service Authorisations to be Granted Under the Telecommunications Act, 2023" dated 18.9.2024.

The Netcos or Infrastructure Providers maybe permitted under a light authorisation regime or a simple registration/notification regime with zero entry barrier and no security compliance obligations. The reason we mention this is because these networks don't directly provide services to the end consumers. They are built to provide networks which could be optimally utilized by TSPs/ISPs to provide multi-play services to the end consumers.

Q9. Whether there is a need to introduce an authorisation under Section 3(1) of the Telecommunications Act, 2023 for establishing, operating, maintaining or expanding ground stations, which may be used to provide ground station as a service (GSaaS)? If yes, what should be the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) for the authorisation to establish, operate, maintain, or expand ground stations, which may be used to provide GSaaS? Kindly provide a detailed response with justifications.

BIF's Response to Q9:

Some companies provide Ground Station as a managed service that lets customers control satellite communications, downlink and process satellite data, scale their satellite operations quickly, easily, and cost-effectively, without having to worry about building or managing their own ground station infrastructure. It is pertinent to note that these services do not operate as a traditional telecommunication service. GSaaS enables private one-way transfer of data (space to ground or ground to space), does not have a hub station, and does not enable ground to space to ground communication. Hence, GSaaS is not similar to a satellite communication service like a VSAT or GMPCS service, wherein the equipment used (for example, a hub station) and the purpose for which it is typically used are entirely different from the GSaaS service offering as well as the use cases for which it is intended. In contrast, GSaaS supports services that require one-way transfer of data for non-telecom purposes such as:

a. Earth observation – weather (analysing downlinked weather data to predict patterns) or natural disaster (analysing downlinked data during natural disasters to identify survivors and assess structural damage) prediction;
b. telemetry tracking and control (TT&C) data encompassing data related to the health and status of the satellite, and the determination of the exact location of the satellite;
c. command function (uplinking commands for control of satellite), etc.

We believe that introducing a separate and additional authorisation framework for GSaaS earth stations, over and above that of IN-SPACe, will hinder the broader aim of enabling a vibrant space and satellite communications industry, with the objective of increasing private participation in the sector. We respectfully suggest that any GSaaS regulatory framework by Department of Telecom be reconsidered. GSaaS uniquely enables faster scaling of satellite-based services, as it leads to the proliferation of satellite-based services without the costs involved to set up infrastructure. GSaaS also enables the provision of cost-effective resilient, ubiquitous, and seamless connectivity for IoT devices to run efficiently. IoT operators can harness the benefits from satellite communications, such as the ability to operate across a vast geography, connect remote assets, and downlink their data onto cloud storages. For satellite operators, engaging GSaaS is much cheaper than setting up their own earth stations. This demonstrates the need for a regulatory framework for GSaaS operators that allows satellite operators to harness the value of space-led innovation, where GSaaS is seen as a unique model that brings value to satellite-led research, separate from the traditional telecom-related use cases of satellites.

Thus, introduction of a separate and additional authorisation for GSaaS earth stations should be avoided. Department of Space (DoS) and IN-SPACe should be the enabling and regulating agency for GSaaS earth stations. DoT should not create onerous compliance obligations on GSaaS operators, including setting specific contractual terms

for GSaaS operators and their customers (i.e., satellite operators) and any other third parties, or placing restrictive conditions pertaining to the relationship between the GSaaS operator and the satellite operator as they will impact accessibility of satellite services.

Q10. Whether there is a need to introduce an authorisation under Section 3(1)(b) of the Telecommunications Act, 2023 for establishing, operating, maintaining or expanding cloud-hosted telecommunication networks, which may be used to provide telecommunication network as a service to the authorised entities under Section 3(1)(a) of the Telecommunications Act, 2023? If yes, what should be the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of such an authorisation? Kindly provide a detailed response with justifications.

BIF's Response to Q10:

Cloud-hosted solutions for telecommunications networks should not be classified as "telecommunication networks" for the following reasons:

- A telecommunications network usually refers to the physical and logical infrastructure (like cables, base stations, and switches) that enables connectivity for voice, data, and other communications. The Act defines a "telecommunication network" as a system or series of systems of telecommunication equipment or infrastructure used or intended to be used for providing telecommunication services. This includes physical and digital infrastructure directly facilitating the transmission, emission, or reception of messages. Cloud-hosted solutions, however, often function as service layers that enhance or support network functions rather than forming the network's core infrastructure. As noted by the Ministry of Electronics and Information Technology (MeitY), "cloud services" are a "delivery model for information services". CSPs provide information services to customers, and these information services are entirely distinct from telecommunication services provided by TSPs.

- Cloud-hosted solutions for telcos might provide critical functions (like billing, data analytics, network management), but they don't usually have direct control over the physical transmission or connectivity. The telco operates the actual network, while the cloud provider hosts tools or applications that support telco operations.

- Legal liability and obligations around telecommunications often require telecommunication operators to have direct oversight and management of the network infrastructure, especially for compliance, security, and emergency access reasons. Cloud-hosted services, which offer managed solutions to telcos, may share responsibility but typically cannot not hold accountability in the same way a telecommunications network does. The Cloud based services are like Managed

Service Providers, who are vendors to the telecommunication networks / service providers (the authorised entities). These authorised entities, by Rules or by Regulations, act under the conditions as to vendor selection etc. so that network security is not compromised. The cloud-based solutions are independent and operate outside the core network infrastructure and is only accessed by the telecommunication operator under specific conditions (e.g., for data storage, analytics, or auxiliary processing), therefore, it does not fall within the definition of a telecommunication network under the Act. The mutual agreement between authorised entity and cloud-based services would, in this case, serve as a contractual boundary, delineating the solution as a support service or a supporting tool.

- TSPs are regulated because there is 'bottleneck 'infrastructure with 'natural monopoly 'characteristics that cannot be easily replicated, creating an enormous barrier to competition. As in the case of other industries with significant infrastructure costs and a physical distribution network such as energy, water, or railways, telecommunication involves access to special privileges (right of way) and scarce resources (spectrum and telephone numbers). Such issues do not exist for the cloud sector which has always been open, competitive and free from infrastructure bottlenecks and other structural features that necessitate regulatory intervention as in the telecom sector. Cloud computing in the telecom supply chain is part of a much larger IT industry which includes software and hardware providers and vendors. Extending the scope of the regulatory framework to capture private networks is not justified and would have significant negative effects on the sector.

- MeitY is tasked with developing policies for information technology and the Internet under the Allocation of Business Rules[1]. Cloud computing is an IT related service, and consequently, governance of Cloud Service Providers (CSPs) in any form falls squarely within the jurisdiction of MeitY.

- CSPs are an intermediary under the Information Technology Act, 2000 (IT Act) and are subject to all due diligence obligations under the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021. For instance, they are subject to Indian laws on data protection - which covers elements of cross border data flows, cooperating with government authorities and cyber-incident reporting. They also adhere to MeitY's empanelment framework wherein CSPs must demonstrate compliance with standards on security, interoperability, data portability, service level agreements, and contractual terms and conditions. They are also indirectly exposed to sectoral regulations – through their customers – such as those issued by the Reserve Bank of India and the Insurance and Regulatory Development Authority of India, the National Health Authority, among others – on regulated

[1] Pg. 51, Government of India (Allocation of Business Rules) 1961 (as amended up to 04 April 2019), available at https://cabsec.gov.in/writereaddata/allocationbusinessrule/completeaobrules/english/1_Upload_1829.pdf ("Allocation of Business Rules") [MeitY- Policy matters relating to information technology; Electronics; and Internet (all matters other than licensing of Internet Service Provider); Promotion of internet, IT and IT enabled services].

entities. For conduct of businesses, like all other entities, CSPs are governed by various regulations such as Indian Contract Act 1872, for e-contracts such as terms of use and click-wrap agreements, etc. As a result, there is no need for additional or specific regulation, even within a telecom context. If there are any operational, security, and compliance concerns for CSPs – these are dealt with under the IT Act by MeitY and under their existing commercial arrangements with TSPs.

In light of the above, it is submitted that the distinction between cloud and telecommunication networks, which is clear and which is material to the question itself has not been considered in the Consultation Paper. **Instead, the Consultation Paper refers to "third-party cloud-hosted telecommunication networks" as if these are already well-defined or established.** However, cloud-based solutions, like Unified Communications as a Service (UCaaS) and Communications Platform as a Service (CPaaS), generally provide tools to support, rather than replacing or directly becoming telecommunication networks. UCaaS and CPaaS do not function as telecommunication networks, which involve infrastructure for the transmission of data. The Consultation Paper references a blog and a general information source on virtualization, which may lack the depth needed to clarify technical distinctions, regulatory considerations, or the specifics of how these cloud-based services differ from telecommunications network functions as defined under the Telecommunications Act.

Terms like "cloud-hosted telecommunication networks" and "telecommunication network resources on lease or hire from cloud service providers" lack clarity. In telecommunications, a network typically refers to infrastructure elements, such as core network elements and transmission links. However, cloud service providers generally provide computer resources, storage, and specific application services rather than functioning as infrastructure that carries telecommunication signals end-to-end.

One of the recommendations in "Recommendations on the Framework for Service Authorisations to be Granted Under the Telecommunications Act, 2023" dated 18.09.2024 that network resources leased or hired from cloud providers shall be treated as part of the network of the Authorised Entity, could be problematic if the leased resources are not providing core network functions. This could lead to an overreach by bringing cloud-based services under telecom regulation even when they do not perform traditional telecommunication network roles.

There is no requirement under the law for an authorisation for operating cloud-hosted solutions for telecommunications networks. A DoT authorised entity such as a TSP would be responsible for complying with the authorisation's requisite terms and conditions. They should be allowed to have the choice of using a CSP as an alternative to on-premises infrastructure. Cloud providers are already regulated under existing IT laws and should not be treated at par with authorised entities providing telecommunication network services. This approach is aligned with international practices.

Q11. What should be the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the authorisation for Mobile Number Portability Service under Section 3(1)(b) of the Telecommunications Act, 2023? Kindly provide a detailed response with justifications.

BIF's Response to Q11:

In April 2019, DoT entered into fresh license agreements with M/s Syniverse Technologies (India) Private Limited and M/s MNP Interconnection Telecom Solutions India Private Limited for MNP Zone 1 and MNP Zone 2 respectively. The period of validity of MNP service license is 10 years. The existing regulatory framework with respect to MNP is reasonable and is meeting the needs of the serving the telecommunication users.

As per the provisions of Section 3(6) of the Telecommunications Act 2023, a licence, registration, permission, by whatever name called, granted prior to the appointed day under the Indian Telegraph Act, 1885, in respect of provision of telecommunication services or telecommunication network and where a definite validity period is given, shall be entitled to continue to operate under the terms and conditions and for the duration as specified under such licence or registration or permission, or to migrate to such terms and conditions of the relevant authorisation, as may be prescribed.

In light of the above, we submit that the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of the authorisation for Mobile Number Portability Service under Section 3(1)(b) of the Telecommunications Act, 2023 do not require to be different from the existing conditions in the current licenses. Hence the existing conditions should be accordingly incorporated in the respective Rules under Section 3(1)(b) of the Telecommunications Act, 2023.

However, the conditions regarding of Entry Fee and Bank Guarantees should be same as that mentioned in TRAI's Recommendations dated 19.09.2023 on "Rationalisation of Entry Fee and Bank Guarantees."

Q12. What provisions should be included in the terms and conditions of various network authorisations under Section 3(1)(b) of the Telecommunications Act, 2023 considering the various sections including Sections 4 to 9, 19 to 24, 32 to 42, 44, 45, 49, and 55 of the Telecommunications Act, 2023 and technological/ market developments in the telecommunication sector? Kindly provide a detailed response with justifications.

BIF's Response to Q12:

At the outset, it is submitted that some of activities covered in this Consultation Paper, like CDNs, IXP, Cloud-hosted telecommunication networks, GSaaS etc. are not telecommunication networks under the Telecommunications Act, 2023. Therefore, Section 3(1)(b) of the Telecommunications Act, 2023 is not applicable in such cases.

Further, Sections 2(d) and 3(1) of The Telecommunications Act, 2023 can be read to mean that authorisation for telecommunication services are separate from authorisation for telecommunication networks. Both telecommunication services and telecommunication networks have been defined under the Act. Section 2(t) of the Act defines 'Telecommunication Service' as any service for telecommunication. This definition does not mention about requirement of own telecommunication network. Further, VNOs have been recommended to be authorised under Section 3(1)(a) in TRAI's Recommendations dated 18.09.2024, where they can only provide services. Thus, a comprehensive scenario mapping of all the authorisations, service or networks, as envisaged under the Act should be provided, given the implications for both new entrants and existing license/registration holders who will migrate at some point of time to authorisation regime under The Telecommunications Act, 2023.

In this regard, we refer to Clause 2.9 and 2.10 of the Consultation Paper, which states as follows:

> *"2.9 In general, an entity establishes a telecommunication network for the following purposes:*
>
> (a) *To provide telecommunication services to end consumers by using the telecommunication network; or*
>
> (b) *To provide the telecommunication network to other eligible entities so that such entities can provide telecommunication services to end consumers.*
>
> *2.10 If an entity intends to provide telecommunication services to end consumers by using its telecommunication network, it will require a service authorisation under Section 3(1)(a) of the Telecommunications Act, 2023. A corollary to this statement is that under the authorisation to establish, operate, maintain, or expand telecommunication network, obtained under Section 3(1)(b) of the telecommunications Act 2023, an entity cannot provide telecommunication services to end consumers; it can only provide the telecommunication-network- as-a-service to eligible entities, which are authorised under Section 3(1) of the Telecommunications Act, 2023."*

Accordingly, we respectfully submit the following questions on the key issues regarding the terms and conditions for network authorisations under Section 3(1)(b). A clarity on the same will ensure that the regulatory approach aligns with the statutory framework

of the Act, providing certainty and promoting a robust, competitive telecommunications market:

1. Does the Act intend to keep Service and Network Authorisations distinct from each other?

Given the distinct definitions provided for "telecommunication services" and "telecommunication networks" in Section 2(d) of the Telecommunications Act, 2023, and the requirement for separate authorisations under Sections 3(1)(a) and 3(1)(b), does the Act intend to permit service and network authorisations to operate independently?

2. Does the Act require both authorisations for an entity intending to provide telecommunication services to end consumers by using its telecommunication network?

If an entity intends to operate a telecommunication network and also provide telecommunication services to end consumers, does the Telecommunications Act, 2023, require that the entity obtain both a service authorisation (under Section 3(1)(a)) and a network authorisation (under Section 3(1)(b))?

If the above is the case, which will be the relevant provisions under the Telecommunications Act, 2023 that indicate a single authorisation for an entity providing telecom service as well as operating telecom network?

3. Does the amendment to TRAI Act, under Section 59 of The Telecommunications Act, 2023 limit TRAI's recommendatory role to telecommunication services and corresponding service authorisations only?

Whether the amendments under Section 59 of the Telecommunications Act, 2023, which amend the definitions of "licensee" and "licensor" in the TRAI Act now mentioning "telecommunication services" limit TRAI's role regarding recommendations to service authorisations under Section 3(1)(a)?

If so, what implications does this have for the TRAI's recommendations dated 18.9.2024, which dealt with service authorisation under Section 3(1)(a) of the Telecommunications Act, 2023 to the extent it covers telecommunication network?

Clarity on the above will enable certainty to the approach, aligning with the framework given in the Telecommunication Act, 2023, with respect to the present Consultation Paper. This will also enable due suggestions / response on the terms and conditions of various network authorisations under Section 3(1)(b) of the Telecommunications Act, 2023 considering the various sections including Sections 4 to 9, 19 to 24, 32 to 42, 44,

45, 49, and 55 of the Telecommunications Act, 2023 and technological/ market developments in the telecommunication sector.

Q13. What provisions should be included in the terms and conditions of various network authorisations under Section 3(1)(b) of the Telecommunications Act, 2023 considering the policy/ Act in the Space Sector and other relevant policies/ Acts in the related sectors? Kindly provide a detailed response with justifications.

BIF's Response to Q13:

Specific Comments regarding aspects pertaining to creation of new categories of network/infra providers have already been provided in our Response to Q7-9 above.

Q14. What should be the terms and conditions for the merger, demerger, acquisition, or other forms of restructuring of the entities holding network authorisations under Section 3(1)(b) of the Telecommunications Act, 2023? Please provide a detailed response with justifications in respect of each network authorisation.

BIF's Response to Q14:

Consistent with what the TRAI observed in its Consultation Paper on the Framework for Service Authorisations to be Granted Under the Telecommunications Act, 2023, it may be more feasible for terms and conditions for mergers and other forms of restructuring to be developed, as appropriate, once an authorisation framework for telecommunication networks is put in place and the scope of various network authorisations is determined. The terms and conditions and process of merger, demerger, acquisition, or other forms of restructuring of the entities cannot be formulated unless such authorisations themselves are prescribed and hence, addressing the same would be a premature exercise.

Q15. What conditions should be made applicable for the migration of existing network licenses, registrations etc. to the new network authorisation regime under Section 3(1)(b) of the Telecommunications Act, 2023? Kindly provide a detailed response with justifications.

Q16. What procedure should be followed for the migration of existing network licenses, registrations etc. to the new network authorisation regime under Section 3(1)(b) of the Telecommunications Act, 2023? Kindly provide a detailed response with justifications.

BIF's Response to Q15-16:

Section 3(6) of the Telecommunications Act, 2023 provides that-

"*(6) A licence, registration, permission, by whatever name called, granted prior to the appointed day under the Indian Telegraph Act, 1885 or the Indian Wireless Telegraphy Act, 1933, in respect of provision of telecommunication services or telecommunication network—*

(a)*where a definite validity period is given, shall be entitled to continue to operate under the terms and conditions and for the duration as specified under such licence or registration or permission, or to migrate to such terms and conditions of the relevant authorisation, as may be prescribed; or*

(b)*where a definite validity period is not given, shall be entitled to continue to operate on the terms and conditions of such licence or registration or permission for a period of five years from the appointed day, or to migrate to such terms and conditions of the relevant authorisation, as may be prescribed.*"

It is submitted that the conditions and procedures can be better commented upon once the new authorisations and respective terms and conditions are prescribed. The conditions and procedures should be on no net zero gain to the network providers and net zero loss to the government. However broad principles, which may be incorporated, are as follows:

- The eligibility conditions should be same as that of a new applicant. However, the requirement of meeting with the net-worth criteria should not be made applicable.
- For the license/ registration/ permission etc. under the extant licensing regime whose scope may be merged with another license/ registration/ permission etc., the entities holding such license/ registration/ permission etc. should be permitted to migrate to the new merged service authorisation under the Telecommunications Act, 2023.
- If relaxations are provided under the new framework in relation to fees and terms and conditions, similar relaxations should be provided to licensees under the extant licensing framework, and any excess Bank Guarantees submitted should be refunded within a stipulated timeframe. This would create greater regulatory certainty regarding the new authorisation framework. The migration framework for any proposed network authorisations should ensure that there is no disruption to the business of entities providing services under the current regime.

In regard to the migration, clarity on the following is critical:

1. Does the Act intend Service and Network authorisations to remain distinct?

2. Does the Act require both authorisations for Integrated Service Delivery and Network Operations (entity intending to provide telecommunication services to end consumers by using its telecommunication network)?

3. Does the amendment to TRAI Act, under Section 59 of The Telecommunications Act, 2023 limit recommendations to telecommunication service authorisations only?

Q17. Whether there is a need to introduce certain new authorisations (other than the authorisations discussed above) to establish, operate, maintain or expand telecommunication networks under Section 3(1)(b) of the Telecommunications Act, 2023? If yes, -

(a) For which type of telecommunication networks, new authorisations should be introduced?

(b) What should be the eligibility conditions, area of operation, validity period of authorisation, scope, and terms & conditions (general, technical, operational, security etc.) of such authorisations?

Kindly provide a detailed response with justifications.

Q18. Whether there is a need to remove certain existing authorisations to establish, operate, maintain or expand telecommunication networks, which may have become redundant with technological advancements? If yes, kindly provide a detailed response with justifications.

Q19. Whether there is a need to club the scopes of certain authorisations to establish, operate, maintain or expand telecommunication networks into a single network authorisation under Section 3(1)(b) of the Telecommunications Act, 2023 for bringing more efficiency in the telecommunication networks? If yes, kindly provide a detailed response with justifications.

BIF's Response to Q17-19:

In this regard, kindly refer to our preliminary submissions and our response to Q12, more specifically the clarifications sought therein,

In addition, following is submitted as key requirement considering the overall economic needs of the country -

A) As mentioned in answer to Q1-3, to harness the true potential of digital telecom infrastructure and the economic benefits it brings, infrastructure provider authorised entities should be generally permitted to share relevant infrastructure ('dark fiber') with non-telecommunication entities like Data Centers also, provided they are for captive private usage and not for resale or sale to the public. The proposed scopes of the DCIP and IP-1 authorisation be expanded. Specifically, we propose that the authorisation should permit (i) provision of 'dark fiber' to data centres and CSPs and/ or (ii) DCIP authorised entities to establish and light 'dark fibre' for enabling high-speed connectivity for captive use by CSPs/ data centers. This would enable data

centre operators and CSPs to efficiently manage their own services, as configured and optimized to meet customer requirements.

Traditionally, licensed TSPs have been providing and managing networks for digital enterprises. However, rising consumer demands for 'feature enhancement' and 'real-time service delivery' have now necessitated leading-edge network architecture and quality, uninterrupted availability, control and scalability of networks of these digital enterprises for delivering uniform and world-class digital services to consumers worldwide.

Further, in light of the rapid growth of India's data centre market, projected to expand from USD 4.35 billion in 2021 to USD 10.09 billion by 2027, there is a clear need to support this expansion by ensuring seamless and high-quality data flow between data centers. With data volumes exchanged by cloud and content providers now often surpassing those handled by traditional telecom operators, efficient inter-data center traffic management has become paramount.

To meet this growing demand, data centers must have the flexibility to establish and operate their own infrastructure for efficient connectivity. This will involve using fiber and other high-capacity resources without undue regulatory hurdles or intermediary dependencies, allowing for more direct and responsive solutions that align with the evolving needs of cloud service providers (CSPs) and other key stakeholders in the digital economy.

For India to fully leverage its growth potential in AI and digital transformation, an advanced network infrastructure is essential, one that can support high-capacity and low-latency demands. Allowing data centers greater ease of access to build and manage end-to-end infrastructure would enable them to operate efficiently, encourage robust investment, and eliminate delays and costs tied to third-party intervention. This approach would also align with India's economic goals by enhancing infrastructure resilience, accelerating technological innovation, and supporting an efficient data ecosystem.

The extant unified licensed framework prevents non-licensed Digital Enterprises from owning or managing Private Enterprise Networks. This limitation hinders 'ease of doing business' (EODB) for Digital Enterprises in India, deters foreign direct investment (FDI) into India's digital sector and delays proactive adoption of state-of-the-art technology for consumer services

In addition, there is no separate set of 'eased-out' license conditions applicable for TSPs providing Private Enterprise Networks to Digital Enterprises. On the contrary, the current unified license requires such TSPs to comply with various technical and security conditions and limitations meant for public networks. This is generally argued to indicate that all license conditions apply to TSPs equally for public as well as private

networks, even though several technical, security and other conditions in the license may not be commensurate with the 'captive, non-public' nature of Private Enterprise Networks. Moreover, such conditions applicable to 'public networks' are increasingly becoming incongruent with technological advancements and prevent India from benefiting from best-in-class technology, network architecture and business models in the digital sector. Additionally, the costs and operational limitations of such conditions ultimately impact services and end users, and investment, innovation and growth of the Indian digital ecosystem.

Further, we urge the Central Government to facilitate the digital ecosystem by providing data centers with the necessary permissions to operate the required infrastructure independently, reducing barriers and promoting more direct resource utilization. Removing such regulatory constraints will not only improve service quality but also foster a more investment-friendly environment, essential for India's competitiveness in AI, cloud, and digital infrastructure.

In order to promote EODB, making India a digital hub, and promoting exponential infusion of FDI into the IT and telecom sector in India, TRAI may kindly consider recommending an exemption from 'authorisation' under the Telecommunications Act 2023, allowing Digital Enterprises incorporated in India to own, establish and manage Private Enterprise Networks.

In fact, this would mean taking a flexible regulatory approach towards digital enterprises and hence, granting exemptions or alternatively, providing for relaxed regulations for global enterprises establishing and managing Private Enterprise Networks solely for internal use (not for public end users). This would offer private use licensing exemption for entities not seeking to operate their infrastructure as TSPs but for their own exclusive use.

B) India's role in the global business and digital landscape is rapidly expanding, positioning the country as a potential central hub for submarine cables connecting the East and West. However, despite India's strategic location, neighbouring countries like Singapore, Malaysia, and Thailand currently attract a higher number of submarine cable landings, partly due to streamlined processes and favourable regulations.

To unlock India's potential as a key node in the global digital infrastructure, facilitating a "light-touch" authorisation process for submarine cable landings is crucial. By simplifying requirements for establishing Cable Landing Stations (CLS) and Points of Presence (PoPs), India could significantly increase its attractiveness for submarine cable infrastructure investment.

TRAI's Recommendations on "Licensing Framework and Regulatory Mechanism for Submarine Cable Landing in India" dated 19.06.2023 are steps in the right direction, proposing relaxed requirements that are essential to achieving this vision. A light-

touch authorisation approach would mean that only the fiber pairs dedicated to domestic telecommunications fall under the International Long Distance (ILD) licensing framework, while major transit fiber pairs connecting global routes could operate without restrictive regulations.

Implementing this approach will strengthen India's position in the global cable network, foster economic growth by attracting high-value digital infrastructure, and provide essential network diversity. This policy shift is a critical need for India's digital future, aligning it with other leading global hubs for submarine cable landings and ensuring it plays a central role in the international data ecosystem.

Q20. What provisions should be included in the terms and conditions of various network authorisations under Section 3(1)(b) of the Telecommunications Act, 2023 to improve the ease of doing business? Kindly provide a detailed response with justifications.

BIF's Response to Q20:

In this regard, kindly refer to our preliminary submissions and our response to Q12, more specifically the clarifications sought therein, which will help in ease of doing business by providing legal and regulatory certainty to players.

In addition, there may be a need for introducing some changes in the authorisation framework to improve the ease of doing business. However, it is important to note that the merger of authorisations cannot be seen as facilitating 'Ease of Doing Business'. There are well-established different types of networks and various players have taken different permissions/registrations/licenses and made investments based on the principles of a stable framework and the promotion of competition.

Subject to the above, our key suggestions are as follows:

- The process of authorisation should be automated and it should be a general authorisation where for non-spectrum activities, the intending entity can start by uploading due information on the portal. The process should apply to initial authorisation, renewals, addition or modification of authorisations.
- The process for assignment of numbering resources should be automated and through portal. In that regard a clear stage-wise timelines for the process of numbering resources allocation may be prescribed.
- The Test Report (approval, rejection) should be automated for the purpose of roll out obligations.
- There should be an automated process for submission for Electronic Bank Guarantee, which will help in general authorisations.
- The Rules should annex distinct user manual and sample forms/formats for each authorisation type to enable smooth functioning of telecom networks.

- There should be a seamless integration with other concerned ministries/ department/ agencies.
- Publicly available status of applications and authorisations to maintain transparency and fairness in the market.
- The affidavits, required under current licenses, should be replaced with self-certificates with similar content.
- Streamline the assessment of Licence Fees and Spectrum Usage Charges to reduce costs and promote efficiency.
- Establish an Ease of Doing Business (EoDB) Committee in each Ministry/Department to review, simplify, and update existing processes.
- The Terms and Conditions of Authorisation should provide for:
    - Module in the single window portal for the rollout obligation process with prescribed timelines.
    - Online, time-bound process for requesting Remote Access to the network from foreign locations.
    - Incorporation of FDI compliance submission on portal.

Moreover, TRAI should also view regulation and policy-making from the lens of the recent advancements in technology and its potential to bring economic advantages for India. For instance, India's stakes in the AI-driven hyperscale era go well beyond "ease of doing business." Strategic reforms in licensing and authorisation policy are essential to position India for the tremendous economic and employment gains this transformation promises.

India has historically reaped considerable benefits from the Internet Revolution, due in large part to proactive, forward-thinking communications policies. However, as the world now enters an accelerated phase of AI-driven growth, India requires an updated, world-class regulatory approach to maximize this opportunity. The surging demand for AI training and inference has led to a marked 25% increase in global internet traffic in 2023 alone, with AI placing heightened demands on ultra-low latency to process high-speed, AI-enhanced results.

This hyperscale revolution will benefit regions that can offer "frictionless" pathways for international data flows. Conversely, restrictive licensing requirements, burdensome regulations, or intermediaries who add costs without adding value would discourage major data center investments. Such obstacles would directly contradict India's ambitions, as outlined in the National Digital Communications Policy 2018, to be a global hub for cloud computing, content hosting, and data services.

India has a unique short-term opportunity to become a regional and global hub for international transit internet traffic. Since this traffic neither originates nor terminates within the country, a light regulatory approach is appropriate. Establishing "Special

Cloud Transit Zones" - akin to Special Economic Zones - could facilitate this, allowing designated Transit Cloud Service Providers to land subsea cables, establish data centers, and set up necessary connectivity infrastructure within these zones with minimal fees. This approach would attract significant investment, generating employment and catalyzing broader economic benefits.

Q21. Whether there is a need for mandating a reference agreement between authorised entities establishing, operating, maintaining or expanding the telecommunication network, and authorised entities providing telecommunication services? If yes, -

(a) Between which type of entities, reference agreements are required to be mandated?

(b) What should be the salient features of the reference agreements between such entities?

Kindly provide a detailed response with justifications.

Q22. Are there any other inputs or suggestions relevant to the subject? Kindly provide a detailed response with justifications.

BIF's Response to Questions 21 & 22:

The need for mandating RIO will depend on the foundational framework for provision of network authorisation. This framework requires the following clarifications, based on which the corresponding terms and conditions for various authorizations are to be proposed:

1. Does the Act intend Service and Network authorisations to remain distinct?

2. Does the Act require both authorisations for Integrated Service Delivery and Network Operations?

3. Does the amendment to TRAI Act, under Section 59 of The Telecommunications Act, 2023 limit recommendations to telecommunication service authorisations only?

Subject to the above, RIO should be required where the eligible service licensees/authorised entities will seek resources from the entity having network authorisation, for the purpose of providing communication services to their customers and where the manner (promptness, commercial fairness etc.), in which the entity having network authorisation provide resources to the seeker service licensees/authorised entities, will influence the ability of the service licensees/authorised entities to provide communication services to their customers.

Q23. In case it is decided for merging the scopes of the extant Infrastructure Provider-I (IP-I) and the Digital Connectivity Infrastructure Provider

(DCIP) authorisation into a single authorisation under the Section 3(1)(b) of the Telecommunications Act, 2023, what should be the: -

(a) Minimum equity and net worth of the Authorised entity.

(b) Amount of application processing fees

(c) Amount of entry fees

(d) Any other Fees/Charge

Please support your response with proper justification.

BIF's Response to Q23:

In case it is decided to merge the scopes of the extant IP-1 Registration and the Digital Connectivity Infrastructure Provider (DCIP) authorisation into a single authorisation under the Telecommunications Act, 2023, the entry fee should be as applicable to IP-1s and application fee should be kept at Rs. 2 lakhs.

There should not be any additional charges, any eligibility conditions, any PBG or FBG. There should not be any License fee applicable.

Q24. In case it is decided not to merge the scopes of IP-I and DCIP, what changes/ modifications are required to be made in the financial conditions of -

(a) DCIP authorisation as recommended by TRAI in August 2023

(b) IP-I authorisation under the Telecommunications Act, 2023 with respect to the extant IP-I registration?

Please provide a detailed response with justification.

BIF's Response to Q24:

There should not be any license fee applicable to DCIP and to IP-1 authorisations. For obtaining DCIP authorisation, the entry fee may be kept at Rs. 2 lakhs and application processing fee should be kept at Rs. 15,000/- as proposed by TRAI.

In case of IP-1, the applicant company may be required to pay a processing fee along with the application of Rs. 5,000/-.

There should not be any minimum equity or net worth conditions in DCIP and IP-1 authorisations.

Q25. In case it is decided to introduce a new authorisation under Section 3(1)(b) of the Telecommunications Act, 2023 for establishing, operating, maintaining or expanding in-building solution (IBS) by any property manager within the limits of a single building, compound or estate controlled, owned, or managed by it, then:

(a) Whether there is a need to have financial conditions associated with such an authorisation?

(b) In case your response to the above is in the affirmative, then what should be financial conditions for such an authorisation?

Please provide detailed response with justification.

BIF's Response to Q25:

Reference may be made to our response to Q4, where we have stated that there should not be any requirement to introduce new authorisation under Section 3(1)(b) of the Telecommunication Act, 2023 for establishing, operating, maintaining or expanding in-building solution (IBS) by any property manager within the limits of a single building, compound or estate controlled, owned, or managed by it.

Without prejudice to the above, and in case TRAI recommends otherwise to issue such an authorisation, then we submit that there is no need to have financial conditions associated with such an authorisation. The property manager is not providing telecommunication service to the end user. Further, there is need to improve the In-building coverage and the regulatory framework requires participation of property manager for which the property maker will be under legal obligation under building bye laws. Hence, there is no reason to impose any financial condition on the property manager.

Q26. Whether there is a need to change/ modify any of the financial conditions of the IXP and CDN authorisations from those recommended by TRAI on 18.11.2022? If yes, please provide a detailed response with justification(s).

BIF's Response to Q26:

Reference may be made to our responses to Q5 & 6, where we have stated that CDNs and IXPs cannot be treated as telecommunication networks within the legal and regulatory framework.

Q27. Whether there is a need to change/ modify any of the financial conditions of the Satellite Earth Station Gateway (SESG) authorisation from those recommended by TRAI on 29.11.2022? If yes, please provide a detailed response with justification(s).

BIF's Response to Q27:

The financial conditions as mentioned in the TRAI's recommendations regarding SESG dated 29.11.2022 are appropriate. The TRAI had recommended prudent financial conditions by prescribing an appropriate license fee, no requirement to furnish bank guarantees, and no minimum net worth or equity requirements. This approach will

decrease the operational expenses for entities wishing to provide satellite communication networks as a service.

Q28. In case it is decided to introduce a new authorisation for establishing, operating, maintaining or expanding satellite communication network under Section 3(1)(b) of the Telecommunications Act, 2023, then, what should be the financial conditions for such authorisation?

Q29. In case it is decided to introduce an authorisation under Section 3(1) of the Telecommunications Act, 2023 for establishing, operating, maintaining or expanding ground stations, which may be used to provide Ground Station as a Service (GSaaS), then:

(a) Whether there is a need to have financial conditions associated with such an authorisation?

(b) In case your response to the above is in the affirmative, then what should be financial conditions for such an authorisation?

Please provide detailed response with justification.

BIF's Response to Q28-29:

Reference may be made to our response to Q8-9.

Q30. In case it is decided to introduce an authorisation under Section 3(1)(b) of the Telecommunications Act, 2023 for establishing, operating, maintaining or expanding cloud-hosted telecommunication networks, which may be used to provide telecommunication network as a service to the authorised entities under Section 3(1)(a) of the Telecommunications Act, 2023, then:

(a) Whether there is a need to have financial conditions associated with such an authorisation?

(b) In case your response to the above is in the affirmative, then what should be financial conditions for such an authorisation?

Please provide detailed response with justification.

BIF's Response to Q30:

Reference may be made to our Response to Q10, where we have stated that cloud-hosted telecommunication networks cannot be treated as telecommunication networks within the legal and regulatory framework.

Q31. For Mobile Number Portability Service authorisation under Section 3(1)(b) of the Telecommunications Act, 2023, should the amount of entry fee and provisions of bank guarantees be:

(a) kept same as per existing MNP license.

(b) kept the same as recommended by the Authority vide its Recommendations dated 19.09.2023

(c) or some other amount/ provisions may be made for the purpose of Entry Fee and Bank Guarantees.

Please support your response with proper justification.

Q32. For Mobile Number Portability Service authorisation under Section 3(1)(b) of the Telecommunications Act, 2023, whether there is a need to review/ modify:

(a) Definition of GR, AGR, ApGR

(b) Rate of authorisation fee

(c) Format of Statement of Revenue Share and License Fee

(d) Norms for the preparation of annual financial statements

(e) Requirement of Affidavit

Please provide your response with detailed justification.

BIF's Response to Q31-32:

The Authority vide its Recommendations on "Rationalization of Entry Fee and Bank Guarantees" dated 19.9.2023, recommended the following and we agree with them:

- The entry fee for MNP license should be reduced from Rs. 1 crore to Rs. 50 lakh.
- Financial Bank Guarantee and Performance Bank Guarantee should be merged into a single Bank Guarantee. This Bank Guarantee should be submitted before signing the License Agreement, valid for one year. For the initial year, the amount of Bank Guarantee should be 40 lakh. For the subsequent years, the amount of Bank Guarantee should be higher of 10 lakh or 20% of the estimated sum payable (of license fee for two quarters and other dues not otherwise securitized).

In our view, there is no need to review/ change the financial conditions and the formats of Statement of Revenue Share and License Fee and norms for preparation of statements in case of MNPSP.

We suggest one change, i.e., the affidavit requirement should be replaced by self-certificate.

Q33. What financial conditions should be made applicable for the migration of the existing licensees/ registration holders to the relevant new authorisations under section 3(1) (b) of the Telecommunications Act, 2023? Kindly provide a detailed response with justifications.

Q34. In case it is proposed for introducing certain new authorisations to establish, operate, maintain or expand telecommunication networks under Section 3(1)(b) of the Telecommunications Act, 2023, what should be the

respective financial conditions for each of such authorisation(s)? Please provide a detailed response with justifications in respect of each network authorisation, separately.

Q35. What should be the financial conditions for the merger, demerger, acquisition, or other forms of restructuring of the entities holding network authorisations under Section 3(1)(b) of the Telecommunications Act, 2023? Please provide a detailed response with justifications in respect of each network authorisation.

Q36. In case it is decided to club the scopes of certain authorisations to establish, operate, maintain or expand telecommunication networks into a single network authorisation under Section 3(1)(b) of the Telecommunications Act, 2023, then, what should be the financial conditions for such authorisations?

Please provide a detailed response with justifications for each network authorisation, separately.

Q37. Whether there are any other issues/ suggestions relevant to the fees and charges? The same may be submitted with proper explanation and justification.

BIF's Response to Q33-37:

No comments.

Annexure 1 - Refer to comments in Question No. 1-3

Data Centres and Cloud Services, which are IT services and are not telecommunication services, presently are required to take resources from NLDO/Access Provider whether or not those licensed operators are able to cater for their complex and advanced requirements. The choice of their connectivity provider is limited as they are mandated to go through these licensed entities. Entities should be free to self-provide captive services by buying or leasing dark fiber from infra providers like IP-1s and/or DCIPs in future and operating it themselves or through DCIPs instead of being unnecessarily required to go through a licensed NLDO/TSP.

Most international best-practice jurisdictions seek to encourage investment and innovation in high-tech, cloud, digital services, and Data Centre services and therefore, ensure required flexibility for such entities to operate in a dynamic and efficient manner because of the large economic benefits they bring. However, current Indian law may not allow unlicensed entities to access passive infrastructure such as dark fibre from infrastructure provider companies for any purpose. This means that such companies are unable to buy or lease dark fibre in order to construct, operate, and efficiently manage their own captive networks (configured to their own internal specialist requirements). Instead, such companies are compelled to procure generic network connectivity services from TSPs. This is problematic because traditional networks operated by TSPs are principally designed for voice or public data services, such as IP services. They are not suitable for advanced cloud or other digital services, which require very high availability, bandwidth and low latency for extremely high amounts of data; and achieving these outcomes using TSP services is especially difficult given India's vast geography and relatively limited existing technology infrastructure and broadband deployment. As a result, cloud services in India are generally slower, less reliable and more expensive than corresponding services in other countries. This discourages investment in technology and cloud businesses in India, and hinders growth of the technology industry. Similarly, these hurdles make it more expensive and more difficult for Data Centres/Digital Service Providers to manage their networks. Data Centres and Cloud Service Providers (CSPs) are currently required to procure services built on common network architecture which simply reduces the efficiency and capability.

To harness the true potential of the economic benefits it brings, infrastructure provider companies should be permitted to share their passive infrastructure with all such entities also and not just licensed TSPs, provided they are for internal private consumption and not for resale or sale to the public. Such entities like Data Centres, Digital Service Providers and CSPs should be permitted to procure passive infrastructure including dark fibre and permitted to operate active services for captive use and not for commercial use. India must ensure that it does not remain an outlier by imposing hefty, inefficient and unnecessary requirements upon Data Centre connectivity which requires the most dynamic and innovative approach to succeed.

Thus, the scope of IP-1s and DCIPs should be expanded and they can help in nation's objectives and economic growth by providing the resources to Data Centres/Cloud Service Providers.