

To
Shri Akhilesh Kumar Trivedi,
Advisor (Networks, Spectrum and Licensing),
Telecom Regulatory Authority of India

Sub: Inputs on the Consultation Paper on *Terms and Conditions of Network Authorisations to be Granted Under the Telecommunications Act, 2023*

Dear Sir,

Extreme Infocom Pvt. Ltd. is holder of NLD and ISP-A Universal Licenses. The company is operating Extreme IXP (www.extreme-ix.org) - India's leading Internet Exchange Provider. Extreme IXP is serving peak traffic of 3 Tbps (www.extreme-ix.org/technical/statistics/) in 41+ Points of Presence across 6 cities - Mumbai, Delhi NCR, Chennai, Bengaluru, Hyderabad and Kolkata.

We're committed to bringing India up to speed and making India a global hub for internet content, services and apps by providing world class peering solutions across all states of India.

We are pleased to learn about the authority's keen interest in aligning the regulatory framework for the telecom industry with the Telecommunication Act, 2023 and further developing the sector to ensure efficiency and regulatory parity. We believe that the questions under consideration indicate a progressive approach towards achieving the said goal.

In this regard, we would like to share a few comments and recommendations on the questions pertaining to the overall authorisation regime and regulation of IXPs and CDNs in particular.

Background:

The Telecommunications Act, 2023 represents a significant reform in India's telecom regulatory landscape, aimed at modernizing the sector to meet the demands of a rapidly digitizing society. By replacing outdated colonial-era laws and introducing a principles-based framework, the Act establishes a simplified authorization system under Section 3, replacing the complex licensing regime that has long hindered growth and innovation. This shift is designed to promote digital inclusion, improve connectivity, and ultimately drive economic progress across the country.

India faces a significant digital divide, with only 25% of rural households having internet access and a pronounced gender gap in digital service usage. This divide disproportionately affects rural populations, women, and students, especially in remote areas. As India strives for its Viksit Bharat vision and a trillion-dollar economy, widespread access to high-speed internet is essential. The Telecommunications Act, 2023 is a key step in addressing this challenge by fostering broadband expansion, streamlining regulatory processes, and promoting equitable digital access for all.

A. Legislative Intent Behind the Telecommunications Act

The intent behind the Telecommunications Act, 2023 is to modernize and streamline India's telecom regulatory framework, replacing outdated laws and simplifying the licensing process. The Act empowers the Central Government to issue authorizations, replacing the old licensing regime. The then Telecom

Minister Ashwini Vaishnaw emphasized this transition in his address to the Lok Sabha, noting that this reform would simplify the system by replacing over 100 types of licenses with a single, streamlined authorization structure.

As recently as 11th November 2024, **Minister of State for Communications, Sri Chandra Sekhar Pemmasani, emphasized the role of light touch regulation in driving innovation.** He remarked, *“regulation should be as minimal as possible, especially in competitive markets.”* This reinstates the legislative intent of the Telecom Act to simplify regulations.

In this regard, the key statements from Members of Parliament (MPs) during the legislative discussions underscore the focus on simplifying processes and fostering growth:

- **Simplicity and Modernization:** The Hon'ble Minister of Communications, at the time when the bill was passed, Shri Ashwini Vaishnaw, emphasized the importance of replacing the existing complex regulatory structure: *"Today, there are over 100 types of licenses... this Bill simplifies and streamlines the system by replacing all licenses with a simple authorization structure.* He described the telecom sector as a "vibrant sunrise sector" and presented the Act as a means to propel it by removing redundant regulatory barriers.
- **Enabling Structural Reform for Sectoral Growth:** Dr. Sanjeev Kumar Singari highlighted the Act's emphasis on replacing traditional licenses with authorizations focused on national security and inclusive digital growth, aiming to create an agile regulatory environment that reflects modern needs.
- **Promotion of Ease of Doing Business:** Shri G.V.L. Narasimha Rao pointed out the Act's overarching goal of simplifying licensing procedures: *"Earlier, 100 licenses were required; now, it needs one simple authorization... This is a major reform aimed at Ease of Doing Business".*
- **Expansion of Digital Access and Teledensity:** Dr. Amar Patnaik underscored the Act's role in increasing teledensity, especially in underserved regions: *"It seeks to club many [types of licenses] into a single authorization process,"* shifting from prescriptive regulations to a principles-based architecture that removes many constraints.
- **Clarity on Spectrum Assignment and Consolidation of Licensing Categories:** Shri Bhartruhari Mahtab highlighted the transition to a streamlined authorization system, providing clarity on spectrum assignment and reducing administrative barriers. Similarly, Shri S. Niranjan Reddy noted that the Act consolidates various services into three categories, simplifying authorizations and aligning with the government's agenda of ease of doing business.

These comments collectively reinforce the Act's objectives:

- **Regulatory Simplification:** Shift from complex multi-license requirements to a unified authorization system that fosters ease of doing business.
- **Fostering Innovation:** Reduce administrative burdens and entry barriers to stimulate competition and sector growth.
- **Promoting Digital Inclusion:** Expand connectivity in rural and underserved areas, reducing the digital divide across demographics.
- **Enhancing Affordability and Accessibility:** Make telecom infrastructure and services more accessible and affordable for all Indians.

B. Concerns Regarding This Consultation's Alignment with Legislative Intent

- While the consultation seeks feedback on network authorization frameworks, it still heavily leans on outdated recommendations and prescriptive regulatory structures that diverge from the simplified, principles-based framework intended by the Telecommunications Act, 2023. This also includes the TRAI's 2022 recommendations on IXPs and CDNs, which propose a rigid licensing framework that directly contradicts the Act's core goals of simplification and modernization.
- Section 2(s) of the Act defines a telecommunication network as a “*system or series of systems of telecommunication equipment or infrastructure intended for providing telecommunication services*”. However, IXPs, CDNs, DCIP, IP-I, etc., which are under consultation here, do not fulfill this role, as they neither operate as telecommunication networks nor provide telecommunication services independently. IXPs serve as neutral infrastructure points, merely facilitating traffic exchange, and do not provide telecom services themselves. CDNs, similarly, improve content delivery efficiency without providing direct connectivity to end-users. This is a key distinction that should be recognized to ensure regulatory alignment with the legislative intent behind the Act. These entities facilitate connectivity but do not offer telecommunication services themselves. Neither do they utilize scarce resources like spectrum nor pose significant public health risks. Thus, subjecting them to authorization contradicts the Act's intent and could stifle innovation and growth in the digital ecosystem.

In light of these concerns, it is crucial that the consultation aligns more closely with the principles of simplification and modernization outlined in the Telecommunications Act, 2023. The following sections address the specific questions raised in the consultation paper, providing our responses that advocate for a regulatory framework in harmony with the Act's legislative intent, focusing on streamlining processes, fostering innovation, and promoting broader digital inclusion.

Q1. Whether there is a need to merge the scopes of the extant Infrastructure Provider-I (IP-I) and Digital Connectivity (b) What terms and conditions should be made applicable to the proposed authorisation? Kindly provide a detailed response with justifications.” 23 Infrastructure Provider (DCIP) authorization (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.

DCIP and IP-I are not liable to be subjected to authorisation under the Act as they neither qualify to be 'telecommunication network' nor are they used to provide services using scarce resources.

Referring to point B of the introduction to our submission above, we draw the attention of the authority to the fact that while the Act defines a telecommunication network as one "used or intended to be used for providing telecommunication services," it does not specify that the infrastructure provider themselves must also provide telecom services..This means that the scope of the definition of telecommunication networks covers only those service providers intending to utilize telecom infrastructure specifically for providing telecom services Since DCIP and IP-I are simply infrastructure providers that facilitate connectivity but do not offer telecommunication services themselves, they do not meet the criteria for authorization under Section 3(1)(b).

Exempting DCIP and IP-I would promote infrastructure sharing and efficient deployment, avoiding redundant regulatory barriers. This aligns with the Act's intent to streamline regulations for entities directly involved in providing telecom services to the public.

We further submit that even if DCIP and IP-I were to fall under the definition of telecommunication networks, there is still a case to be made for their exemption from authorisation. We believe that only those telecommunication networks that are used to provide services that utilize scarce resources (e.g. spectrum) or pose significant public health risks should be required to seek authorization, or any kind of permission from the government to provide their services. All other networks should be exempted under Section 3(3) of the Telecom Act. In other words, invoking the power under Section 3(3) of the Act, the Central Government ought to exempt all those telecommunication networks that neither utilize scarce resources nor pose significant public health risks, from seeking authorisation under Section 3(1) of the Act.

Such an exemption is essential for regulatory efficiency and ensures that regulatory interventions are both necessary and justifiable, preventing unwarranted administrative overreach. By streamlining the process, providers can enter and expand within the market more freely, fostering innovation and competition without being constrained by redundant regulatory barriers. This approach aligns closely with the Telecommunications Act, 2023, which aims to streamline compliance and reduce unnecessary regulatory burdens.

The reasoning for maintaining separate authorizations to address unique technical needs or to ensure market fairness does not outweigh the advantages of a streamlined, unified framework. Eliminating the need for seeking authorization would promote infrastructure sharing across active and passive elements, since infrastructure providers would no longer require separate licenses, thus fostering more efficient deployment and utilization of digital infrastructure. By minimizing administrative burdens, the proposed general authorization better aligns with legislative intent to enable a competitive and dynamic telecom market. This ultimately serves the sector's growth, benefiting consumers through increased service

availability and encouraging infrastructure development without the friction of multiple, overlapping authorizations.

Therefore, we submit that pursuing separate authorizations for IP-I and DCIP may be unnecessary and unwarranted in this context.

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.

We respectfully submit our views in firm opposition to the recommendation to require registration for CDN providers. CDNs, as integral components of modern digital infrastructure, operate in a unique manner distinct from telecommunications networks. Forcing them into a registration framework would not only be counterproductive but also contrary to the legislative intent under the Telecommunications Act 2023, which does not encompass CDNs within its scope.

CDNs as Foundational Digital Infrastructure

CDNs are essential to India's digital ecosystem, supporting a wide range of applications from video streaming to telemedicine. As a core component of modern digital infrastructure, they are instrumental in ensuring efficient, high-quality content delivery, which broadens digital accessibility and enhances user experience across the country. Any move to regulate CDNs could not only stifle these benefits but also hinder India's aspiration to emerge as a global digital leader. Given the rapid growth and projected potential of the CDN industry in India, a regulatory framework would be premature and counterproductive. Rather, we recommend fostering a policy environment that supports and encourages the expansion and innovation of CDNs.

High-Growth Potential of the CDN Industry

The global and Indian CDN markets are poised for significant growth. With the global video streaming market [expected](#) to reach USD 124.57 billion by 2025, and India's CDN market projected to expand at a [rate](#) of 13.3% annually, CDNs are positioned as critical enablers of digital transformation, especially as 5G adoption [accelerates](#). This robust growth trajectory underscores the importance of CDNs for delivering low-latency services that will support India's ambitions in areas like autonomous vehicles, cloud gaming, and Industry 4.0. **Restricting this industry with regulations at such a high-growth stage would risk undermining India's broader digital goals.**

Distinction from Telecommunications Networks

As stated in point ‘B’ in the introduction to our submission, providing or intended to provide telecommunication service is a key distinction that should be recognized before subjecting a network operator to authorisation under the Telecom Act, 2023.

In the context of CDNs, it is crucial to recognize that CDNs are fundamentally different from telecommunications networks. Clause 2(s) of the Telecommunications Act 2023 [defines](#) a “telecommunication network” as infrastructure used for providing telecommunication services, which CDNs do not offer. CDNs function as intermediary platforms that store and deliver content efficiently rather than engaging in end-to-end communication. They are consumers of telecommunications infrastructure, rather than providers of telecommunication services, placing them within the IT sector rather than telecommunications. Thus, classifying CDNs as telecommunications operators would be a misinterpretation, leading to unnecessary regulatory burdens that could impair their operations. The Telecommunications Act 2023 confines TRAI’s recommendation powers specifically to “telecommunication services” and “telecommunication networks.” CDNs do not fall within either category under the Act’s definitions, rendering any recommendation for their regulation beyond TRAI’s legal purview. In previous recommendations, TRAI itself noted that a licensing framework for CDNs was unnecessary. While TRAI did suggest a registration requirement with the DoT, even this recommendation lacks a basis under the current Act and would represent an overreach into areas reserved for telecommunications.

Additionally:

- CDNs provide a specialized form of content caching and delivery without providing direct connectivity to end-users.
- They serve as intermediaries that improve content delivery efficiency without offering bandwidth, and therefore do not fall under the scope of telecommunication network regulations.

Implications of Registration or Licensing Requirements

Establishing a registration or licensing requirement for CDNs could set a problematic precedent that might trigger similar requirements for other internet services, such as web hosting, DNS providers, and email services. The strength of the internet lies in its open, largely unregulated nature, which has fostered innovation, kept entry barriers low, and driven its global success. In contrast, additional regulatory requirements would restrict this flexibility, stifling innovation and complicating entry for emerging players. The highly competitive nature of the CDN industry, evidenced by both established players and new entrants driving down service costs, further negates the need for regulatory intervention. **Notably, a regulated environment could add operational costs for CDNs, which might ultimately pass onto end-users, affecting the overall internet economy.**

International Standards and Minimal Intervention

Most [countries](#) do not classify CDNs as telecommunications operators or impose licensing requirements on them, understanding that such measures could hinder market growth. India’s policy environment would greatly benefit from following this globally successful approach. By allowing the CDN market to

flourish in a minimally regulated environment, India can better leverage CDNs' competitive and innovative capabilities, ultimately supporting its broader digital economy.

The robust growth of the CDN industry—both globally and domestically—has been driven by an environment of minimal regulatory intervention. CDNs enhance internet performance, reduce bandwidth usage, improve traffic management, and provide security benefits, all of which align with India's digital policy goals. Over-regulation could counteract these benefits, slowing technological advancement and diminishing competitiveness in the global market. We therefore urge TRAI to support policies that encourage the growth of CDNs, leveraging their capabilities to improve internet access and performance across India without the imposition of regulatory constraints. **A facilitative policy framework that focuses on growth incentives, infrastructure support, and innovation incentives would be more beneficial than regulatory oversight.**

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, 72 operational, security etc.) of the IXP authorisation? Kindly provide a detailed response with justification.

As stated in point 'B' in the introduction to our submission, providing or intended to provide telecommunication service is a key distinction that should be recognized before subjecting a network operator to authorisation under the Telecom Act, 2023.

The classification of Internet Exchange Points (IXPs) as networks within this consultation framework is misaligned with both their functional role and the definitions set out in the Telecommunications Act, 2023. [Section 2\(s\)](#) of the Act defines a "telecommunication network" as a system or series of systems of telecommunication equipment or infrastructure intended for providing telecommunication services. IXPs, however, do not fulfill this role, as they neither operate as telecommunication networks nor provide telecommunication services independently.

The Telecommunications Act, 2023 establishes definitions for "telecom services" and "telecom networks" based on the intent to provide telecom services. Entities such as IXPs, which enable the exchange of data between networks without delivering telecom services themselves, fall outside this scope. For example, certain financial services applications that peer with cloud and CDN providers to enhance data flow rely on IXPs for efficient connectivity but are not themselves providing telecom services. For example, government entities like the National Informatics Centre (NIC) and the National Knowledge Network (NKN) also manage extensive networks for data exchange among various public institutions, yet their intent is not to provide telecom services to the public. **The mere facilitation of data routing, as performed by IXPs, NIC, or NKN, does not qualify these networks as telecom networks under the**

Act. This distinction ensures that only those networks with a direct intent to deliver telecom services are regulated as telecom networks, in alignment with the Act's principles.

IXPs serve as physical interconnection points, enabling autonomous networks—such as Internet Service Providers (ISPs), data centers, and content providers—to exchange internet traffic locally. They function as neutral platforms that facilitate efficient data routing and reduce latency. Unlike telecommunication networks, IXPs do not provide end-to-end connectivity or telecommunication services directly to end-users. They do not transmit, emit, or independently receive data; rather, they facilitate inter-network traffic exchange without participating in the broader transmission of telecommunication services. The neutrality of IXPs ensures that all participating networks have equal access to exchange traffic without favoritism or prioritization, further distinguishing them from traditional networks that may have proprietary interests.

Furthermore, the core function of IXPs—enabling interconnection and traffic exchange between networks—does not meet the criteria for "telecommunication services" under the Act. Since IXPs act merely as platforms for data exchange among networks, they do not control, transmit, or deliver messages across regions as required of telecommunication service providers. Section 2.42 of the consultation paper itself acknowledges this role, describing IXPs as facilities that "*allow networks to exchange internet traffic with one another.*" This characterization by TRAI confirms that IXPs facilitate data exchange between networks without serving as network providers themselves.

Additionally, there is broad international recognition that the internet functions as an information service, distinct from telecommunications. Today's interconnected digital landscape increasingly unbundles network and service functions, moving away from traditional, vertically integrated telecommunications models. IXPs embody this shift, acting as essential hubs that enable seamless data exchange across networks without delivering telecommunication services. By categorizing IXPs separately from networks, TRAI would reflect this modern approach, support India's digital growth, and align with global practices.

We recommend that TRAI reconsider the classification of IXPs within this consultation. Recognizing IXPs as neutral interconnection infrastructure rather than categorizing them as networks would better reflect their operational realities and global regulatory standards. This approach would promote a robust, efficient, and resilient internet ecosystem in India, free from unnecessary regulatory constraints. Such a reclassification would also encourage investment in IXP infrastructure development across India, fostering innovation and enhancing overall internet performance for users nationwide.

On TRAI's recommendation on a separate license for IXPs under the UL framework:

The proposal to impose a license on Internet Exchange Points (IXPs) may inadvertently hinder their growth and operational efficiency in India. Two primary concerns arise with this recommendation: it deviates from international best practices observed in thriving IXP sectors, and it imposes disproportionate regulatory obligations misaligned with the core functions of IXPs.

1. Misalignment with International Best Practices

Globally, the IXP sector has flourished under minimal regulatory intervention:

- Finland requires IXPs to submit only a notification rather than obtaining an individual license, fostering ease of establishment and [operation](#).
- Canada does not mandate licenses for IXPs, with organizations like the Canadian Internet Registration Authority (CIRA) actively supporting the development of [local IXPs](#).
- United Kingdom IXPs typically operate without a license unless they require spectrum or specific land access, and they are only required to notify Ofcom as an "essential [service](#)."

Countries like Canada, Finland, and the UK—each with high broadband penetration rates—demonstrate that less burdensome regulatory requirements are instrumental to the success of IXPs. In contrast, TRAI's proposed licensing structure would impose significant entry and compliance barriers, such as demanding technical calculations, engineering details, and network planning documents. These requirements may be excessive, given that IXPs simply route traffic between networks without managing or interacting with the content. Such compliance obligations could dissuade smaller or emerging IXPs, potentially reducing competition and connectivity options, ultimately impacting India's internet infrastructure. India's current telecom regulation framework under the Telecom Act 2023 does not allow for intermediate options like registration or notification. Entities must either be fully authorized or operate outside the regulatory framework altogether. Unlike countries that permit IXPs to operate with only a registration or notification, India lacks a provision for entities to be regulated without explicit government authorization. As a result, given that IXPs do not naturally fit within the existing framework for authorisations for reasons elaborated above (i.e., they are neither telecommunication service nor telecommunication network), they should, therefore, remain outside its scope for the time being.

It is also important to keep in mind that most mature markets, like the examples above, follow a principle based approach to regulations - where regulations match the nature, function, and operation of each telecom service. For instance, while operators using scarce resources like spectrum may require detailed licenses, others with simpler operations often follow a lighter framework, such as notification or simple registrations. Such approaches allow regulators to ensure compliance while fostering innovation and reducing administrative barriers. **However, in India, where the IXP market is still nascent, such a flexible and facilitative regulatory approach is more critical.** Given that IXPs do not use scarce resources like spectrum, exempting them from any authorization and keeping them out of the purview of the Act would avoid stifling their growth while still enabling regulatory goals through minimal, proportionate oversight. In future too, such a principle based approach is essential to ensure that compliance remains streamlined and proportional as the market matures.

2. Functional Differences Between IXPs and ISPs

Regulatory History:

TRAI's past recommendations for a class license for IXPs were not acted upon by DoT, indicating no intent to subject IXPs to the licensing regime. IXPs, by nature, differ from ISPs and should not be burdened with similar licensing conditions. In countries with thriving IXP ecosystems, such as Singapore, Canada, and the UK, IXPs are either lightly regulated or not regulated at all.

There has been no previous reference by DoT to regulate IXPs, and even TRAI's recommendation in 2011 for a class license for IXPs was not acted upon by DoT. Notably, TRAI did not argue that IXPs fell under

Section 4 of the Telegraph Act, suggesting that the government intended to keep IXPs free from licensing requirements. Moreover, when the National Internet Exchange of India (NIXI) was established, there was no license requirement clarified for its operation, further indicating a preference for non-regulation.

IXPs do not provide any telecom services and hence do not qualify to be licensees under the Unified License. They merely offer physical infrastructure without providing bandwidth, internet services, or IP transit services. The activities of IXPs are not covered under the ISP license, emphasizing their distinct role from ISPs. While ISPs deliver internet services directly to end-users, IXPs facilitate interconnection and traffic exchange between networks, a unique and differentiated function that should not be conflated with ISP services.

IXPs have been operating in India without any licensing for more than two decades, likely because they do not provide services directly to end users of the internet. The functioning of IXPs is similar to that of system integrators or network equipment providers who offer managed services and charge their customers on a recurring basis. Thus, IXPs operate as B2B businesses, contributing in a manner similar to companies like Nokia, Ericsson, Samsung, and Cisco, which provide network services to TSPs and ISPs.

IXPs cannot be equated to ISPs

IXPs should neither be classified as ISPs nor subjected to ISP-like regulatory obligations. Globally as well, IXPs are not subjected to ISP licenses. For instance, no country mandates IXPs to operate under an ISP license, recognizing their unique role and technical simplicity. Unlike ISPs, which deliver internet services to end-users, IXPs are neutral infrastructure entities that interconnect autonomous networks without providing public telecommunications services. According to the TRAI [Act](#), 1997, a service provider is an entity that provides public telecommunications services to end-users. By this definition, IXPs do not qualify as an ISP, as they neither offer direct services to consumers nor participate in IP transit services. Their sole function is to facilitate traffic exchange between network operators; thus, subjecting them to ISP-like licensing is inappropriate and restrictive.

In the case of [Viom Network Ltd.](#), the Hon'ble Delhi High Court ruled that telecom licensees under the TRAI Act are defined as entities providing telecommunication services to end consumers, not to other licensees. Since IXPs connect networks rather than serving the end consumers directly, they fall outside this licensee definition. The implication of licensing entities like IXPs would entail bringing digital applications, providers, hosting providers, website operators and even universities providing internet to students, within the folds of licensing. To name a few, HPCL, DMRCL, Hostinger, etc., and other similar market players will have to be subject to licensing.

Therefore, the regulatory framework for IXPs should focus on their unique role in supporting internet infrastructure and avoiding placement under a licensing category intended for consumer-facing telecom services.

3. Limited Regulatory Justification from Security and Compliance Perspectives

Imposing a license on IXPs lacks substantial regulatory justification from a security standpoint. IXPs do not host or store content, nor do they have oversight over the data passing through them, as all traffic

remains encrypted. The ISPs connected to IXPs are already regulated under licenses with stringent national security obligations, meaning that traffic routed through IXPs is subject to existing security requirements. IXPs typically operate as small companies with limited resources, focusing on infrastructure rather than high-margin consumer services. Enforcing a license would add regulatory and financial strain without meaningful benefits to data privacy, sovereignty, or national security.

4. Impact on India's Digital Economy

To fully unlock the potential of India's digital economy, a supportive regulatory environment is essential for IXPs. A light-touch regulatory approach—based on exemption or ex-post regulation—would foster innovation, enable flexibility, and ensure agility within the market. By avoiding onerous compliance obligations, India can encourage investment in IXP infrastructure, which is crucial for optimizing local internet traffic flow and minimizing reliance on international routes. The imposition of a license may deter investment and innovation in the IXP sector, impeding the government's goal to expand affordable and accessible internet access across the country.

We urge TRAI to re-evaluate the license proposal for IXPs. Instead of imposing licensing requirements intended for consumer-facing telecom providers, a facilitative policy framework regulatory framework This approach would enable IXPs to fulfill their essential role in India's digital infrastructure while minimizing unnecessary compliance burdens, ultimately supporting India's aspirations for a modern, efficient, and resilient internet ecosystem.

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.

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.

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.

Our position is that only Network services utilizing scarce resources, such as spectrum, or those posing significant public health risks should be required to obtain specific authorization or permission from the government to operate. This targeted approach reflects the intent of the Telecommunications Act, 2023, and aligns with global best practices in regulatory frameworks. While the Network services referenced in the above questions would require authorization, the current licensing framework requires an overhaul to align with a streamlined general authorization regime, which is not fully reflected in the consultation questions.

Principles for a General Authorization Framework

1. Minimizing Barriers to Entry and Promoting Innovation

A general authorization framework reduces entry barriers, encouraging competition and aligning with India's goal of enhancing the ease of doing business. Licensing regimes often introduce unnecessary [hurdles](#), limiting the ability of legitimate players to innovate and grow. In contrast, general authorizations rely on objective, transparent [criteria](#) for service provision, minimizing discretionary powers and reducing risks of arbitrary decision-making. The framework prevents overreach and supports an efficient market structure.

2. International Best Practices

Internationally, several regions, including the European Union, Australia, and Singapore, have adopted general authorization frameworks. The European Union's approach, under the European Electronic Communication Code, emphasizes minimal restrictions on service provision, intervening only when justified. EU Directive [2018/1972](#), for instance, establishes that fees should reflect market conditions and ensure the efficient use of resources. By aligning with this model, India can reduce regulatory burdens, allowing telecom entities to focus on service quality and innovation.

- In these frameworks, regulatory authorities reserve specific intervention for cases where clear, justified interventions are required. [Australia](#) and [Singapore](#) similarly emphasize minimal barriers, intervening only where necessary for security, public health, or efficient spectrum use. Such models underscore the importance of limiting regulatory oversight to essential cases, reducing barriers for non-consumer-facing infrastructure Network services, such as satellite and ground stations.

3. Safeguards and Specific Recommendations

- **Narrowly Defined Authorization Requirements:** Only Network services utilizing scarce resources or posing public health risks should require authorization. The Telecommunications Act already distinguishes between services based on resource utilization, requiring both fees and charges for spectrum-based services¹ due to their high economic value, while mandating only one or the other for other telecommunication services.² This differentiation should guide the authorization process, allowing mandatory authorization only for services directly tied to scarce resources or public health impacts.
- **Cost-Recovery Based Fees:** Authorization fees should be based solely on cost recovery, avoiding any financial barriers that might stifle market entry or discourage investment.

¹ Sections 4(3) and 4(6) of the Telecom Act, 2023

² Sections 3(1) and 3(8) of the Telecom Act, 2023

Article 16 of the EU Directive 2018/1972, which recommends cost-recovery-based fees as a global best practice, can serve as a model. In India, authorization fees should reflect this principle, applying charges purely for administrative purposes and remaining distinct from spectrum management fees or universal service contributions.

4. Transparent and Predictable Criteria

To maintain predictability, the criteria for general authorizations should be predefined and accessible to all prospective service providers. This reduces uncertainty and regulatory burden, allowing entities to launch Network services without awaiting explicit approval, thus accelerating deployment. This structure also enables regulatory bodies to focus more on strategic oversight and market development rather than time-consuming procedural compliance.

5. Exemption Under Section 3(3) for Non-Essential Network services

For all Network services that do not utilize scarce resources or pose significant public health risks, we recommend an exemption from authorization requirements under Section 3(3) of the Telecom Act. This will enable the Central Government to clearly distinguish essential Network services requiring regulation from infrastructure-based Network services without direct consumer-facing activities.

Ensuring Market Efficiency and Digital Agility

Adopting a general authorization framework not only aligns with global standards but also strengthens India's position as an attractive destination for global telecom investments and partnerships. In a rapidly evolving telecom landscape, it is crucial to have a regulatory approach that supports agility and adaptability. General authorizations allow new Network services and technologies to be deployed swiftly, aligning regulatory processes with market needs and technological advancements.

In summary, while Network services tied to scarce resources or public health risks, such as satellite and ground station Network services, may require authorization, this should be handled through a refined, general authorization framework. By focusing on narrowly defined requirements, transparent criteria, and cost-recovery-based fees, India can foster a regulatory environment that promotes innovation, market efficiency, and administrative simplicity, benefiting the telecom sector and the broader digital economy.

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.

The Mobile Number Portability (MNP) service does not use scarce resources, such as spectrum, nor does it issue new numbers—it simply reallocates existing ones. Therefore, separate authorization for MNP under Section 3(1)(b) of the Telecommunications Act, 2023, is unnecessary and misaligned with the Act's intent to streamline regulatory requirements.

As illustrated earlier, the Act aims to eliminate multiple, redundant licenses for services that neither impact public health nor rely on limited resources. MNP clearly falls within this category and should be exempted from authorization under Section 3(3). Requiring separate eligibility, scope, and conditions for MNP would impose needless compliance burdens, slowing down market efficiency and consumer choice.

In line with the Act's legislative vision to simplify and unify telecom regulation, MNP should not be restricted by individual licensing requirements, allowing for a more competitive and responsive telecom sector without administrative obstacles.

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.

We submit that certain existing authorizations for establishing, operating, maintaining, or expanding telecommunication networks have indeed become redundant with advancements in technology. Many services that currently require separate authorizations do not rely on scarce resources like spectrum or present public health risks. Imposing authorizations on these services creates unnecessary regulatory burden without any corresponding benefit. Under Section 3(3) of the Act, we urge the government to exempt such services from authorization, aligning with the Act's intent to simplify and consolidate authorizations.

Removing outdated authorizations will reduce administrative complexity, free up resources, and promote infrastructure expansion, accelerating innovation and enhancing service availability across the sector.

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.

Many processes and procedures governing the telecom sector today, under the Unified Licensing (UL) regime, are rooted in laws and considerations dating back decades. While they may have been justified at the time, technological advancements and rapidly changing user needs now necessitate a comprehensive review and realignment of these regulatory frameworks. The Telecom Act, 2023 marks a shift and demonstrates the legislature's intent to foster innovation and equitable growth within the sector.

Section 3 of the Telecom Act, 2023, shifts telecom regulation from a complex licensing system to a more streamlined authorization-based framework. This establishes the legislature's intention to enable ease of business in the telecommunication sector by removing administrative and regulatory hardships. This was echoed by Shri GVL Narsimha Rao in the parliament during discussions on the Telecom Bill, 2023. He said, *"this seeks to reform and simplify regulatory and licensing regime. I will highlight only a few important aspects of the Bill. One, it simplifies the license procedures. Earlier, 100 licenses were required; now, it needs one simple authorization. It needs one simple authorization, instead of 100"*

licenses that were required earlier. It is a major reform aimed at Ease of Doing Business which has, actually, been the leitmotif of the current Government.”

To realize this vision, upcoming rules under the Act must establish a lighter, authorization-based regulatory framework. This will promote a more competitive and innovative telecom environment, attracting new players, reducing costs, expanding consumer services, and strengthening India's digital infrastructure.

Key Provisions to Improve Ease of Doing Business:

1. Narrowly Defined Requirements for Authorization:

- Only networks utilizing scarce resources (e.g., spectrum) or posing significant public health risks should require authorization. This aligns with legislative intent, as reflected in the Act's distinction between spectrum-based services (which incur both fees and charges) and other telecommunication services (incurring either fees or charges). This differentiation underscores the need for targeted regulatory oversight, avoiding overreach and unnecessary restrictions.
- All other networks should be exempt under Section 3(3) of the Telecom Act, ensuring that regulatory interventions are proportionate and justified.

2. Cost-Recovery Based Fees:

- Authorization/licensing fees should strictly cover the administrative costs of regulation, following a cost-recovery model recognized globally (e.g., Article 16 of the EU Directive 2018/1972). Any additional fees (e.g., spectrum management fees, universal service charges) must be distinct, clearly defined, and based on transparent, objective criteria. They should not create market entry barriers or serve as disproportionate revenue sources.
- The Act's requirement for either fees or charges for non-spectrum services underscores the legislature's intent to minimize costs, furthering the goal of ease of business.

3. Clear and Transparent Criteria for General Authorizations:

- The criteria for general authorizations must be predefined, accessible, and predictable, ensuring regulatory clarity for service providers. This reduces business uncertainty and promotes compliance.
- Regulatory objectives should be broad and general, with specific conditions applied only when necessary to manage scarce resources or address public safety concerns.

The Telecommunications Act, 2023, offers an opportunity to establish a modern, flexible regulatory framework that reflects current technological and market realities. By streamlining processes, focusing on essential interventions, and maintaining transparency, India can foster a vibrant, innovation-driven telecom sector that supports ease of doing business.

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) authorization into a single authorization under the Section 3(1)(b) of the Telecommunications Act, 2023, what should be the: - (a) Minimum equity and networth 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. 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.

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).

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

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.

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.

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 the 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.

To ensure a fair and equitable regulatory environment, it is crucial that authorization and licensing fees are strictly limited to the administrative costs of regulation. These fees should follow a cost-recovery model, directly reflecting the expenses incurred by the regulatory body in overseeing the telecommunications sector. Such an approach also aligns with international best practices, including those outlined in Article 16 of the EU Directive 2018/1972 and ensures that fees are objectively justified, transparent, non-discriminatory, and proportionate to actual regulatory costs. In the United States³, the Federal Communications Commission (FCC) can assess and collect regulatory fees only to recover the costs of its regulatory activities covering enforcement, policy and rulemaking, user information services, and international activities. This establishes that even in the U.S. telecom sector, regulatory fees are designed to recover the actual costs of regulation, ensuring they are fair and proportionate. Similar provisions can be seen in the regulatory approach of [Australia](#) and [Singapore](#) as well.

³ Section 9 of the Communications Act of 1934

While ensuring a cost-based recovery, administrative fees as opposed to other charges, should be transparent and reflect only the cost of regulation and any additional fees or component thereof should be clearly defined and justified. This ensures that administrative fees are not perceived as revenue-generating mechanisms for the government, thereby preventing any potential distortion of the market.

The existing fee structure, which bases the license fee on AGR, functions similar to a tax. Operators or telecom networks are required to pay license fees based on their AGR, and when this is combined with the Goods and Services Tax (GST), it results in a cascading financial burden. This dual cost ultimately falls on the end consumer, making telecommunication services more expensive. For instance, broadband services are currently subject to an 18% GST. Additionally, the AGR-based fees are also passed on to customers, further increasing their expenses. Thus, to ensure transparency, the component-wise breakdown of such fees should be reflected to the consumer, making it clear what costs they are paying for. It is worth noting that historically, telecom services in India have been subject to service taxes since 1994-95, with rates progressively increasing from 5% to 12% by 2006,⁴ and now to 18% under GST. This significant rise in tax revenue also underscores the need to avoid additional financial burdens on consumers. Thus, to ensure that the service becomes affordable and reaches a wider consumer base in the country, it is essential that the customer is not excessively burdened.

However, over the past few years, it can be seen that receipts for this sector have been significantly high compared to costs. For instance, both in 2022-23 and 2023-24, the telecom expenditure⁵ was significantly lower than the receipts⁶. This shows that collection has been a manifold of actual expenditure.

It is also crucial to ensure that it is not tax which is ultimately collected under the garb of fees. Taxes and fees are inherently different. Taxes are intended to raise general revenue, while fees are charged for specific services benefiting the end consumer. Without this distinction, fees effectively become unjustified taxes. The distinction between 'tax' and 'fee' was also highlighted by the courts of law in various judgments over the years. Hon'ble Supreme Court in the **Shirur Mutt's Case**⁷ held that taxation is characterized by compulsion, meaning it is imposed by law without the taxpayer's consent, and payment is enforced by law. Additionally, taxes are imposed for public purposes without direct benefits to the taxpayer, contributing to the general revenue of the state. On the contrary, a 'fee' is a charge for a special service provided to individuals, typically based on the costs incurred in rendering the service. As the jurisprudence on this evolved, courts have recognized that regulatory fees, such as license fees imposed for regulating an activity, must meet the standard of reasonableness and cannot be excessive. Even though these fees are not charged for providing a specific service, they must be justified and reasonable. This was held by the Hon'ble Supreme Court in **Delhi Race Club Ltd vs Union Of India & Ors.**⁸ It is thus necessary to ensure that under the garb of levying a fee, the regulatory authority should not attempt to impose a tax and must keep the fees proportionate to the regulatory cost only.

⁴ https://nipfp.org.in/media/medialibrary/2013/08/TRAI_Revised_Final_Report_December_2011_final.pdf

⁵ <https://www.indiabudget.gov.in/doc/eb/sbe13.pdf>

⁶ <https://www.indiabudget.gov.in/doc/rec/allrec.pdf>

⁷ 1954 AIR 282

⁸ 2012 (8) SCC 680

Rationalizing fees to cover only regulatory expenses will have significant positive implications for the telecommunications sector and the broader economy. Lower entry fees can stimulate competition and investment, which are crucial for expanding telecommunications services. Therefore, by reducing entry barriers, we can facilitate greater coverage, enhance service quality, and ultimately drive economic growth.
