

STPL/Reg/TRAI/2512/86

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Subject:

TRAI Consultation Paper on Review of existing TRAI Regulations on Interconnection matters dated 10 November 2025

Dear Sir,

At the outset, we thank the Authority for initiating this Consultation Paper and for providing stakeholders with an opportunity to offer their views on the interconnection matters outlined therein. The Consultation Paper is a welcome and timely initiative by the Authority.

In this regard, please find enclosed the comments submitted on behalf of Satzilio Telecom Pvt. Ltd. (formerly V-Con Mobile & Infra Private Limited) in response to the questions raised in the Consultation Paper, for your kind consideration.

Thanking you,

Yours sincerely,
For Satzilio Telecom Pvt. Ltd.

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Encl.: as above

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Response to TRAI Consultation Paper on Review of Existing Interconnection Regulations

Telecom Regulatory Authority of India (TRAI) has initiated a comprehensive review of its existing regulatory framework concerning interconnection matters vide its Consultation Paper dated November 10, 2025. Key drivers for this review include the statutory development of The Telecommunications Act, 2023, the market consolidation among major operators, and the fundamental technological transition from legacy Time Division Multiplexing (TDM) circuit-switched networks (E1-based) to all-IP (Internet Protocol) packet-switched infrastructures (4G, 5G, and Next Generation Networks). This transition impacts crucial aspects of regulatory oversight, including cost recovery mechanisms, physical interconnection design, traffic management methodologies, and overall network security and resiliency. We welcome the initiative taken by the Authority for this long due review.

We also note that as per para 2.139 of the Consultation Paper, the present consultation exercise does not envisage the review of the subject matters of A2P SMS viz promotional, service and transactional SMSs along with those related with unsolicited commercial communication such as spam SMSs which are rightfully dealt under 'The Telecom Commercial Communications Customer Preference Regulations, 2018' (as amended from time to time).

We would like to place on record our deep appreciation of the proactive and stringent measures taken by Telecom Regulatory Authority of India's (TRAI) to combat Unsolicited Commercial Communication (UCC), or spam calls, represent a significant effort to protect Indian consumers. A cornerstone of this strategy is the systematic allocation of special number series to clearly distinguish legitimate business communication from spam. Specifically, the 140-series has been designated for promotional calls, while the newly mandated 160-series (often seen as 1600-series) is exclusively for service and transactional calls from regulated entities like banks and financial institutions. This clear segmentation, alongside the migration of these communications to the Distributed Ledger Technology (DLT) platform, enhances traceability and accountability, making it significantly harder for fraudulent activities like impersonation to thrive. Furthermore, by implementing stricter penalty thresholds for violations and disconnecting millions of

fraudulent mobile numbers, TRAI is taking decisive steps to cleanse the communication ecosystem and instill greater trust and security for the public.

Point wise response to various questions in the Consultation Paper is as follows:

A.I. The Telecommunication Interconnection Regulations, 2018

Q.1 For PSTN to PSTN, PLMN to PSTN and PSTN to PLMN, should the interconnection level be specified at LSA level? If yes, should the existing POIs at the LDCA/SDCA level also be migrated to the LSA level? Kindly justify your response.

STPL Response:

The interconnection level for all traffic (PSTN to PSTN, PLMN to PSTN, and PSTN to PLMN) should be specified at the Licensed Service Area (LSA) level. Furthermore, all existing Points of Interconnection (POIs) currently situated at the Long-Distance Charging Area (LDCA) and Short Distance Charging Area (SDCA) level must be migrated to the LSA level in a regulated, phased manner.

Rationale for LSA Migration:

- 1. Technological Obsolescence: The current regulatory regime defining POIs at the SDCA/LDCA level is intrinsically linked to the geographical and hierarchical structure of legacy TDM-based Public Switched Telephone Networks (PSTN). With the advent of all-IP core networks (NGN, 4G, 5G), service providers have largely centralized their core switching capabilities. Modern network architecture allows a single IP core/soft switch to efficiently handle traffic for an entire LSA, rendering the historical LDCA/SDCA-based structure technologically obsolete and economically inefficient.
- 2. **Regulatory Consistency and Efficiency**: Aligning interconnection with the LSA, which is already the standard for mobile (PLMN) services, creates necessary regulatory consistency across fixed and mobile networks. This reflects the current operational reality of centralized traffic management and network modernization.
- 3. **Facilitating IP Transition**: The move to LSA-level POIs supports the broader push towards IP-based interconnection (Q6). Continuing to mandate POIs at the finer LDCA/SDCA level forces operators to maintain redundant, costly, and complex

TDM/SS7 interworking layers long after their internal networks have migrated to IP.

4. **NLD Voice decline**: This factor also supports the migration of interconnection to LSA level.

Q.2 For PSTN to PSTN, PLMN to PSTN, PSTN to PLMN and PLMN to PLMN, should interconnection be allowed at a level other than the LSA level, based on mutual agreement? Kindly justify your response.

STPL Response:

Interconnection should be permitted at levels other than the LSA, provided such arrangements are based solely on mutual agreement between the TSPs.

Rationale:

This flexibility is essential to support niche enterprise requirements, dedicated Virtual Private Networks (VPNs), or specific low-latency applications that benefit from closer, geographically specialized points of traffic exchange. Such non-LSA POIs facilitate innovative, specialized services that require minimal latency and direct exchange. However, any such mutually agreed POI must adhere strictly to the commercial and technical terms (including all regulated charges, Quality of Service, and security mandates) applicable at the primary LSA POI. This ensures that non-LSA POIs do not become tools for creating commercial discrimination or technical workarounds.

- Q.3 Based on your response to Question 1 and 2 above, what changes, if any, are required in the level of interconnection / point of traffic handover as provided in the following:
- (a)Telecommunication Interconnection Regulations (TIR), 2018, and (b)Guidelines annexed to the Telecommunication Interconnection (Reference Interconnection Offer) Regulations, 2002? Kindly justify your response.

STPL Response:

Significant amendments are required in both regulatory instruments to reflect the proposed LSA-centric, IP-based framework.

(a) Telecommunication Interconnection Regulations (TIR), 2018:

- Regulation 9A, which currently addresses the interconnection level for PSTN calls by default to the LDCC (in case of disagreement) and providing for carriage charges between LDCC and SDCC, must be substantially revised or repealed.
- The revised regulation must establish the LSA Core/Gateway Switch (IP) as the default and mandated level for all interconnection traffic handover, irrespective of call type (PSTN or PLMN). This removes the reliance on TDM-era LDCC/SDCC defaults.

(b) RIO Guidelines, 2002 (Annex-C):

- Annexure-C of the Reference Interconnect Offer (RIO) Guidelines, which details
 the complex hierarchical structure of Points of Interconnection for PSTN-PSTN
 (Tables 1.1, 1.2), PLMN-PSTN, and PSTN-PLMN traffic (Tables 2.1, and 2.2), must
 be completely overhauled.
- These tables, structured around TDM-era switching levels (TAX, SDCC, LDCC), must be replaced with a simplified, technology-neutral structure specifying the LSA Core/Gateway Switch (IP) as the singular logical point of handover for all regulated traffic within the License Service Area.

Proposed Amendments to Telecom Interconnection Regulation (TIR) 2018

Insertion of Clause 9A: Interconnection Requirements for Public Switched Telephone Network (PSTN) and Mobile/National Long Distance (NLD) Services

These provisions shall be incorporated into the TIR 2018.

9A. Voice Interconnection Standards

- (1) Minimum Interconnection Level Interconnection for calls originating or terminating on the PSTN (including PSTN-to-PSTN, PSTN-to-PLMN, and PLMN-to-PSTN connectivity) and calls traversing the NLD network shall be established at a minimum of the Licensed Service Area (LSA) level or as mutually agreed.
- (2) Point of Interconnection (POI) Location: Mutual Agreement The physical location of the POI shall be determined through mutual agreement between the interconnecting partners.

- (3) POI Consolidation and Resilience Interconnecting partners may mutually agree to consolidate POIs for multiple LSAs at a single, agreed-upon location. In such cases, the partners shall be jointly responsible for ensuring the resilience and redundancy of these consolidated POIs. However this provision is applicable only in cases of mutual agreement.
- (4) Default POI Location for Dispute Resolution In the event that interconnecting partners fail to mutually agree on a POI location as per sub-regulation (2) for PSTN-to-PSTN or PSTN-to-NLD calls, the default POI location shall be the State Capital of the LSA in question. In the case of an LSA encompassing multiple States, the POI shall be established at the largest city within that LSA.
- (5) Traffic Carriage Responsibility and Charges Each party shall be responsible for carrying its own traffic to and from the POI. Furthermore, no carriage charge shall be levied for the transport of calls between the POI and the Short Distance Charging Areas (SDCAs).
- Q.4 Is there a need to mandate multi-path resiliency and redundancy in the Point of Interconnection (POI) framework to mitigate link failure at the primary POI in the case of: PSTN-PSTN interconnection, PLMN-PLMN interconnection, and PLMN-PSTN interconnection?

If yes, kindly provide an appropriate architectural framework with diagram. Kindly justify your response.

STPL Response:

Yes, mandating multi-path resiliency and redundancy is necessary for all forms of interconnection (PSTN-PSTN, PLMN-PLMN, and PLMN-PSTN).

Rationale for Resiliency:

The consolidation of interconnection points at the LSA level, while economically efficient, significantly increases the risk associated with a Single Point of Failure (SPOF). A single link failure at a high-volume LSA POI could lead to widespread service disruption across millions of subscribers. Network resiliency requires more than just duplicated

equipment (redundancy); it requires planned architectural diversity to ensure quick recovery and business continuity.

Architectural Framework:

The regulatory framework should mandate a Geographically Diverse, Dual-Home POI Architecture.

- 1. **Redundancy and Diversity**: Traffic exchange must occur through a minimum of two physically distinct POI locations within the LSA, connected via diverse fiber routes.
- 2. **Functionality:** This configuration ensures that traffic can be dynamically and automatically rerouted to the secondary POI in the event of failure at the primary POI due to localized physical damage, human error, or severe congestion. This dual-home setup transitions from passive redundancy to active resiliency, allowing for load-sharing and immediate failover.

Q.5 Is there a need to incorporate security provisions in the interconnection framework to ensure network security? If yes, kindly provide details along with an appropriate architectural diagram. Kindly justify your response.

STPL Response:

It is submitted that the incorporation of separate security provisions within the interconnection framework is unnecessary. Modern network architecture already adheres to the principle of 'Security by Design'. Moreover, comprehensive network security requirements are sufficiently addressed by the existing Telecommunication Act 2023, the associated Draft Rules, and the terms and conditions stipulated in the Unified License. Duplicating these requirements in TRAI Regulations would be redundant.

Q.6 (a) Should IP-based interconnection be mandated for new interconnections in the regulatory framework? Kindly justify your response.

(b) Should TSPs be mandated to migrate existing TDM based E1 interconnection to IP-based interconnection within a specified period? If yes, suggest timelines. Kindly justify your response.

STPL Response:

The Authority has in its Recommendations on Revision of National Numbering Plan dated 6th February 2025 stated that IP-based interconnection is best suited for managing voice

traffic and would be critical for managing numbering resources. It has also recommended a consultative process delivering universal IP based interconnection at LSA level.

"2.31 Further, in the IP-native architecture of modern telecom networks, IP-based interconnections provide an optimal solution for managing voice traffic; however, many interconnections among major Telecom Service Providers (TSPs) remain tethered to outdated TDM protocols. This reliance on TDM for intra as well as inter-TSP connectivity requires IP to-TDM conversions, introduces latency and hinders higher QoS for voice traffic. Although there has been progress in implementing intra TSP IP-based Pols within the networks, the absence of widespread IP interconnections across networks is apparent. This situation indicates a pressing need for harmonised, fully IP-based interconnectivity, preferably at the LSA level, across telecom networks, to ensure consistent voice quality, free from the drawbacks of protocol conversions. In view of the aforementioned, the Authority opines that to establish universal IP-based Points of Interconnection (Pol) at the LSA level among TSPs to phase out TDM-based Pols (both at intra and inter TSP level), the extant Telecommunication Interconnection Regulations (TIRs) governing Pols and Port Charges (including subsequent amendments), needs to be reviewed through a separate consultation"

- (a) Mandate for New Interconnections: Yes, IP-based interconnection must be mandated immediately for all new interconnection requests whether in respect of Voice or SMS services. This reflects the global consensus on Next Generation Network (NGN) deployment and ensures all future network builds are future-ready, scalable, and efficient.
- (b) Mandate for Existing Interconnections: Yes, TSPs must be mandated to migrate all existing TDM-based E1 interconnection to IP-based interconnection for both Voice and SMS. Continuing a dual architecture (IP core network but TDM interconnect) increases complexity, operational costs, and hinders high-quality service rollouts like VoLTE-to-VoLTE. This dual setup is technologically inefficient, as TDM is inherently limited by its fixed bandwidth allocation, unlike the flexible, scalable, and multi-service capability of IP.

Suggested Timelines:

A maximum mandatory migration period of 24 months from the date of the revised regulation's notification should be stipulated. This period allows sufficient time for capital planning, vendor procurement (given the difficulty in sourcing TDM equipment),

and coordinated technical execution across all operators. While some TDM operators argue for continuation until business viability ceases, a firm regulatory timeline is necessary to overcome industry inertia and realize the full benefits of NGN migration, as TDM systems pose disadvantages in reliability, scalability, and data suitability.

Q.7. Should the existing processes of 'provisioning and augmentation of ports at POIs' under Chapter IV of the TIR 2018 in respect of following need revision: Seeking of ports at POIs, Request for initial provisioning of ports, and Request for augmentation of POIs? Kindly provide your response with justification.

STPL Response:

Yes, revision is necessary to strengthen reciprocity and eliminate structural asymmetry in responsibilities. It also needs to be ensured that all Operators including incumbent Operators comply with the existing Regulations.

Revisions Recommended:

- (1) **Abolition of Perpetual Seeker Status**: The provision in Regulation 6, which defines the initial two-year period where one party acts as the sole "seeker," must be enforced as a maximum transition phase, and the concept of one party being a perpetual "seeker" must be eliminated. All post-transition agreements must operate on a fully reciprocal, bilateral basis, where port seeking and cost obligations are proportional to outgoing traffic requirements, based on the principle of Equivalence of Inputs (EOI). This removes the structural asymmetry that burdens some TSPs.
- (2) **Streamlined Timelines**: The cumulative timeline for provisioning and acceptance testing (totalling approximately 42 working days) must be reviewed and significantly reduced. The acceptance testing period (currently 10 working days, as amended in 2018) should be harmonized and streamlined, given that IP provisioning primarily involves logical configuration rather than extensive physical cabling. The entire provisioning and commissioning cycle should be aggressively streamlined to reduce the potential for deliberate delays.
- Q.8. Should the existing framework for Interconnection process and timelines, as provided in the existing TRAI regulations including, The Telecommunication Interconnection Regulations (TIR) 2018, The Telecommunication Interconnection (RIO) Regulations, 2002, and The Telecommunication Interconnection (Charges and Revenue Sharing) Regulation 2001 be revised or continued.

Kindly indicate challenges, if any, currently being faced in the implementation of the framework by the TSPs and their possible remedies. Kindly provide your response with detailed justifications.

STPL Response:

1. Retention and Enforcement of TIR 2018

The Telecommunication Interconnection Regulation (TIR) 2018 is an advanced and well-developed regulatory framework that comprehensively addresses all interconnection requirements and establishes realistic completion timelines. Consequently, there is limited need for major amendments to this regulation, aside from focusing on three critical enforcement mandates:

- **Universal Compliance:** Ensuring all operators strictly adhere to the stipulated timelines.
- **LSA-Level POI Migration:** Enforcing the mandate for migrating Points of Interconnection (POIs) to the Licensed Service Area (LSA) level.
- **IP-Based Mandate:** Mandating the industry-wide transition to IP-based interconnection.

2. Addressing Non-Compliant Operators

The Authority is well aware that some Operators are hindering these progressive industry steps. Therefore, robust measures must be introduced to significantly increase the enforceability of the Regulations specifically targeting the non-compliant operators.

3. Repeal of Redundant Regulations

Regarding "The Telecommunication Interconnection (RIO) Regulations, 2002" and "The Telecommunication Interconnection (Charges and Revenue Sharing) Regulation 2001," we submit that their most operative and relevant provisions are already addressed by subsequent regulations, notably the TIR 2018 and the IUC 2003 Regulations. We propose that these older regulations be repealed. If necessary, their core guiding principles can be integrated into either the TIR 2018 or the Indian Interconnection Code, as deemed most feasible for regulatory streamlining.

Q.9 Whether there is a need to revise the existing process of disconnection of POIs as provided in regulation 11 of the Telecommunication Interconnection Regulations (TIR) 2018? If yes, what specific changes should be done in the disconnection procedure? Kindly justify your response.

STPL Response:

No major procedural revision to the disconnection process (Regulation 11) is necessary, as the two-tiered, 30-working-day notice period provides sufficient safeguards against arbitrary cutoff. However, critical clarification regarding the grounds for disconnection is required.

The regulations must explicitly mandate that disconnection notices may only be issued after the service provider has exhausted all avenues of dispute resolution, and primarily on the grounds of non-payment of undisputed, regulated charges (IUC, Port Charges, or standardized infrastructure charges). This prevents TSPs from using the threat of disconnection to enforce payment of disputed commercial liabilities or non-regulated fees.

Q.10 Is there a need to introduce a process for the surrender or closure of POIs in the regulatory framework? If yes, what should be the criteria, procedure, charges, and timelines, including the minimum retention period for POIs before a surrender or closure request can be made? Kindly justify your response.

STPL Response:

Yes, introducing a formal, transparent process for the voluntary surrender or closure of POIs/ports is essential, as the existing framework only addresses disconnection due to contravention or non-compliance.

Criteria and Procedure for Surrender:

- **Criteria**: Surrender requests for individual ports or entire POIs should be entertained if the utilization rate has remained demonstrably below a defined threshold (e.g., 10% of capacity) for six consecutive months, or if the service provider formally withdraws service from the relevant geographic area.
- **Minimum Retention Period**: To prevent strategic capacity booking and subsequent immediate surrender, a minimum retention period of 12 months from the date of commissioning or last major augmentation should be imposed before a surrender request can be considered.
- **Timeline and Notice:** A mandatory 90-day notification period must be provided by the surrendering party to allow the receiving TSP ample time to re-route traffic and manage operational changes.

Q.11 In order to safeguard the interest of TSPs arising due to financial obligations of interconnection, is there a requirement for furnishing bank guarantee by one TSP to the other TSP? If yes, please provide the process and methodology for determining the initial bank guarantee amount and any subsequent bank guarantee amount, if required. Kindly justify your response.

STPL Response:

We disagree with the proposal to mandate the use of Bank Guarantees (BGs) to secure the financial interests of interconnecting parties. Since interconnection is a fundamental requirement under the Unified License, and the participating entities are large licensees subject to significant financial commitments and TRAI regulatory oversight, requiring BGs for interconnection-related payments is superfluous. We therefore request that this requirement be withdrawn.

Q.12 Should a procedure be established for addressing delays in the payment of interconnection-related charges? If yes, what should be the procedure to address such delays? Kindly provide your response with justification.

STPL Response:

There is no need for a procedure to be established for addressing delays in the payment of interconnection-related charges. Furthermore, to address payment delays, the invoicing party should be granted the right to set off non disputed outstanding interconnection-related charges against its own payables, and this right should be explicitly incorporated into the Interconnection Regulation, overriding any conflicting terms in specific Interconnect Agreements.

Q.13 Is there a need to revise the financial disincentive framework as provided in these regulations. If yes, what specific changes should be done? Kindly justify your response.

STPL Response:

We submit that the existing financial disincentive of Rupees One Lakh per day per Licensed Service Area for contravention of the Regulations is already established and requires no revision. While we remain fundamentally opposed to the general concept of financial disincentives in a mature telecom market, we stress that regulatory provisions must be enabling enough to ensure compliance by all service providers.

A.2 The Short Message Services (SMS) Termination Charges Regulations, 2013

Q. 14 Is there a need to revise the existing SMS termination charge? If yes, what are the considerations necessitating such a revision? If not, kindly provide justification.

STPL Response:

It is understood that this question is related only to P2P SMS and its termination charges which were fixed vide Short Message Services (SMS) Termination Charges Regulations, 2013.

Para 2.139 of the Consultation Paper specifically clarifies that the present consultation exercise does not envisage the review of the subject matters of A2P SMSs viz promotional, service and transactional SMSs along with those related with unsolicited commercial communication such as spam SMSs which are rightly dealt under 'The Telecom Commercial Communications Customer Preference Regulations, 2018' (as amended from time to time). Relevant para is reproduced as under:

"2.139. As discussed above in para 2.121, the subject matters of A2P promotional, service and transactional SMSs along with those related with unsolicited commercial communication such as spam SMSs are dealt under 'The Telecom Commercial Communications Customer Preference Regulations, 2018' (as amended from time to time), present consultation does not envisage the review of these regulations."

It is therefore requested that comments in respect of the A2P SMS or A2P calls which some of the TSPs might attempt to raise may not be considered, being outside the stated ambit of the present consultation exercise as stated above.

In respect of P2P SMS, we would like to submit as follows:

- Considerations Necessitating Revision - Market Shift and Technological Divergence: The current domestic SMS termination charge of ₹0.02 (2 paise) per SMS was established in 2013 based on cost assessment of a network ecosystem significantly different from today's. The rise of Over-The-Top (OTT) messaging applications has caused Person-to-Person (P2P) SMS volumes to decline and

- remain minimal, while Application-to-Person (A2P) commercial traffic (used for One-Time Passwords, alerts, and enterprise communication) has surged.
- Cost Reflectivity and Efficiency: The true incremental cost of carrying an SMS, which utilizes the SS7 signalling channel (also used for call setup), is marginal in modern packet-switched networks. Maintaining a single, decades-old termination rate violates the principle of cost-based charging in an efficient, all-IP environment.

Proposal for P2P SMS: This traffic should transition to a Bill-and-Keep (B&K) regime. Due to its symmetrical and negligible volume, the cost and administrative overhead associated with calculating and settling a per-message charge for P2P traffic are inefficient. However, some stakeholders may argue that a regulated, cost-based charge should be retained even for non-commercial/P2P SMS to act as a deterrent against spam and to encourage the receiving network to maintain quality of service (QoS) for message delivery.

Q.15 Is there a need to prescribe SMS carriage charges when an NLDO carries SMS between the LSAs? If yes, what principles and methodology should apply? If not, kindly provide justification.

Response:

Yes, there is a clear necessity to prescribe a standardized, cost-based SMS carriage charge for National Long-Distance Operators (NLDOs) when they carry SMS traffic between Licensed Service Areas (LSAs). However the carriage charges should be payable only to the NLDO undertaking the carriage of SMS taken over from Originating Access Provider and delivering it to the Terminating Access Provider and no carriage charges should be payable to the terminating Access Provider.

Rationale for Prescribing the Charge:

Regulatory Gap and Operational Reliance: The existing framework does not explicitly regulate this charge, which creates a significant gap for service providers that hold single or multiple LSA authorizations but do not possess a pan-India NLDO network. These niche operators rely on the NLDO's signalling network to route inter-LSA SMS traffic.

Principle of Compensation for Work Done: Adherence to the core regulatory principle of compensating for "work done" requires that NLDOs receive appropriate payment for

the utilization of their network elements and transmission capacity to carry SMS signalling and payload across long distances.

Promoting Fair Competition: Prescribing a transparent carriage charge ensures equitable revenue-sharing and prevents NLDOs from having to cross-subsidize non-NLD TSPs, thereby supporting a level playing field.

Guiding Principles and Methodology:

Cost-Based Charging: The charge must be prescribed and strictly based on the verifiable cost incurred by the NLDO.

Optimal Routing: The cost calculation should be based on the most optimum route available, reflecting the lowest economically viable cost of network usage.

Alternatively, if the Authority wants to skip the cost-based calculations to fix the carriage charge, the Authority may consider to provide an appropriate minimal ceiling for NLDO carriage of SMS at Re .02 per SMS.

A.3 Intelligent Network Services in Multi-Operator and Multi-Network Scenario Regulations, 2006

Q.16 Is there a need to revise the existing access charge to be paid by the service provider to the originating provider for IN services? If yes, kindly provide detailed explanation; if not, kindly provide justification.

And

Q.17 Are there any difficulties that service providers encounter in complying with existing IN Regulations, 2006 in Multi-Operator and Multi-Network Scenario? Kindly describe these challenges in detail and suggest possible regulatory remedial measures to overcome these challenges.

STPL Response:

Yes, the existing IN access charge of ₹0.52 per minute (mandated via a 2007 decision) should be revised downwards.

Rationale:

The ₹0.52 charge was based on network costing methodologies applicable to TDM-era architectures. With the widespread adoption of IP-based core networks, the marginal

cost (specifically, the Long Run Incremental Cost, LRIC) of originating and carrying a voice minute, including IN calls (such as free phone service), has fallen significantly. The revised access charge must reflect these substantial efficiencies derived from modern, packet-switched technology.

The primary challenge encountered by TSPs relates to the interoperability between legacy SS7 protocols used by older IN platforms and the modern IP/IMS-based signaling protocols (such as SIP) deployed in next-generation core networks (NGN/5G)

Remedial Measures:

The Authority should mandate a time-bound technical migration schedule for all IN service providers, requiring them to utilize IP-based interconnection for IN services. Furthermore, compliance with updated technical standards issued by the Telecommunication Engineering Centre (TEC) for signaling gateways and Session Border Controllers (SBCs) is essential to ensure seamless and secure communication between diverse network generations.

A.4 TRAI (Transit Charges for BSNL's Cell One Terminating Traffic) Regulations, 2005

Q.18 Is there a need to revise the Telecom Regulatory Authority of India (Transit Charges for Bharat Sanchar Nigam Limited's Cell One Terminating Traffic) Regulation, 2005? Kindly provide your response with justification.

STPL Response:

This specific Regulation was originally enacted in compliance with an order issued by the Hon'ble Telecom Disputes Settlement and Appellate Tribunal (TDSAT), primarily to resolve and prevent the imposition of an unauthorized transit charge by BSNL for routing calls destined for CellOne subscribers. We maintain that there is no current necessity to re-evaluate the issues covered by this Regulation. Furthermore, the Regulation is expected to become redundant once the industry transitions to LSA-level Points of Interconnection (POIs), as all Person-to-Person (P2P) traffic will subsequently be handed over at these POIs on a no-cost basis to both parties

A.5 The Telecommunication Interconnection Usage Charges Regulations, 2003

Q.19 The existing interconnection regulatory framework provides for application of origination, carriage, transit, transit carriage and termination charges for various levels of interconnections for PSTN-PSTN, PLMN-PLMN, PLMN-PSTN. Based on the

interconnection regulatory framework suggested in your response in Questions 1, 2 and 3 above, should there be a review of these charges? Kindly justify your response.

STPL Response:

The domestic Interconnection Usage Charges (IUC) regime has successfully transitioned to the Bill and Keep (BAK) principle, an arrangement that is currently functioning efficiently and requires no regulatory intervention regarding origination, carriage, or termination charges. With the proposed migration to LSA-level and centralized interconnection, each operator will be fully responsible for managing the incoming traffic destined for its own customers. Under this structure, the transit charge should be immediately abolished based on the principle of full reciprocity. We therefore urge the Authority to mandate the elimination of these transit charges.

Q.20 For termination of emergency calls/SMSs from one TSP's network to another TSP's network, should there be a provision of any additional charges other than applicable IUC? If so, what should be the charges and the basis thereof?

STPL Response:

No, the termination of all emergency calls (including calls to 112 and legacy Level-1 codes transitioning to ERSS) must be mandated at zero charge.

Rationale:

Emergency services are a cornerstone of public safety and represent a fundamental public service obligation. Imposing additional, non-cost-based charges (such as the escalating lump sum fees observed in some PSU TSP agreements, which rose from ₹10 lakh to ₹41.8 lakh per LSA) creates a direct commercial disincentive to efficient emergency response provisioning. Network costs incurred by TSPs to provide PRI line connectivity to Public Safety Answering Points (PSAPs) should be recovered through regulated, transparent means, such as the Universal Service Obligation Fund (USOF), and not through inter-operator commercial charges.

Q.21 Should the International Termination Charges (ITC) for international incoming calls to India be revised? If yes, what are the considerations necessitating such a revision. Kindly provide your response with justification.

STPL Response:

Yes, the International Termination Charges (ITC) for international incoming calls to India should be strategically revised upwards from the current floor/ceiling range of ₹0.35 to ₹0.65 per minute to Rs 1.50 per minute as a ceiling.

Rationale for Revision:

Cost Recovery: International voice traffic carried over Public Land Mobile Networks (PLMN) has declined sharply (over 85% decline since 2015-16) due to the shift to internet-based communication. Raising the ITC ceiling ensures that ILDOs and terminating access providers can recover the costs associated with maintaining the mandated gateway infrastructure necessary for secure, compliant international voice traffic.

Q.22 Is there a need to address the issue of telemarketing and robo-calls within the interconnection framework? If yes, kindly provide your inputs on the possible approaches. Kindly justify your response.

STPL Response:

No, there is no need to incorporate provisions specifically addressing telemarketing and robo-calls within the Interconnection Framework.

The primary reasons and supporting logic for this is as follows:

 Dedicated and Sufficient Regulatory Mechanism Exists: The issue of telemarketing & robo calls is already comprehensively and effectively governed by a dedicated framework: the Telecom Commercial Communications Customer Preference Regulations (TCCCPR), 2018 and is amendments and various other orders like use of level 1400/1600 for these calls.

Focus on Consent: The TCCCPR utilizes the Distributed Ledger Technology (DLT) platform, which is specifically designed to manage customer consent, register telemarketers, verify message headers (scrubbing), and ensure traceability. This consent-based, application-layer control is the correct technical and regulatory approach for UCC.

Avoiding Regulatory Duplication: Introducing separate rules within the Interconnection Regulations (TIR 2018) would lead to redundancy and create

conflicting or overlapping enforcement responsibilities between the two regulatory instruments.

2. Difference in Regulatory Scope and Purpose

The Interconnection Framework and UCC Regulations serve fundamentally different purposes:

Interconnection Framework (TIR): The purpose of interconnection regulations is to define the technical parameters, quality of service (QoS), physical location (POI), and commercial terms (IUC/BAK) for the exchange of traffic between different licensed networks. It is a network engineering and commercial agreement framework.

<u>UCC Regulations (TCCCPR):</u> The purpose of the UCC regulations is to control content and intent (i.e., whether the call is solicited or not) and enforce customer privacy. Mixing these two distinct objectives can unnecessarily complicate and delay the evolution of the technical interconnection framework.

3. 'Security by Design' and Existing License Conditions

Network security, which is often cited as the reason to embed UCC controls, is already comprehensively addressed elsewhere:

Network Security: Modern telecom networks are built on the principle of "Security by Design".

Existing Legal Mandates: Specific network security provisions are already mandated under the Telecommunication Act 2023, the associated Rules (draft stage), and the general conditions of the Unified License (UL). These instruments provide sufficient legal

authority to penalize or disconnect non-compliant licensees involved in fraudulent activities, irrespective of the interconnection framework.

4. Risk of Stifling Technical Modernization

Adding complex, content-related filtering and security mandates to the interconnection framework risks slowing down the critical industry migration:

Focus on IP Migration: The industry's primary technical goal is migrating to IP-based interconnection at higher levels (LSA-level POIs). This transition is vital for future network efficiency and multi-path resiliency.

Increased Complexity: Burdening the core interconnection rules with non-core security and content provisions would make the framework overly complex, potentially delaying agreements and slowing down necessary network modernization efforts.

A.6 The Telecommunication Interconnection (Reference Interconnect Offer) Regulations, 2002

Q.23 Is there a need to revise 'The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002'? If yes, kindly provide the specific revisions. Kindly provide your response with justification.

STPL Response:

We submit that the RIO Regulations have achieved their historical purpose and now require no further change or update following two decades of technological and market evolution. It is important to recall that these Regulations were crucial during the initial market entry of private service providers, successfully mitigating interconnection hurdles with the incumbent government players. Their impact was significant, fostering competition in mobile and basic telephony and ensuring access to interconnected networks for all Telecom Service Providers (TSPs).

However, with the subsequent introduction of the comprehensive Telecommunication Interconnection Regulations (TIR), 2018, which fully details all current interconnection requirements and provides explicit timelines for associated activities, the RIO Regulations have effectively lost their regulatory relevance. We therefore recommend that this Regulation be repealed to streamline the existing framework.

Should the Authority deem that certain foundational guiding principles of the RIO Regulations remain necessary for the current market, we propose that, at the very maximum, only broad guidelines focused on Fair, Reasonable, and Non-Discriminatory (FRAND) principles for offering interconnection be incorporated into the existing TIR 2018. All other detailed activities should be explicitly left to bilateral negotiations. This approach promotes operational flexibility and significantly reduces the regulatory burden, which is appropriate for India's mature and competitive telecom market. Furthermore, the Authority already holds sufficient provisions under TIR 2018 to protect and safeguard the interests of smaller or new entrants when faced with situations of uneven bargaining power.

Q. 24 For the purpose of interconnection, is there a need to revise the current categories of 'Services' and 'Activities' to determine Significant Market Power (SMP)? Kindly provide your response with justification.

STPL Response:

Given that the redefinition of Significant Market Power (SMP) was previously addressed through the TTO 63rd Amendment, which is now the subject of litigation initiated by stakeholders and is currently sub judice before the Hon'ble Supreme Court, we respectfully request that this specific discussion be set aside for the time being.

Q. 25 Should the publication of Reference Interconnect Offers (RIOs) on the websites of Telecom Service Providers (TSPs) be mandated? Kindly justify your response.

STPL Response:

We submit that the telecom industry is already operating with standardized interconnect agreements that are built upon principles of reciprocity and are offered to all competitors on non-discriminatory terms.

Furthermore, all such bilateral agreements are mandatorily filed with TRAI. This submission requirement allows the Authority to independently examine and validate adherence to the principles of reciprocity and non-discrimination at any time. Given the maturity of the market and the existing oversight mechanism, the requirement for publishing a formal Reference Interconnect Offer (RIO) has lost its relevance and should therefore be repealed.

A.7 The Telecommunication Interconnection (Charges and Revenue Sharing) Regulations, 2001

- Q. 26 Should there be any interconnection charges? If yes, kindly provide details about the following:
- a. the types of infrastructure charges to be levied,
- b. the guiding principles for determining such charges along with ceiling, if required, and
- c. determination of time-based escalation methodology, if required. Kindly provide your response with justification.

STPL Response:

We concur with the Authority that the fundamental principles enshrined in the 2001 Regulations—namely cost-based charging, consideration of incremental or additional cost, non-discrimination, and the prohibition of unwanted charges for services not sought—remain highly relevant to a competitive telecom market. However, it is a critical observation that these principles have been consistently ignored in practice. The incumbent provider, BSNL, has leveraged its position as a perpetual interconnection provider to impose unilateral and one-sided interconnection charges, thereby undermining the spirit of the regulatory framework.

We assert that, beyond the charges explicitly mandated by the Regulations, the commercial terms of interconnection with BSNL are unduly governed by a series of unilateral charges that must be immediately brought under regulatory scrutiny and control.

Arbitrary POI Infrastructure Charges: One such highly problematic levy is the Point of Interconnection (POI) infrastructure charge.

Basis and Escalation: BSNL arbitrarily determines this charge based on a city category basis and applies an automatic, mandatory 10% annual escalation. This mechanism has resulted in the charge effectively doubling over the last decade, creating an unsustainable financial burden on interconnecting partners.

Lack of Justification: These charges lack transparency and regulatory oversight, creating a significant and predictable revenue stream for BSNL that is disproportionate

to the actual costs of maintenance or capacity provided, especially given the transition towards IP-based interconnection.

A further distortion of market principles occurs when BSNL forces private operators to build and provide the media (fiber or cable infrastructure) required to carry even BSNL's own traffic, only to then charge them infrastructure fees for the same.

Reciprocity Principle: This practice fundamentally violates the principle of reciprocity in network investment and operational responsibility. In a reciprocal environment, each party assumes responsibility for its own network costs up to the agreed-upon POI.

Required Action: This coercive practice must be halted. Any arrangement for the sharing of media infrastructure should be strictly governed by the principle of equal reciprocity and mutual cost-sharing, not unilateral financial imposition.

BSNL imposes an array of unjustified and prohibitive fees for the voluntary shift or surrender of existing POIs, which acts as a deterrent to network optimization and efficiency:

Charge	Description of Levy	Justification
Category		
Penalty for Surrender	Surrender charges at the existing POI equivalent to	
Surremaer	one full year's port	beyond recovery of genuine
	charges and six months of	outstanding costs.
	infrastructure charges.	
New Setup Fees	Fresh port charges, Set-up charges, Duct Charges, and Passive Media charges for the new POI location.	Excessive. While some setup costs are expected, demanding full annual port charges for the surrendered link <i>in addition</i> to imposing multiple fees for the new link is a mechanism designed to generate revenue rather than cover incremental costs.

Q.27 Whether following sections of The Telecommunication Interconnection (Charges and Revenue Sharing) Regulations, 2001:

- a) Section IV which contains 'Revenue Sharing Arrangements' i.e. interconnection usage charges.
- b) Schedule I and II which contains rates of interconnection usage charges still hold relevance, in view of the subsequent issuance of the Regulation 4 under Section IV which specifies rates of 'Interconnection Usage Charges (IUC) under 'The Telecommunication Interconnection Usage Charges Regulations, 2003'.

Additionally, is there an alternative way to organize these two regulations to enhance clarity and ease of understanding? Kindly provide your response with justification.

STPL Response:

We submit that the operational provisions of the Telecommunication Interconnection (Charges and Revenue Sharing) Regulation, 2001—including its associated schedules—have been systematically superseded or amended by the Telecommunication Interconnection Usage Charges Regulation, 2003 and thereafter by the Telecommunication Interconnection Regulations (TIR), 2018. Consequently, these Regulations of 2001 and 2003 have lost its regulatory relevance and should therefore be repealed entirely.

Should the Authority deem it necessary to preserve the fundamental guiding principles contained within the 2001 & 2003 Regulation—such as cost-based charging, the consideration of incremental and additional costs, non-discrimination among Telecom Service Providers (TSPs), and the principle of not charging for any service not sought by the seeker—these principles can be efficiently and logically subsumed within the TIR 2018. This approach will streamline the regulatory framework without sacrificing essential market conduct standards.

A.8 Telecommunication Interconnection (Port Charges) Regulations, 2001 and Its Amendments

Q.28 Is there a need for change, if any, required in respect of following:

- Port Technology
- Port Size (Capacity)
- Port Charges
- Any other related aspect

Kindly provide a detailed response with justification.

STPL Response:

Yes, comprehensive revision is required across all four categories to move beyond the obsolete E1/TDM model.

(i) **Port Technology:** The definition must evolve from a physical E1 link to a Technology-Neutral Logical Interface. The relevant physical interfaces should

- be defined by high-capacity, optical/electrical IP/Ethernet standards (1 Gbps, 10 Gbps, 100 Gbps), as specified by TEC standards for IP interconnection.
- (ii) **Port Size (Capacity):** Replace the fixed E1 capacity (2.048 Mbps) with flexible, scalable Bandwidth Denominations (measured in Mbps/Gbps) that align with modern packet-switched networking principles.
- (iii) **Port Charges:** The existing fixed ceiling rates (e.g., ₹4,000 per port for MSC) are based on historical TDM equipment costs. These must be replaced with LRIC-based charges calculated using contemporary IP network elements (SBCs, core routers, media gateways) and virtualized infrastructure costs. With the growth in telecom services, introduction of IP technology and economies of scale, the network costs for provision of Ports have reduced drastically and the current levy does not reflect the cost of the service.
- (iv) Any other related aspect: Incorporate service level agreements (SLAs) tied to IP-centric performance metrics (latency, jitter, packet loss) into the port usage terms.
- 1. The Need for Cost Review and Proviso Removal: Given the humongous increase in traffic volume, enhanced connectivity, and the technological redundancy of legacy network elements like TAX switches, it is imperative that all legacy and one-sided levies, particularly port charges, be immediately reviewed and substantially reduced.

However, this necessary modernization is severely impeded by the proviso inserted into the Telecommunication Interconnection Regulations (TIR) 2018 via the amendment dated July 5th, 2018:

"Provided that the port charges and infrastructure charges, for all ports provided before the 1st February, 2018, shall continue to be payable as per the terms and conditions which were applicable to them before the 1st February, 2018."

This proviso effectively legitimizes the continuation of unilateral, one-sided, and coercive terms unilaterally prescribed by BSNL/MTNL for ports and infrastructure charges. This measure directly contravenes the core regulatory concepts of transparency, fairness, and reciprocity in interconnect agreements. We assert that this proviso must be removed, and any revised port charges prescribed by the Authority must be applicable to all ports, regardless of when they were provisioned.

2. Strategic Regulatory Priorities The removal of long-standing, redundant legacy regulatory interventions must be a priority for the Authority. These interventions

have lost their purpose due to convergence, technological advancements, changes in consumer preferences, economies of scale, and the migration toward a Bill and Keep (BAK) regime for all connection types. In light of the above, we request the Authority to take the following actions:

- Review and Revise E1 Port Charges: Kindly review and substantially revise the
 existing E1 Port Charges prescribed vide The Telecommunication Interconnection
 (Port Charges) (Second Amendment) Regulations, 2012 (dated September 18th
 2012.
- **Prescribe IP Port Charges:** Additionally, the Authority must prescribe appropriate IP Port charges to facilitate and govern the upcoming industry-wide migration to IP interconnection.
- **3.** We submit the following specific actions are necessary to ensure a fair and modern interconnection regime:
- a) The existing port charges must be reviewed and substantially reduced.
- b) All changes and revisions to port charges must be applicable to all ports currently in operation.
- c) The port charge-related proviso must be removed from the Telecommunication Interconnection Regulations 2018.
- d) BSNL and MTNL must be mandated to fully comply with the Telecommunication Interconnection Regulations 2018 and be compelled to bear the cost of their own ports after network bifurcation.
- e) BSNL/MTNL must be strictly directed to refrain from imposing irrational and unilateral charges.

Q.29 Should port charges be uniform across all services and technologies? Kindly provide detailed response for the following categories specifically:

- a. Fixed Line Service/ Mobile Service/ NLD service/ ILD service, and
- b. E1 (TDM) based interconnection and IP based interconnection.

In case non-uniform charges are suggested, what methodology should be followed for calculation of port charges for above mentioned categories of services and technologies. Kindly provide a detailed response with justification.

STPL Response:

Port charges should be uniform across different service categories but non-uniform across different technologies.

- a) Service Categories: Port charges should be uniform across Fixed Line, Mobile, NLD, and ILD services, provided they utilize the same standardized IP physical interface. The function of the port is purely capacity exchange, which is technology-specific, not service-specific.
- b) **Technology Categories**: Port charges for E1 (TDM) and IP-based interconnection must be non-uniform. IP-based interconnection offers inherently lower marginal costs per unit of bandwidth due to architectural efficiencies. Mandating uniform charges would violate cost-based principles and effectively create a cross-subsidy for outdated E1 TDM equipment, thereby disincentivizing the necessary industry-wide migration to IP.
- c) Uniformity and Cost-Based Calculation: Port charges must be uniform across all services. For the upcoming IP-based interconnection, the Authority should mandate a transparent, cost-based calculation to determine the appropriate port charges.
- d) **Revision Based on Actual Costs**: The existing TDM port charges must be immediately reviewed and revised downwards based on a verifiable assessment of actual, current operational costs, reflecting the technological advancements and cost efficiencies achieved in the last decade.
- e) **Impact of Centralized IP POIs**: We anticipate that the planned shift to centralized IP Points of Interconnection (POIs) will inherently facilitate and positively impact the implementation of these reciprocal charging principles.

Q.30 Whether use of 'Erlang' as a unit of traffic in various interconnection regulations is sufficient and are the current procedures for demand estimation as provided in the Telecommunication Interconnection (Port Charges) Regulation 2001 and the TIR 2018 still effective and practical, in view of adoption of IP based interconnection? If yes, kindly provide justification in support of your response. If no, kindly provide alternate metrics and demand estimation methods for IP-based interconnection along with detailed explanation.

Response:

No, the use of 'Erlang' is technically insufficient and obsolete for demand estimation in IP-based interconnection environments.

Rationale and Alternative Metrics:

- 1. Erlang Obsolescence: The Erlang model is mathematically predicated on the characteristics of circuit-switched networks, where a channel is continuously occupied for the duration of a call, and resources are dimensioned based on blocking probability (Grade of Service). IP-based networks are packet-switched and resource-shared, where voice and signaling are multiplexed as bursty data packets.
- 2. **Alternative Metrics:** Demand estimation must transition to metrics appropriate for IP networks, primarily:
- **Bandwidth Utilization:** Measured in Mbps or Gbps, typically calculated as the 95th percentile of peak hour throughput over a preceding measurement period (e.g., 60 days).
- Quality of Service (QoS) Thresholds: Augmentation requests should be triggered not just by a utilization threshold (e.g., 85% capacity utilization), but also by the sustained breach of objective IP QoS parameters, such as

excessive latency, jitter, or packet loss, which are the primary indicators of congestion in an NGN environment.

Technical Architecture and Dimensioning of IP Interconnection

1. Interconnection Setup and Key Network Elements

IP interconnection is established via Point-to-Point (P2P) link connectivity. The core network elements deployed for this interconnection are:

Connectivity Equipment: Digital Cross-Connects (DWDM/SDH MUX) used to establish and manage the high-capacity transport link.

Capacity Link: High-speed physical interface, typically a 10 Gigabit Ethernet (10G) port link, used for exchanging traffic.

Control and Routing: A dedicated Peering Session Border Controller (SBC), which manages SIP signaling for call control and the RTP bearer for voice data, facilitating subsequent call routing within the respective networks.

2. POI Dimensioning and Redundancy

The process for dimensioning IP Points of Interconnection (POIs) is streamlined. Incremental capacity requirements are added in Gigabits (Gigs), determined by assessing traffic growth over the last two fiscal quarters alongside future business projections provided by both parties.

Capacity Allocation: Based on this joint assessment, the required number of call sessions is calculated, allocated, and configured at both ends of the peering link to meet the projected capacity needs.

Redundancy: Network resiliency is achieved through the use of primary and secondary IP link connectivity, ensuring traffic can be routed between the two Telecom Service Providers (TSPs) via separate, dedicated routers.

A.9 The Register of Interconnect Agreements Regulations, 1999

Q.31 In either case, kindly provide suitable diagrammatic representation. Should the current provisions for submission, inspection and getting copies of interconnection agreements under 'The Register of Interconnect Agreements Regulations, 1999' using floppy disks and print copies be dispensed with and be made online? If yes, what changes do you suggest for the online process, timelines, related charges and any other aspect? If not, kindly provide justification.

STPL Response:

Yes, the current provisions, (Clause 5, Section-III of the Register of Interconnect Agreements Regulations 1999) which mandate the use of archaic technology like "floppy disks and print copies," must be entirely dispensed with and replaced by a mandatory, end-to-end digital online process.

Changes for Online Process:

- 1. **Submission:** Mandate the submission of digitally signed electronic copies of interconnection agreements via a secure, centralized TRAI online portal within 15 days of execution. This would be in line with major steps taken by TRAI in creating a paperless environment by accepting digital/online submissions of reports, compliances, and various other correspondence and accepting of Interconnect Agreements would further support the environment friendly practices.
- 2. **Access:** The non-confidential portion of the Register must be made immediately and freely accessible online to the public. The obsolete and inefficient fees stipulated for physical inspection (₹50 per hour) and obtaining copies (₹20 per page) should be eliminated. This digital overhaul increases transparency, speed, and efficiency for all stakeholders.

B. Generic Questions pertaining to all existing interconnection regulations

Q. 32 Is there a need to incorporate provisions for financial disincentives in interconnection regulations to deter non-compliance? If yes, kindly provide specific scenarios and mention the concerned regulations, where financial disincentives would be applicable, along with their quantification. Kindly justify your response.

STPL Response:

In a mature telecom market, we are against the imposition of further Financial Disincentives (FDs). The focus should be on creating a regulatory regime that is equitable and effective enough to compel compliance on its own terms. Since the TIR 2018 already includes existing FD mechanisms, we contend that the implementation of any new or supplementary financial disincentives is wholly unwarranted.

Q.33 What should be the mechanism and timelines for transition of existing interconnection agreements between the service providers to the new regulatory framework that will emerge from this consultation process?

Kindly provide detailed response with justification.

STPL Response:

We submit that existing Interconnection Agreements (IAs) generally contain a standard clause stipulating that the agreement terms are subject to TRAI Regulations. This provision has historically ensured that existing IAs did not require redrawing following the notification of the Telecommunication Interconnection Regulations (TIR) 2018, and this principle should remain applicable for any future regulatory revisions. Even in absence of such a clause in the IA which is a contract between two parties , the over-riding provisions of applicable Regulation, being a subordinate legislation, will still apply especially in case of any contrary provisions in the IA.

Consequently, as and when the revised Regulations become applicable, the IAs will be automatically required to be compliant with the new mandates. Therefore, there is no need to prescribe a specific regulatory timeline for the transition or revision of these agreements.

Furthermore, should interconnecting parties mutually agree to formally redraft their agreements, this process can be undertaken bilaterally and run concurrently with the continued operation of the existing agreement.

Q.34 What should be the interconnection framework for satellite-based telecommunications networks with other telecom networks? Further, whether the interconnection frameworks for MSS and FSS satellite-based telecommunications networks should be distinct? Please provide your response along with end-to-end diagrammatic representation and justification in respect of the following: Satellite - Satellite network interconnection Satellite - PLMN interconnection Satellite - PSTN interconnection

STPL Response:

No comments.

Q. 35 Are there any specific regulatory models from other countries that have successfully addressed interconnection related issues and challenges which can be adapted in the Indian telecom sector? If yes, kindly provide details of such best international practices.

STPL Response:

No comments.

Q. 36 Kindly mention any other challenges or concerns related to the regulations being reviewed in this consultation paper.

STPL Response:

No comments.