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TRAI/FY25-26/114

02<sup>nd</sup> March 2026

**Shri. D Manoj**

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New Delhi – 110029

**Subject: Bharti Airtel's Comments on Consultation Paper on *Review of Tariff for Domestic Leased Circuits (DLCs)***

**Reference: TRAI's Consultation Paper dated 23<sup>rd</sup> January 2026**

Dear Sir,

This is in reference to TRAI's Consultation Paper on the *Review of Tariff for Domestic Leased Circuits (DLCs) dated 23<sup>rd</sup> January 2026.*

In this regard, please find enclosed our comments to the consultation paper for your kind consideration.

Thanking You,

Yours Sincerely,

For **Bharti Airtel Limited**

A handwritten signature in blue ink, appearing to read 'Rahul Vatts', is written over a light blue circular stamp.

**Rahul Vatts**

Chief Regulatory Officer

**Encl: a.a**

**Preamble:**

1. Airtel would like to begin by thanking the Telecom Regulatory Authority of India (henceforth referred to as ‘the **Authority**’) for giving Airtel the opportunity to express its views on the Authority’s pre-consultation paper, *Review of Tariff for Domestic Leased Circuits (DLCs)* as part of the Authority’s efforts to foster a competitive, transparent and forward-looking telecom ecosystem in India—something much appreciated by Airtel.
2. **DLCs have historically served as a reliable point-to-point connectivity solution within India’s telecommunications ecosystem. However, with the market evolving significantly, a transition driven by changing enterprise requirements, rapid technological advancement, and the emergence of competitive, agile and scaleable alternatives is taking place. Enterprise connectivity today is no longer limited to static point-to-point bandwidth provisioning. Instead, it is increasingly defined by integrated architecture, performance commitments and intelligent network designs and solutions.**
3. It is important at this point to highlight the monetary costs of running such an operation. DLC services are powered entirely and exclusively by physical fibre infrastructure. Such infrastructure has to be dug, laid, secured, maintained and periodically upgraded across terrain regulated by more than 7,000 urban local bodies and multiple State and Central authorities. The deployment process remains heavily dependent on Right of Way (RoW) permissions and restoration norms administered by diverse authorities with varying degrees of integration into the Gati Shakti Sanchar framework. Despite regulatory initiatives, the operators continue to face significant inconsistencies, procedural delays and elevated costs in securing RoW approvals. Meanwhile, restoration charges, where specified, are frequently excessive and, where unspecified, are arbitrary and unpredictable. Consequently, the costs of deploying and maintaining fibre networks remain high and, in many instances, continue to escalate.
4. In other words, the underlying cost structure for DLC provisioning is neither uniform nor declining. As such, any presumption that tariffs should automatically reduce disregards these economic realities. It is important that these tariffs are allowed to reflect their diverse cost conditions through market-driven mechanisms rather than be governed by prescriptive and limiting regulation.
5. The Indian DLC market is already characterised by effective competition, with 71 licensed providers, including national and international operators. Market-driven pricing, competitive bidding and continuous innovation define the segment. Enterprise DLC contracts, today, are highly customised and engineered around site-specific SLAs, secure communication, redundancy configurations, and risk-sharing mechanisms. The architecture may include dual MPLS clouds, multiple levels of redundant last-mile media (fiber, RF, 4G/5G), and stringent penalty-linked commitments. **A uniform, regulated tariff framework will, therefore, not work for this market. It will not be able to capture bespoke engineering design, hardware redundancy, active-active configurations, or financial exposure arising from performance**

**guarantees. Strong competition, particularly in MPLS-VPN and hybrid architecture, already operates as a natural price discipline. Any technology-specific regulation will only lead to incentivising regulatory arbitrage rather than promoting efficiency-driven network design.**

6. Further, while technologies such as DWDM, Ethernet over Fibre and SD-WAN have enhanced network capabilities, they do not alter the fundamental case for forbearance. SD-WAN is an overlay technology and does not change the underlying fibre cost base. DWDM and Ethernet are integral components of the transport ecosystem and represent ongoing technological evolution rather than structural cost reductions warranting tariff recalibration.
7. **The 2014 cost-modelling framework, including BU-FAC and distance-based constructs, is no longer aligned with packet-based, software-defined networks. The ‘death of distance’ concept along with shared core efficiencies and statistical multiplexing have rendered rigid distance slabs outdated. Reapplying legacy methodologies or adopting foreign cost models will not alter this since they will neither successfully reflect contemporary market conditions nor be able to advance regulatory objectives.**
8. Additionally, **given that ISPs are already being considered by the TRAI and the DoT to provide leased circuits/VPN services as complementary offerings while operating under comparatively lighter regulatory obligations, imposing prescriptive tariff ceilings will create regulatory asymmetry and undermine level-playing-field principles. There is no justification for staggered tariffs based on geography, service commitment or technology. Nor is there a need for additional ex-ante reporting mechanisms, standardised tariff disclosures, or DLC-specific transparency mandates.** The enterprise customer base is sophisticated, contracts are commercially negotiated and transparency is ensured through competitive processes.
9. Similarly, there is **no basis for prescribing separate ceiling tariffs for local lead and trunk segments, remote or hilly regions, or specific bandwidth capacities.** The market is competitive, technology-diverse and commercially negotiated to discover and decide price under different scenarios. Regulatory forbearance across all technologies and capacity segments remains the most proportionate and economically sound approach.
10. **In conclusion, considering the mature competitive landscape, evolving and increasing costs, extensive technological transformations and the risks inherent in prescriptive cost modelling, the Authority should adopt a regime of tariff forbearance for DLC services. Any move towards technology-specific or cost-based ceiling regulation at this stage would be regressive, inconsistent with established regulatory practices and detrimental to sustained investment, innovation and enterprise consumer welfare.**
11. Lastly, while a Virtual Network Operator (VNO) is permitted to deduct all charges paid to the underlying TSP from its GR/ApGR, a TSP procuring bandwidth or network capacity from another TSP for service delivery is not accorded the same treatment. This creates regulatory inconsistency which has a cascading effect on price. Accordingly, **Airtel submits that charges of a pass-through nature—such as bandwidth and leased line charges—should be explicitly**

**recognised in the license as deductible.** Such clarity would ensure parity, remove interpretational ambiguity, promote infrastructure sharing and encourage continued investment in telecom network expansion.

**In summary:**

- ✓ *The DLC market in India is operating under conditions of effective and sustainable competition. Accordingly, permitting ISPs to offer DLCs is neither necessary nor desirable for promoting competition and achieving tariff efficiency. Considering that the scope of ISPs w.r.t. provision of DLCs is already under consideration in the Rules, structural and regulatory distinctions among ASPs, NLDOs and ISPs also support the continuation of tariff forbearance for DLC services.*
- ✓ *Enterprise connectivity market is competitive, technologically diverse and runs on commercial negotiations with customised service commitments. Standardised tariff prescriptions in such a scenario would not only be impractical but could also potentially distort conditions.*
- ✓ *A stable and predictable policy framework with ex-post oversight, coupled with regulatory forbearance across all DLC technologies, is essential for ensuring long-term market efficiency, sustained investment, technological innovation and enterprise consumer welfare.*
- ✓ *Forbearance will:*
  - *Preserve market efficiency;*
  - *Encourage innovation and service customization;*
  - *Avoid distortions in enterprise contracting; and*
  - *Sustain the financial viability required for fiberisation and digital infrastructure expansion.*
- ✓ *Consistent with the precedents of the TRAI's TTO (57th Amendment), 2014, MPLS-VPN based DLCs should remain outside tariff regulation.*
- ✓ *Dynamic and heterogeneous nature of enterprise connectivity solutions—such as DWDM, SD-WAN and Ethernet over Fibre—cannot be effectively regulated through static tariff ceilings. Tariff forbearance is, therefore, the most appropriate approach.*
- ✓ *Technology-specific or technology-neutral or bandwidth/distance-based tariff prescriptions for DLCs and related enterprise connectivity services are not relevant in the current mature and competitive market environment. Regulatory forbearance should apply uniformly across all capacities and technologies.*
- ✓ *Distance-based pricing structures derived from 2014 slabs are obsolete. In line with the 'death of distance' principle, P2P-DLCs should be under a full forbearance regime without distance-based or other ceiling prescriptions.*

- ✓ *Staggered tariffs based on service commitments or geography are neither necessary nor appropriate. A uniform regime of regulatory forbearance should be maintained.*
- ✓ *No additional ex-ante or DLC-specific reporting requirements should be introduced in an attempt to introduce transparency in discounts or service bundling since competitive practices and contractual disclosures already ensure adequate transparency.*
- ✓ *Standardised tariff disclosure formats for DLC providers should not be mandated since they will be commercially intrusive and inconsistent with a forbearance regime.*
- ✓ *The Bottom-Up Fully Allocated Cost (BU-FAC) methodology used in 2014 should not be reapplied/used for computing cost-based ceiling tariffs. In view of the technological evolution, changing cost structures and competitive dynamics currently at play, tariff forbearance is the most appropriate regulatory approach.*
- ✓ *Separate ceiling tariffs for local lead and trunk segments are unnecessary. Regulatory forbearance should apply across all DLC segments.*
- ✓ *Spectrum charges for 6 GHz backhaul links are not an appropriate benchmark to determine DLC ceiling tariffs. Any spectrum-referenced tariff ceilings would distort competition, undermine investment and hinder innovation.*
- ✓ *Prescribing separate ceiling tariffs for remote or hilly areas is unwarranted. A nationwide forbearance regime is the most efficient, transparent, investment-friendly and non-discriminatory approach to adopt for ensuring equitable access.*
- ✓ *Charges of a pass-through nature (e.g., bandwidth or leased line charges) should be clearly defined in the license framework to ensure consistent interpretation, avoid ambiguity in regulatory and financial treatment and prevent cascading pricing effects.*

In the remainder of this document, please find Airtel's question-wise response to the Consultation Paper.

### Question-wise Comments

**Q1. What is expected to be the likely impact on competition and tariffs in the DLC sector, if the ISPs are permitted to provide DLCs in the future? Please provide your response with justification.**

**And**

**Q2. What is the likely impact of tariffs for DLC on the bandwidth charges (including the transmission costs) or any other costs incurred by ISP operators, especially for ISP B & C operators who do not have their own transmission infrastructure? Further, what are the specific elements of DLC tariff which can be addressed in the regulation to make it more relevant for ISP B & C business? Please provide your response with justification.**

**Airtel's Comments to Q1 and Q2:**

1. **Airtel submits that the DLC market in India is already operating under conditions of effective, sustainable and well-functioning competition and, therefore, permitting ISPs to offer DLCs is neither necessary nor desirable from the standpoint of enhancing competition or achieving tariff efficiency. On the contrary, such a move is likely to distort the existing market structure, undermine regulatory parity and adversely impact long-term investment incentives, without delivering commensurate benefits to consumers. The detailed justification for this is explained next:**

**a. Competitive Market Structure with Multiple NLD and Access Providers:**

- i. The DLC market today comprises a large number of active service providers including pan-India Access Service Providers (ASPs), numerous NLD licensees and circle-specific and specialised players. These providers have established extensive national backbone networks and actively compete across geographies and enterprise segments.
- ii. In fact, TRAI, in its extant consultation, has also cited the following and provided the following table which clearly indicates the stark increase in the number of players in the DLC market from 1999 to 2025:

*“Based on the progress evolving around revised license terms, since 1999 when the first TTO for DLC services was introduced, the market has transformed from being a monopolistic, nascent and growing one to a competitive and mature market. Post liberalization in Dec 2005, the NLD operators were allowed to access the customers directly for the provision of leased circuits. In 2014, there were 7 to 10 ASPs in different LSAs and 31 NLDs operators in the telecom market who could provide the DLC connectivity to the end user. As on date, multiple NLDOs and ASPs under Unified license (UL) and UL-VNOs are providing DLCs services across the country.”*

Year	No. of Players in DLC Market	Remarks
1999	BSNL	Single public sector operator
2005	BSNL/MTNL, TATA, Reliance, Airtel, TTSL, HFCL and IP-II (GAIL, Power Grid, RailTel, Shyam Telelink) <sup>23</sup>	Entry of private operators and infrastructure providers
2014	7 to 10 ASPs in different LSAs and 31 NLDOs	Market expansion with multiple service providers
2025	71 operators for NLDs (16 NLDOs through Standalone NLD license, 38 NLDOs through UL-NLD license & 17 NLDOs through UL-NLD-VNO license) <sup>24</sup> and multiple ASPs under UL <sup>25</sup> and UL-VNO <sup>26</sup> licenses	Unified License regime with broader participation

iii. This coexistence of multiple Access and NLD licensees ensures that no single entity enjoys market dominance. Further, the presence of Infrastructure Providers (IP-I), availability of dark fiber and duct infrastructure and the widespread passive-infrastructure-sharing have significantly lowered entry barriers and enhanced market contestability. Enterprises are therefore able to choose from several competing providers for equivalent DLC services.

b. **Market-Driven Pricing and Continuous Innovation:** Pricing in the DLC segment is entirely market-driven, determined through commercial negotiations based on bandwidth, topology, service levels, redundancy and customer-specific requirements. Over the past decade, there has been a consistent and sustained decline in effective DLC tariffs, even as service quality and resilience have improved significantly. This has been accompanied by rapid adoption of advanced technologies such as Ethernet over fiber, SD-WAN, managed connectivity solutions and stringent SLA frameworks. These outcomes clearly demonstrate that competition among Access and numerous NLD licensees is already delivering efficiency, innovation and affordability.

c. **TRAI's Concurrence that ISPs are 'Complementary' to NLDOs:**

i. The Authority, in its Recommendations on 'the Framework for Service Authorisations to be Granted Under the Telecommunications Act, 2023' dated 18<sup>th</sup> September, 2024 has itself observed that:

*"permitting ISPs to provide leased circuits/VPN service to their internet customers should be viewed as 'complementary' to NLDO's service offerings."*

- ii. This recognition is significant and itself affirms that multiple categories of licensees are already considered as authorised to offer leased circuits and VPN services within a complementary and competitive framework. ISPs, NLDOs and Access Providers will therefore be operating in overlapping enterprise segments, providing customers with multiple sourcing options for comparable connectivity solutions.
  - iii. In such a market structure, price discovery is inherently governed by competition. Enterprises—particularly large and medium business customers—routinely evaluate offerings across providers through competitive bidding and commercial negotiation. The presence of ISPs as active participants exerts additional competitive discipline on tariffs, ensuring that pricing remains market-aligned.
  - iv. Accordingly, when ISPs are already being considered as authorized to operate in this space, there is no regulatory necessity to further intervene through the prescription of ceiling tariffs for DLCs. Imposing tariff regulation in a competitive, multi-licensee environment risks creating asymmetry, distorting market signals and constraining commercial flexibility without demonstrable consumer harm.
  - v. **In view of the above, and consistent with the Authority’s own acknowledgement of complementarity between ISPs and NLDOs, tariff forbearance for DLCs remains the most appropriate and proportionate regulatory approach.**
2. Given that ISPs are already being considered as authorised to offer leased circuits/VPN services as complementary offerings yet allowed to operate under a comparatively lighter regulatory and financial framework than NLDOs and ASPs, imposing prescriptive tariff ceilings specifically on DLC services would create regulatory asymmetry.
  3. **If the regulatory framework is imposed disproportionately on NLDOs/ASPs while ISPs continue operating under relatively lighter obligations, it would distort competition and undermine level-playing-field principles. Accordingly, these structural differences between ASPs, NLDOs and ISPs further reinforce the appropriateness of tariff forbearance with respect to DLC services.**

**Q3. Should the MPLS-VPN DLCs be brought under the tariff regulation framework? Please provide your response with justification.**

**Airtel’s Comments to Q3:**

1. **Introduction to MPLS-VPN DLC as a Service:**
  - a. **MPLS Is No Longer a Standalone Service:**



- i. Airtel would like to highlight that MPLS is no longer offered as an isolated “commodity bandwidth pipe.” It functions as an embedded component within a fully integrated enterprise networking stack comprising SD-WAN hardware, SASE security frameworks, cloud orchestration and managed services. The commercial construct is based on end-to-end service delivery inclusive of performance guarantees, proactive monitoring, cybersecurity integration and lifecycle management.
- ii. Regulating a single underlay element within this integrated architecture is commercially impractical and structurally inconsistent with how modern networks are designed, deployed and billed. Any attempt to isolate MPLS for tariff regulation would artificially fragment a unified solution and distort cost attribution.

**b. Enterprise Solutions are Bespoke and SLA-Driven**

- i. Enterprise connectivity contracts today are highly customised, engineered around site-specific SLAs, redundancy levels and risk-sharing mechanisms. Architectures frequently include dual MPLS clouds, redundant last-mile media (RF, fiber, 4G/5G) and strict penalty clauses tied to uptime and security compliance.
- ii. A uniform, regulated tariff framework cannot account for:
  - Bespoke engineering design
  - Hardware redundancy and active-active configurations
  - Site-wise SLA obligations
  - Financial exposure arising from penalty-linked performance guarantees

Any regulatory standardisation would undermine the flexibility required to design high-availability, mission-critical networks.

**c. Illustrative Enterprise Use Cases Demonstrate Variance and Complexity in Requirements:**

User	Vertical	Scale (Sites – may vary on case to case basis)	Solution Complexity	Primary Value Drivers
A	BFSI	4000–5000	Two MPLS links with dual last miles (RF + 4G) + SD-WAN per site	Active-active load balancing with seamless failover for critical banking applications
B	Government	800–1000	Dual MPLS clouds + dual last mile + SASE per site	Security-led connectivity with site-wise penalty SLAs

C	Mission & Defense	10–20	Dual MPLS links + SD-WAN per site	Full hardware and link-level redundancy for mission-critical operations
D	Manufacturing & Services	20–25	MPLS + ILL per site	Hybrid performance measured at site-level, not link-level
E	Mission & Defense	10–20	MPLS + P2P + Internet hybrid	Architectural diversity optimizing cost, resiliency, and speed

**These examples demonstrate that MPLS forms only one component within highly engineered, multi-layered architecture. The commercial value resides in integrated design, orchestration, risk management and SLA assurance—not in the MPLS link viewed in isolation.**

2. The above confirms that **competitive substitution acts as a natural price discipline for MPLS-VPN DLCs. Airtel submits that MPLS-VPN DLCs should continue to remain under a forbearance regime, in line with TRAI’s consistent and well-established regulatory approach of refraining from ex-ante tariff regulations in market segments characterised by effective competition, rapid technological evolution and the absence of any market failure.** The detailed justifications for this are as below:
  - a. **Consistent with TRAI’s Forbearance-led Regulatory Approach:** TRAI has, over time, consciously adopted a progressive shift from tariff regulation to regulatory forbearance in enterprise and data services where competitive market conditions prevail. The Authority recognises that price discovery through market forces is more efficient and responsive than administered tariffs in segments marked by multiple service providers, informed consumers and availability of substitutes. In fact, the TTO (57<sup>th</sup> Amendment), 2014 reaffirmed that enterprise data services characterised by customisation and negotiated contracts are best governed through forbearance, underscoring the continued relevance of a market-based pricing framework. MPLS-VPN services fall squarely within this category. Bringing such services under tariff regulation would represent a departure from TRAI’s own precedents, which have favoured light-touch regulation and a reliance on competition law and ex-post oversight, rather than intrusive price controls.
  - b. **MPLS-VPN Is a Managed Enterprise Solution:** MPLS-VPN based DLCs are complex, managed and highly customised enterprise network solutions, offering differentiated service attributes such as traffic engineering, multiple QoS classes, redundancy, security features, cloud needs and stringent SLA commitments. In practice, enterprises procure MPLS-VPN solutions through tailored network designs — including dual last-mile redundancy, geo-diverse routing, application prioritisation and managed security layers — making tariff standardisation neither practical nor economically representative of the

service delivered. The TRAI has historically acknowledged that services involving significant customisation and value addition are not amenable to standardised tariff prescriptions. Attempting to regulate tariffs for MPLS-VPN DLCs would therefore be inconsistent with TRAI's recognition that technology-intensive and solution-oriented services cannot be effectively governed through rigid tariff frameworks without undermining service differentiation and innovation.

- c. **Alignment with the Principle of Technology Neutrality:** TRAI has consistently upheld the principle of technology neutrality, ensuring that regulation does not favour or disadvantage any specific technology. MPLS-VPN is only one of several technologies used today to deliver enterprise connectivity, alongside Ethernet VPN, IP-VPN, SD-WAN and hybrid architectures. Subjecting MPLS-VPN DLCs to tariff regulation would artificially single out one technology, creating distortions and potential regulatory arbitrage and would be contrary to TRAI's established approach of regulating services based on market outcomes rather than underlying network technologies.
- d. **Absence of Market Failure Justifies Continued Forbearance:** TRAI's past forbearance decisions have been premised on the principle that regulatory intervention is warranted only in the presence of demonstrable market failure or consumer harm. In the case of MPLS-VPN DLCs, there is no evidence of abuse of dominance, denial of access, or exploitative pricing. On the contrary, enterprises benefit from:
- Multiple competing Access and NLD licensees,
  - Negotiated and declining effective tariffs,
  - Improved service quality and SLA enforcement driven by commercial incentives.

In such circumstances, ex-ante tariff regulation would be neither proportionate nor necessary, and would run counter to TRAI's own analytical framework for regulatory intervention.

- e. **Investment and Innovation Depend on Regulatory Certainty:** TRAI has consistently emphasised the importance of policy stability and regulatory predictability to encourage long-term investments in telecom infrastructure. MPLS-VPN networks require sustained capital investment in backbone capacity, access fiber, network intelligence and continual upgrades to meet evolving enterprise and cloud-driven requirements. Extending tariff regulation to MPLS-VPN DLCs would introduce regulatory uncertainty, dampen investment appetite and potentially slow the adoption of next-generation enterprise networking solutions—outcomes that are inconsistent with TRAI's objective of promoting a robust digital ecosystem.
- f. **Adequacy of Ex-Post Regulatory Oversight:** TRAI has, in several instances, relied on ex-post monitoring and intervention, rather than ex-ante tariff control, to address any potential competitive concerns. This approach remains fully adequate for MPLS-VPN DLCs as well.

3. Taking into account the points enumerated previously and in order to continue to be consistent with TRAI’s past precedence of forbearance, Airtel strongly submits that MPLS-VPN based DLCs should not be brought under the tariff regulation framework. Any consideration of technology-specific regulation could inadvertently incentivise migration towards alternative architectures purely for regulatory arbitrage rather than efficiency or performance considerations, thereby distorting network design choices and undermining optimal service delivery.
4. Airtel submits that regulatory forbearance for all technologies associated with the DLC market, supported by a stable and predictable policy environment and backed by ex-post oversight, is essential to ensure long-term market efficiency, sustained investment, technological innovation and enterprise consumer welfare.
5. Any move towards technology-specific tariff regulation at this stage would be regressive, and inconsistent with established regulatory practice. Artificial price caps on MPLS would disincentivise investment, suppress innovation in hybrid-WAN architectures and risk slowing India’s digital transformation relative to global markets.

**Q4. What are the key differences in cost structure and service delivery between traditional P2P-DLCs and MPLS-VPNs that should be reflected in tariff regulation? Please provide your response with justification.**

**Airtel’s Comments to Q4:**

1. At the outset, Airtel submits that while certain cost-structural and service delivery differences exist between traditional P2P-DLCs and MPLS-VPN services, these differences do not necessitate differentiated tariff regulation. On the contrary, the evolving enterprise connectivity market supports a regime of regulatory forbearance for both services.
2. Kindly refer to Airtel’s detailed comments on MPLS-VPN DLC to Q3. The key difference between P2P-DLC and MPLS-VPN is stated below:

Characteristic	P2P-DLC	MPLS-VPN
<b>Technology</b>	<ul style="list-style-type: none"> <li>▪ Provides dedicated, fixed-capacity connectivity between two specified customer locations (A-end and B-end).</li> <li>▪ Service is linear in nature, designed for direct connectivity between two defined sites.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Enables multi-site connectivity across a managed IP-based network, allowing enterprises to interconnect multiple locations in a secure and scalable manner.</li> <li>▪ Network-based service, offering any-to-any connectivity, traffic prioritization, and scalability.</li> </ul>

3. In addition to this, the distinctions that are material and fundamental w.r.t. the key differences in cost structure and service delivery between traditional P2P-DLCs and MPLS-VPNs and should be considered are:

**a. Nature of Network Architecture:**

- i. P2P-DLCs constitute a traditional transport network construct. They are engineered as dedicated, circuit-oriented links between two fixed endpoints, relying on pre-defined transmission paths and committed bandwidth allocation. The cost structure is therefore closely aligned with physical infrastructure utilisation and linear transmission resource consumption.
- ii. In contrast, MPLS-VPN services operate as a subset of overlay services deployed over a shared IP/MPLS core. They are not merely transport links, but logically segregated virtual private networks built upon a common, intelligent backbone. The underlying economics and engineering principles are therefore materially different.

**b. Customer Enterprise Perspective:**

- i. From an enterprise standpoint, P2P-DLCs are typically procured for predictable, fixed-capacity connectivity between defined locations. They are circuit-centric and primarily bandwidth-driven.
- ii. MPLS-VPNs, however, are procured as scaleable, multi-site networking solutions that integrate traffic management, class-of-service differentiation, routing intelligence and resiliency features. Enterprises evaluate MPLS-VPNs based on application performance, network agility and SLA-backed service assurance—not merely on raw bandwidth or distance.

**c. Pricing Determinants: Distance vs. Architecture**

- i. P2P-DLC pricing has historically been distance-sensitive and circuit-oriented. Tariffs are commonly structured around bandwidth slabs and route lengths, reflecting the dedicated allocation of transmission resources over specific geographic spans.
- ii. Conversely, MPLS-VPN pricing is architecture-driven rather than distance-driven. The commercial constructs are influenced by various factors such as:
  - Port density at edge locations
  - Traffic engineering complexity
  - Class-of-service prioritisation
  - Routing intelligence and control management
  - Resilience design (e.g., dual access, dual core paths)
  - Network monitoring and managed services

Physical distance between sites is not the primary cost determinant in MPLS-VPN environments.

**d. Cost Behaviour – Linear vs. Non-Linear:**

- i. P2P circuits scale in a largely linear manner: increasing bandwidth or extending route distance proportionally increases infrastructure utilisation and cost.
- ii. MPLS-VPN networks, by contrast, benefit from statistical multiplexing and shared-core efficiencies. Traffic aggregation across multiple customers enables optimised backbone utilisation. As a result, cost behaviour is non-linear and influenced by aggregate traffic patterns, service tiers and network design rather than simple bandwidth-distance multiplication.

**e. Service-Level and Performance Commitments:**

- i. MPLS-VPN pricing is materially influenced by service-level commitments such as:
  - Latency guarantees
  - Packet prioritisation
  - Jitter control
  - Application-aware routing
  - Differentiated class-of-service frameworks
- iii. These performance-driven attributes require sophisticated control management and ongoing operational oversight. Such dimensions are generally not applicable in traditional P2P constructs, where the service obligation is limited to availability and bandwidth integrity.

4. Although structural differences in charging models exist, i.e., distance-based consolidated billing in P2P-DLC versus per-site port/access billing in MPLS-VPN, these are commercial constructs shaped by service architecture and customer requirements. They do not, in themselves, justify differential tariff regulations. It is critical to note that in today's converged telecom networks and current competitive environment:

- a. Both services may ride on common underlying fiber and transmission infrastructure.
- b. Cost allocation between services is largely internal to the operator's network design.
- c. Enterprises increasingly migrate between these services based on functional requirements rather than regulatory classifications.
- d. Both P2P-DLC and MPLS-VPN services are procured through competitive bidding and commercial negotiations.
- e. Enterprises evaluate multiple providers before entering contracts.
- f. Pricing is influenced by bandwidth, topology, redundancy, SLA commitments, tenure and bundling — not merely by service category.

5. Hence, any standardised or uniform tariff framework would fail to capture the heterogeneous cost drivers inherent in MPLS-VPN services. Attempting to regulate MPLS-VPNs using a construct designed for legacy, distance-based transport circuits risks mispricing services that deliver fundamentally different network intelligence, resiliency and performance characteristics.
6. Accordingly, any tariff regulation must recognise that P2P-DLCs and MPLS-VPNs are architecturally and economically distinct service categories. Treating them equivalently does not reflect their divergent cost structures, service models and enterprise value propositions.
7. Also, any attempt to reflect structural differences in tariff regulation requires intrusive cost modeling, artificial segmentation and prescriptive benchmarks that may not align with real-world commercial practices. Such interventions risk distorting competition between functionally substitutable enterprise connectivity solutions.
8. **Therefore, while P2P-DLC and MPLS-VPN differ in their service architecture and billing methodologies — with P2P being distance-based and circuit-oriented and MPLS-VPN being port- and site-based within a managed IP framework — these distinctions are commercial and technological in nature. They do not constitute grounds for differentiated tariff prescription.**
9. **Also, given the competitive, technologically-diverse and commercially negotiated nature of the enterprise connectivity market, Airtel urges that the Authority should adopt a regime of regulatory forbearance for both P2P-DLC and MPLS-VPN services. Such an approach will:**
  - a. Preserve commercial flexibility,
  - b. Avoid regulatory distortions between substitutable services,
  - c. Encourage innovation and network modernisation,
  - d. Support sustained infrastructure investment.

**Q5. What has been the impact of deployment of DWDM, SD-WAN and Ethernet over Fibre on provisioning of DLCs, in terms of operations, costs and tariffs? Should the regulation incorporate these technological changes in the ceiling tariff framework? Please provide your response with justification.**

**Airtel's Comments to Q5:**

1. **Airtel submits that while the deployment of DWDM, SD-WAN, and Ethernet over Fibre has undoubtedly transformed the technical architecture underpinning DLCs, these technological advancements do not call for the imposition or recalibration of ceiling tariffs. On the contrary, they reinforce the case for continued tariff forbearance.**

2. DWDM and Ethernet over Fibre represent natural technological evolution within backbone and access networks, enhancing spectral efficiency, fiber utilisation, and scalability. Operationally, these technologies have enabled:
  - Higher capacity aggregation
  - Improved network resilience
  - Faster provisioning timelines
  - Enhanced bandwidth scalability.
3. From a cost perspective, DWDM has improved per-bit transmission efficiency over time, while Ethernet over Fibre has replaced legacy TDM constructs with more flexible and scalable, packet-based transport. The associated costs continue to be influenced by RoW constraints, fiber availability, redundancy requirements and site-specific engineering complexity.
4. Importantly, these technologies form part of the infrastructure ecosystem and have always been embedded within network evolution cycles. Their deployment does not fundamentally alter the commercial principles governing DLC pricing. Rather, they reflect the ongoing capital investment and competitive modernisation that has been taking place.
5. SD-WAN, an overlay technology, operates above the underlying DLC or access infrastructure and does not alter the physical cost structure of DWDM or Ethernet transport. Instead, SD-WAN introduces software-defined intelligence that enhances traffic management, application prioritisation, centralised orchestration and security.
6. In contemporary enterprise networks, value is driven by software intelligence rather than static bandwidth allocation. SD-WAN dynamically prioritises mission-critical applications over MPLS while offloading non-critical traffic to secondary ILL or broadband links. Consequently, pricing models are increasingly aligned with application uptime, latency performance, resiliency architecture and service intelligence—not a simplistic 'rate per Mbps.'
7. It is, thus, worth noting that traditional tariff regulation frameworks, which assume bandwidth as the primary value metric, are technologically outdated and commercially misaligned with present-day service construct.
8. **Taking this into account, the following emerges:**
  - **DWDM and Ethernet over Fibre are integral and longstanding elements of the transport layer.**
  - **SD-WAN is an overlay innovation independent of physical tariff constructs.**
  - **Pricing is increasingly architecture-driven and SLA-based rather than distance- or bandwidth-driven.**
  - **The market offers multiple substitutes, including broadband and hybrid WAN models.**

**Airtel submits that any attempt to recalibrate ceiling tariffs to reflect these technologies would be inherently reductive and administratively complex. The dynamic and heterogeneous nature of enterprise solutions cannot be effectively captured within a static**

**regulatory ceiling. Accordingly, tariff forbearance remains the most appropriate regulatory approach.**

**Q6. Are there any other technological changes apart from the ones mentioned in above paragraphs in provisioning of DLCs in India? If yes, what has been the impact of deployment of such technologies on provisioning of DLCs, in terms of operations, costs and tariffs? Should the regulation incorporate these technological changes in the ceiling tariff framework? Please provide your response with justification.**

**Airtel's Comments to Q6:**

1. Yes, apart from DWDM, SD-WAN and Ethernet over Fibre, several other technological advancements have significantly influenced the provisioning of DLCs in India. These include adoption of Network Function Virtualisation (NFV), integration with public and private cloud environments, enhanced SLA frameworks enabled by advanced analytics and support for emerging high-bandwidth, low-latency applications.
2. Such technological changes have resulted in improved scalability, bandwidth efficiency and service flexibility. NFV and cloud integration have embedded value-added services—such as virtual firewalls, WAN optimisation and direct cloud interconnect—into leased line offerings, materially transforming them from pure transport circuits into intelligent, service-oriented solutions. Enhanced SLA constructs, backed by real-time monitoring and automation, have further elevated service differentiation. Additionally, modern DLC infrastructure now supports mission-critical use cases such as smart manufacturing, edge computing, video surveillance and remote operations.
3. Operationally, these advancements have increased automation, orchestration capability and service intelligence. From a cost perspective, while transmission efficiency may have improved, overall cost structures have become more architecture-driven and SLA-dependent, incorporating software platforms, security layers, analytics and cloud gateways. Tariffs are therefore influenced not merely by physical infrastructure but by integrated design, risk allocation and performance commitments.
4. It is pertinent to note that these developments are the direct outcome of robust market competition. The operators have continuously innovated to meet evolving enterprise requirements without regulatory intervention.
5. In view of the above, **Airtel submits that there is no justification for incorporating these technological changes into a tariff framework. Any attempt to regulate tariffs would risk mispricing complex, differentiated services and discouraging continued investment and innovation. Accordingly, tariff forbearance remains the most appropriate regulatory approach.**

**Q7. As an alternative to Q5 & Q6, should the Authority consider technology-neutral tariff models, focusing on bandwidth and service commitments rather than provisioning technologies? If yes, what should be the criteria for the same? Please provide your response with justification.**

**Airtel's Comments to Q7:**

1. At the outset, Airtel submits that the Authority should maintain regulatory forbearance with respect to tariffs for DLCs across all capacities and technologies. In the current market environment, neither technology-specific tariff regulation nor a technology-neutral tariff prescription based on bandwidth and service commitments is warranted. Any shift towards a technology-neutral tariff construct would represent a substantive departure from the long-standing forbearance regime, and such departure must be justified by demonstrable market failure—which is absent in the present case.
2. The existing tariff framework for DLCs, first introduced under the Telecommunication Tariff Order (TTO), 1999 and last revised in 2014, was formulated in a market context where DLCs represented the primary and often the only reliable enterprise connectivity solution. Regulatory oversight at that time was justified to ensure fair access, prevent abuse of dominance and facilitate enterprise adoption. That regulatory rationale has materially diminished due to structural shifts in the market including the proliferation of fiber infrastructure, availability of alternative access technologies and the emergence of neutral infrastructure providers.
3. However, the enterprise connectivity ecosystem in 2025 is fundamentally different and has evolved into a competitive, technology-diverse and customer-driven marketplace. The detailed justification is as follows:
  - a. **Competitive Market Structure renders Tariff Prescription Redundant**
    - i. The presence of multiple TSPs—including pan-India operators, regional players and infrastructure providers—has resulted in sustained price competition, service innovation and commercially negotiated contracting frameworks.
    - ii. Enterprise customers routinely obtain customised proposals from multiple providers. Tariffs are determined through commercial negotiations and vary depending on:
      - Location and last-mile availability,
      - Bandwidth requirements,
      - Redundancy and resilience architecture,
      - SLA commitments (uptime, latency, packet loss, restoration time),
      - Contract tenure,
      - Bundling with cloud, security, or managed services.

- iii. In such a dynamic and competitive environment, market forces adequately discipline pricing. There is no evidence of denial of access or anti-competitive tariff practices that would justify regulatory intervention.
- iv. Further, large enterprises and government customers typically conduct competitive bidding processes or reverse auctions, which inherently ensure price discovery and prevent excessive pricing. Even MSMEs increasingly rely on competitive digital procurement platforms, reinforcing price transparency and competition.
- v. Importantly, enterprises retain switching power due to multi-homing strategies, use of dual providers and contractual exit provisions. This further constrains any possibility of sustained supra-competitive pricing.

#### **b. Technology Convergence makes Prescriptive Tariff Models Impractical**

- i. Since 2014, enterprises have increasingly adopted hybrid and cloud-first network architectures, leveraging:
  - SD-WAN solutions,
  - Internet Leased Lines (ILLs),
  - IP-VPN and MPLS networks,
  - Direct Cloud Interconnects,
  - Carrier-neutral data centre connectivity,
  - 4G/5G enterprise wireless and private networks.
- ii. Connectivity is no longer procured as a uniform, standalone product. Rather, it forms part of integrated digital transformation solutions. Attempting to regulate tariffs—even under a technology-neutral construct focused on bandwidth and SLAs—would risk imposing artificial standardisation in a market characterised by customisation and convergence.
- iii. Moreover, bandwidth itself is no longer the sole determinant of value. Enterprises increasingly prioritise application-aware routing, cybersecurity integration, edge-computing capabilities, analytics-driven network management and outcome-based performance metrics. A tariff model anchored merely to bandwidth and generic SLAs would fail to capture these value-added dimensions.
- iv. A technology-neutral tariff framework may also inadvertently discourage adoption of innovative or transitional technologies by flattening pricing differentials that reflect underlying cost structures and performance characteristics. This could slow technological evolution rather than promote neutrality.

#### **c. Service Commitments are Inherently Customer-Specific**

- i. A critical consideration is that service commitments are not uniform across enterprises and vary significantly depending on business needs, industry verticals and risk tolerance. For instance:
    - A financial institution may require ultra-low latency and near-100% uptime with stringent restoration timelines.
    - A manufacturing unit may prioritise redundancy across geographically diverse routes.
    - A startup or SME may opt for cost-optimised bandwidth with moderate SLA requirements.
    - A hyperscale data centre may demand dedicated fiber paths, route diversity and performance-backed penalty clauses.
  - ii. These differentiated requirements translate into varied network architectures, cost structures and pricing models. Any attempt to standardise tariffs around bandwidth and generic service commitments would fail to account for:
    - Customised SLAs,
    - Performance-linked penalties,
    - Managed service components,
    - Security overlays, and
    - Hybrid deployment models.
  - iii. Therefore, even a technology-neutral tariff framework would be inherently rigid and misaligned with the bespoke nature of enterprise contracting.
  - iv. Further, enterprise contracts often include negotiated service credits, dynamic capacity scaling, burstable bandwidth and flexible commercial constructs (such as pay-per-use or elastic models). These features cannot be meaningfully standardised without constraining commercial innovation.
- d. Absence of Market Failure or Regulatory Concern**
- i. There is no demonstrable evidence of excessive pricing, discriminatory conduct, or structural barriers to enterprise connectivity. On the contrary:
    - Enterprises enjoy multiple sourcing options.
    - Competitive offerings are common practice.
    - Pricing flexibility has improved.
    - Service quality has materially advanced since 2014.
  - ii. In the absence of market failure, regulatory intervention—whether technology-specific or technology-neutral—would be disproportionate.

**e. Investment Sustainability requires Tariff Stability**

- i. Continued fiberisation and network densification require substantial capital investment with long gestation periods. In a market where capital for expansion is largely funded through internal accruals, any artificial tariff suppression or regulatory uncertainty would:
  - Reduce investment headroom,
  - Delay fiber rollout in underserved areas,
  - Disincentivise deployment of advanced enterprise-grade solutions, and
  - Ultimately impact service innovation and quality.
- ii. A stable and predictable tariff regime under forbearance is therefore essential for sustaining infrastructure expansion and supporting India's digital economy objectives.

**4. In light of the foregoing, Airtel strongly submits the following:**

- a. The Authority should not introduce technology-neutral tariff models for DLCs or related enterprise connectivity services.**
- b. Regulatory forbearance across all capacities should be adopted, supported by a stable and predictable policy framework.**

**5. The enterprise connectivity market is competitive, technologically diverse and commercially negotiated. Service commitments vary significantly from customer to customer, making standardised tariff prescriptions impractical and potentially distorted. Maintaining forbearance will:**

- a. Preserve market efficiency,**
- b. Encourage innovation and customisation,**
- c. Avoid distortions in enterprise contracting, and**
- d. Sustain the financial viability necessary for continued fiberisation and digital infrastructure expansion.**

Such an approach will be fully aligned with the principles of light-touch regulation and would best serve the long-term interests of enterprises, service providers and the broader digital ecosystem.

**Q8. What are the various service commitments (such as bandwidth, SLA requirements such as uptime, latency, packet loss, response time etc.) bundled as part of managed DLC service, for both P2P & VPN based DLC? How are the service commitments offered as part of managed DLC services linked with the tariffs? Please provide your response with justification.**

**Airtel's Comments to Q8:**

1. Managed P2P-DLC services are typically provisioned as dedicated, end-to-end connectivity solutions between two customer locations. In addition to committed bandwidth, managed P2P services generally include (but are not limited to) the following service commitments:
  - Committed Bandwidth: Dedicated capacity between A-end and B-end.
  - Uptime/Availability Commitments.
  - Latency Guarantees.
  - Packet Loss Parameters.
  - Jitter Specifications: Where applicable for real-time traffic.
  - Mean Time to Restore (MTTR).
  - Fault Response and Resolution Timelines.
  - Performance Monitoring and Reporting.
  - Redundancy Options (Route diversity).

These commitments are typically formalised through SLAs and may include service credits or penalties linked to performance deviations.

2. On the other hand, managed VPN-based DLC services, such as MPLS-VPN, are multi-site, network-based connectivity solutions and typically include:
  - Per-Site Bandwidth Commitments
  - Class of Service / QoS Differentiation (Prioritisation of traffic types (e.g., voice, video, data))
  - Network Availability Guarantees
  - Latency, Jitter and Packet Loss Guarantees
  - Flexibility to upgrade bandwidth or add sites.
  - Managed CPE & Network Management – Provision of routers, configuration & centralised monitoring
  - Security Features — encryption, firewall integration, etc.
  - Performance Reporting

VPN-based services are inherently more dynamic and application-aware, reflecting the distributed and multi-location architecture of enterprise networks.

3. It is pertinent to note that service commitments are directly and intrinsically linked to tariffs. The pricing of managed DLC services is influenced by multiple service parameters, including:
  - Bandwidth capacity (CIR/PIR);
  - Level of uptime guarantee;
  - Stringency of latency, jitter and packet loss commitments;

- Redundancy and route diversity requirements;
- MTTR and response time obligations;
- Managed equipment and monitoring scope;
- Security and traffic management features;
- Geographic location and last-mile complexity;
- Contract tenure and volume commitments.

Broadly, higher SLA commitments, protected architectures, lower latency thresholds and shorter restoration timelines materially increase network design complexity and cost.

4. Consequently, tariffs escalate in proportion to the performance assurances contracted. Conversely, cost-optimised solutions with moderate SLA parameters are priced accordingly. The tariff structure, therefore, reflects a calibrated balance between performance obligations and network resource allocation.
5. Most importantly, managed DLC services are not standardised commodities. Service commitments vary significantly across customers depending on:
  - Industry vertical (e.g., BFSI, IT/ITeS, manufacturing, Government);
  - Business criticality of applications;
  - Risk tolerance and resilience requirements;
  - Multi-site topology complexity;
  - Budgetary considerations;
  - Hybrid or cloud integration requirements.
6. For instance, a financial institution may require ultra-low latency, near-zero packet loss and stringent MTTR obligations, whereas a small enterprise may prioritise cost efficiency with moderate SLA requirements. Similarly, a multi-location VPN deployment may require differentiated QoS policies that do not apply to a simple P2P circuit. Accordingly, service commitments and associated tariffs are inherently customer-specific and commercially negotiated.
7. On the whole, managed DLC services, irrespective of their P2P or VPN-based implementation, bundle a comprehensive suite of service commitments encompassing bandwidth assurance, availability guarantees, latency and packet performance metrics, restoration timelines, redundancy, monitoring and managed services. Tariffs are intrinsically linked to these commitments and are determined through commercial negotiation based on the level of performance, resilience and management contracted by the enterprise customer.
8. **Therefore, given that service commitments vary significantly from customer to customer based on business needs, topology and SLA requirements, it is neither feasible nor appropriate to standardise tariff benchmarks on defined service parameters. The diversity and customisation inherent in managed DLC services reinforce the need for a market-driven, forbearance-based regulatory framework rather than prescriptive tariff controls.** Such an approach ensures flexibility, innovation and alignment between enterprise requirements and

commercial offerings, while supporting continued investment in high-quality digital infrastructure.

**Q9. Should the proposed regulation include staggered tariffs in line with service commitments, possibly further staggered for different regions, for both VPN & P2P based DLC? If yes, what are the service commitments, mentioned as reply to Q8, which should be considered for tariff regulation?**

**Airtel's Comments to Q9:**

1. Please refer to Airtel's comments in response to Q8.
2. **No, the proposed regulation should not introduce staggered tariffs based on service commitments or geographic regions for either VPN-based or P2P-based DLC services. The Authority should follow a regime of regulatory forbearance.**
3. Operators design networks based on end-to-end performance obligations rather than isolated SLA parameters. Cost variations across regions – arising from RoW challenges, fiber density, infrastructure availability and operational conditions – are already assumed in market-driven pricing. Competitive bidding ensures that regional cost realities are appropriately reflected without regulatory prescription.
4. The enterprise connectivity market is characterised by multiple competing providers, alternative technologies and transparent procurement processes. Enterprises typically seek quotations from several operators before finalising contracts. There is no evidence of systematic pricing abuse or denial of service that would justify staggered regulatory ceilings. Introducing region-based tariff staggering would therefore duplicate what competitive market forces are already achieving, while introducing regulatory rigidity.
5. Enterprise connectivity services increasingly support mission-critical digital infrastructure including cloud integration, data centre interconnection and digital transformation initiatives. Sustained investment in fiber networks, resilient routing architectures and managed services require commercial flexibility and predictable regulatory conditions. Any imposition of staggered tariffs linked to predefined SLA categories or regions will discourage differentiated service offerings and reduction in investments pertaining to network upgrades.
6. In view of the above, **Airtel strongly submits that staggered tariffs based on service commitments or geographic regions for VPN-based or P2P-based DLC services are neither necessary nor appropriate. The Authority should maintain a regime of regulatory forbearance for DLC services.**

**Q10. What reporting mechanisms should be mandated to ensure transparency in discounts and service bundling for DLCs? Please provide your response with justification.**

**Airtel's Comments to Q10:**

- 1. Airtel strongly submits that no additional or ex-ante or DLC-specific reporting mechanisms should be mandated for the purposes of ensuring transparency in discounts and service bundling for DLCs.**
2. The DLC market in India is highly competitive and characterised by multiple players, including NLDOs, Access Service Providers, IP-I and, increasingly, ISPs under an evolving authorisation framework. These operators compete vigorously on price, service quality and bundled offerings, driving commercial transparency through market dynamics rather than regulatory mandates. The presence of multiple infrastructure owners and alternative last-mile providers further enhances competitive discipline, limiting the scope for opaque or discriminatory pricing practices.
3. The TRAI, in its extant consultation itself, recognises that '*service providers offer significant discounts to customers depending on the factors such as bandwidth, distance, location, volume of business and duration of commitment*'. Also, the Authority has observed that discounts in the range of 20% to 98% in cases of VPN-based DLCs are being provided by the service providers. It is worth noting that such significant discounts reflect negotiated commercial outcomes across routes and capacities. These variations are driven by legitimate cost differentials, scale efficiencies, network topology considerations and long-term contractual commitments, rather than opacity or discriminatory conduct.
4. DLC pricing and bundling, including discounts linked to volume, duration of commitment or bundled SLA features, are an inherent part of commercial negotiations between TSPs and customers. In such an environment, enterprise customers, who dominate the DLC user base, possess strong bargaining power and contractual sophistication. These customers routinely undertake comparative evaluation of pricing, SLAs and bundled commitments prior to contracting, effectively functioning as market-based transparency mechanisms. These negotiations are documented through formal contracts containing detailed terms and pricing, providing direct transparency to the contracting parties. Mandating reporting outside this direct contractual context adds no meaningful informational value for either customers or the regulator but imposes procedural burden.
5. In addition, it is important to consider that introducing such additional reporting requirements specifically for discounting and bundling would impose a disproportionate number of compliance burdens on TSPs and would be against the principle of ease of doing business. Preparing, validating and submitting detailed reports on bespoke commercial terms – often highly confidential and tailored to individual customer requirements – would divert resources from core service delivery, network investment and innovation. This overhead is

particularly onerous given that such reporting does not demonstrably advance consumer welfare beyond what existing market information and competitive dynamics already achieve.

6. In fact, the goal of transparency is best served by market mechanisms in a competitive sector. Mandating standardised disclosures risks homogenising commercial flexibility that is essential for innovative pricing structures and flexible service bundles. Enterprises select DLC providers based on negotiated outcomes that reflect both supply-side cost conditions and demand-side requirements. Any regulatory reporting that seeks to centralise or catalogue these bespoke terms would only risk stifling commercial innovation without clear evidence of market failure. Additionally, standardised reporting templates may fail to capture the multi-dimensional and bundled nature of enterprise contracts, leading to oversimplified or potentially misleading representations of pricing structures.
7. **Therefore, Airtel submits that there should be no mandated reporting mechanisms exclusively for transparency in DLC discounts and service bundling. Transparency in this domain is already achieved through competitive commercial practices, contractual disclosures and the informed decision-making of enterprise customers. Additional reporting obligations would impose unnecessary compliance burdens without meaningful incremental benefit to competition, consumer choice, or market efficiency.**

**Q11. Should the Authority mandate standardized tariff disclosure formats for all DLC service providers? Please provide your response with justification.**

**Airtel's Comments to Q11:**

1. **Airtel submits that the Authority should not mandate standardised tariff disclosure formats for DLC service providers. Such a requirement is unnecessary, commercially intrusive and inconsistent with a regime of regulatory forbearance.** This is further justified through the following factors:
  - a. **Market-Driven Commercial Negotiations Must Remain Confidential and Flexible:** DLC tariffs and associated commercial terms are the outcome of bilateral negotiations between service providers and enterprise customers. These negotiations are inherently tailored, reflecting unique requirements such as bandwidth, redundancy, latency, SLA commitments, contract tenure, bundling and pricing incentives. Mandating a one-size-fits-all disclosure format would constrain commercial flexibility, undermine contract confidentiality and disrupt competitive contracting dynamics.
  - b. **Commercial Sensitivities and Competitive Strategy are Incompatible with Standardised Disclosure:** Tariff structures, pricing strategies and commercial terms are fundamental elements of competitive differentiation. Operators routinely tailor offers to reflect cost structures, geographic footprint, service capabilities and risk sharing. Prescriptive disclosure formats would compel providers to reveal proprietary pricing constructs,

exposing commercially sensitive information to competitors and customers alike, thereby distorting market competition.

- c. **No Evidence of Asymmetric Information or Market Failure:** There is no demonstrable evidence that enterprise customers lack access to the relevant pricing information necessary for procurement decisions. On the contrary, enterprises routinely solicit and receive detailed pricing proposals from multiple operators during competitive bidding or negotiation. The absence of documented market failure in information asymmetry undermines the rationale for mandating standardised disclosures.
  - d. **Standardisation Risks Misinterpretation and Regulatory Overreach:** A standardised format may inadvertently oversimplify complex contractual terms, leading to misinterpretation of actual service commitments, SLA parameters and pricing contingencies. It may compel disclosure of terms that are not directly comparable across providers due to differences in network topology, technology mix, service features and customer requirements. This could confuse rather than clarify pricing for enterprise customers.
  - e. **Forbearance and Market Competition are Better Mechanisms to Ensure Transparency:** The competitive marketplace is the most effective mechanism for ensuring transparency and fair pricing. Operators compete on price, quality and service assurance, and customers freely engage with multiple providers to evaluate alternatives. Forbearance allows markets to evolve organically, fostering innovation and differentiation without prescriptive regulatory constraints that distort commercial arrangements.
  - f. **Regulatory Mandates on Disclosure are Disproportionate and Unwarranted:** Mandating standardised tariff disclosure would constitute regulatory intrusion into commercial contracting that far exceeds any compelling policy necessity. It would impose compliance burdens on providers and shift the regulatory paradigm away from forbearance, without any evidence of benefit to customers, competition or market efficiency.
2. In conclusion, Airtel submits that the Authority should refrain from imposing standardised tariff disclosure formats for DLC service providers as it would result in the following:
- Undermining commercial confidentiality and negotiational flexibility;
  - Exposing competitively sensitive information;
  - Creating regulatory complexities without addressing any proven market failures;
  - Distorting competitive dynamics; and
  - Departing from the proven benefits of a forbearance-based regulatory framework.

**Q12. Should TRAI use the same cost methodology i.e. BU-FAC for computing cost based ceiling tariffs for P2P DLCs as was used in 2014? Please provide your response with justification.**

**Airtel's Comments to Q12:**

1. **Airtel submits that the Authority should not use the BU-FAC (Bottom-Up Fully Allocated Cost) methodology for computing cost-based ceiling tariffs for P2P DLCs, as was undertaken in 2014. Instead, the Authority should adopt a policy of tariff forbearance for this segment, considering the following factors:**
  - a. **Structural Changes in Network Architecture:** The cost structures underpinning P2P DLC provisioning have evolved materially since 2014. The networks have transitioned from legacy architecture to packet-based Ethernet, MPLS and software-defined frameworks. Infrastructure sharing, statistical multiplexing, virtualisation and automation have altered both capital and operational expenditure profiles. The BU-FAC model used in 2014 was premised on static engineering assumptions, deterministic traffic growth projections and legacy asset configurations. These assumptions no longer reflect contemporary network design or operational realities. Reapplying the same methodology would risk generating cost outputs that are structurally misaligned with present-day technology and service constructs.
  - b. **Complexities of Cost Attribution:** Modern enterprise connectivity is no longer a pure transport offering. DLCs are frequently integrated with redundancy configurations, cloud interconnects, managed services, performance analytics and stringent SLA commitments. Costs are increasingly architecture-driven rather than distance- or bandwidth-driven. A BU-FAC approach, which seeks to allocate costs based on modelled network elements and traffic volumes, would struggle to accurately capture the heterogeneous and customised nature of present-day deployments. This increases the risk of regulatory mispricing.
  - c. **Mature and Competitive Market Conditions:** The market for P2P DLCs has become competitive and enterprise-driven, particularly at higher bandwidth tiers. Large enterprises procure such services through competitive bidding processes, commercial negotiations and multi-operator evaluations. These dynamics ensure efficient price discovery without regulatory intervention. In such a competitive environment, ex-ante cost modelling and ceiling tariff prescription are neither necessary nor proportionate.
2. Considering all the above, it is possible that cost-based tariff ceilings derived from BU-FAC modelling may:
  - Constrain commercial flexibility
  - Undermine differentiated SLA offerings
  - Discourage investment in higher-capacity and redundant infrastructure
  - Fail to reflect regional cost asymmetries and project-specific engineering complexities.
3. Regardless of the above, reconstructing a comprehensive BU-FAC model would require substantial data collection, validation, engineering assumptions and periodic recalibration to keep pace with technological change. Given the rapid evolution of packet-based and software-defined networks, such an exercise risks becoming obsolete shortly after implementation.

4. Therefore, in light of significant technological transformations, evolving cost structures, competitive market dynamics and the risks inherent in prescriptive cost modelling, Airtel submits that the BU-FAC methodology used in 2014 should not be reapplied for determining ceiling tariffs for P2P DLCs. The appropriate regulatory approach in the present context is tariff forbearance, allowing market forces to determine prices while preserving incentives for innovation, investment and service differentiation.

**Q13. In case response to the above question is affirmative, what values of the following items should be used for estimation of ceiling tariffs for DLCs:**

- (i) Return of Capital Employed (ROCE)
- (ii) Useful lives of transmission equipment and Optical Fibre Cable separately
- (iii) Average no. of fibre pairs lit in OFC in trunk segment and local lead segment separately
- (iv) Utilization factor of OFC system in trunk segment and local lead segment separately
- (v) % of use for the transmission equipments used at local lead junction points and in trunk segment for DLCs
- (vi) If the repeaters are still being used in the trunk segment, what is the average distance between two repeater sites?
- (vii) What is the factor of use (no. of circuits in underlying OFC system) to be taken into consideration at local lead and trunk segment for computation of ceiling tariffs?

**Airtel's Comments to Q13:**

Please refer to Airtel's comments in response to Q12.

**Q14. As an alternative to the BU-FAC methodology, or in addition to it, should LRIC or any other methodology be considered for computing ceiling tariffs for P2P DLCs? Please support your view with detailed justification along with data and assumptions**

**Airtel's Comments to Q14:**

Please refer to Airtel's comments in response to Q12.

**Q15. What should the bandwidth capacities be, including the minimum and maximum bandwidth capacity, of P2P DLC for which ceiling tariffs need to be prescribed? In case of bandwidth capacities not regulated in the 2014 TTO, what should be the concomitant value of the relevant factors mentioned at Q13? Please provide your response with justification.**

**Airtel's Comments to Q15:**

1. Airtel submits that the Authority should adopt regulatory forbearance with respect to tariffs for DLCs across all capacities and technologies. In the current market environment,

**neither technology-specific tariff regulation nor a technology-neutral tariff prescription based on bandwidth and service commitments is required.**

2. Since 2014, India has witnessed extensive connectivity expansion by multiple Access and NLD operators, resulting in a mature and competitive market for high-capacity DLCs, particularly at and above 1 Gbps. These services are predominantly procured by large enterprises, hyper-scalers, financial institutions and government bodies through competitive bidding and commercial negotiation. In such an environment, market forces are fully capable of ensuring efficient price discovery without the need for regulatory ceiling tariffs.
3. The technological landscape has undergone a fundamental transformation since the issuance of the TTO, 2014. The networks have migrated from legacy transport platforms to Ethernet, MPLS and software-defined architectures such as SD-WAN. Cost structures are now shaped by packet-based transport, statistical multiplexing, automation and virtualisation. The BU-FAC assumptions underpinning the 2014 framework—relating to capex, traffic projections, asset utilization, etc.—no longer reflect contemporary network design, operational efficiencies, or risk allocation models. Attempting to apply updated bandwidth slabs within an outdated cost construct would be analytically incorrect.
4. Further, very low-capacity circuits (e.g., below 2 Mbps) have become largely obsolete in the enterprise segment, where demand typically begins at 10 Mbps and scales to multi-gigabit levels. Continuing to prescribe tariff ceilings for such legacy capacities would impose disproportionate compliance burdens without delivering meaningful consumer benefit.
5. Prescriptive tariff ceilings may also dampen incentives for investment in high-capacity fibre infrastructure, resilient routing and redundant architectures. India's digital economy increasingly depends on fibre densification, data centre interconnectivity, cloud integration and low-latency enterprise circuits. Regulatory forbearance provides the commercial flexibility necessary to sustain capital investment in advanced transport and access networks.
6. Modern enterprise DLC contracts are highly customised and frequently incorporate redundant last-mile configurations, stringent latency and jitter guarantees, uptime commitments, penalty-linked SLAs and application-sensitive performance metrics. A uniform ceiling tariff framework cannot capture these differentiated service constructs. Rigid tariff prescriptions risk compressing premium service differentiation and undermining tailored enterprise solutions.
7. The TTO, 2014 is premised on detailed cost modelling, distance slabs and engineering assumptions that are increasingly misaligned with packet-based and software-defined networks. Extending or recalibrating this complex framework for each emerging bandwidth tier and technology would be administratively burdensome and economically inefficient. By contrast, forbearance simplifies regulatory oversight while allowing competitive forces to function effectively.

8. Therefore, in light of the mature competitive landscape, rapid technological evolution, obsolescence of legacy capacities, increasing contractual customisation and the imperative to promote continued infrastructure investment, Airtel submits that the Authority should maintain full tariff forbearance for P2P DLCs across all bandwidth capacities. Current market conditions do not warrant technology-specific tariff controls or bandwidth-based ceiling prescriptions.
9. As submitted in comments to various questions above, Airtel strongly submits that forbearance remains the most proportionate, forward-looking and economically efficient regulatory approach.

**Q16. Should the Authority consider the cost methodologies used in other countries for determining tariffs for P2P-DLCs? If so, which methodologies would be appropriate for the present exercise? Please provide your response with justification along with data and assumptions.**

**Airtel's Comments to Q16:**

1. Airtel submits that the Authority should adopt a forbearance regime w.r.t. tariffs for P2P-DLCs.
2. Given India's unique geographic diversity, regulatory framework, spectrum auction regime and its capital structure of operators, adopting foreign cost models would be inappropriate. The only appropriate regulatory approach would be to deregulate retail P2P-DLC tariffs and a forbearance regime across capacities and geographies.
3. Therefore, given the competitive, technology-diverse and commercially negotiated nature of the Indian enterprise connectivity market, the Authority should not adopt foreign cost methodologies for determining P2P-DLC tariffs. Instead, it should follow the regime of regulatory forbearance and deregulation, in alignment with long-term investment sustainability and market efficiency.

**Q17. Is there a need for prescribing separate ceiling tariffs for local lead and trunk segment? Should the Authority adopt different cost methodology for local lead and trunk segment for provisioning of DLCs? If yes, please provide your response with justification.**

**Airtel's Comments to Q17:**

1. No, there is no need to prescribe separate ceiling tariffs for the local lead and trunk segment. The Authority should adopt regulatory forbearance for DLC services across all segments.

2. Enterprises procure DLCs as integrated, end-to-end connectivity solutions based on bandwidth, performance, resilience and SLA commitments. They do not contract separately for local lead and trunk components. Artificial tariff segmentation would therefore not reflect commercial reality.
3. It is worth noting that DLCs are provisioned as an integrated, end-to-end solution comprising both the local lead and trunk segments under a single commercial construct. The network cost is determined on a unified basis for the complete circuit. As an NLD or Access Service Provider, it is neither operationally nor commercially feasible to disaggregate and attribute separate costs to the local lead and trunk components. Any attempt to introduce a segmented tariff structure would impose unnecessary administrative and technical complexities resulting in an increased operational burden without delivering proportional value. Accordingly, the offering is structured and priced as a single, consolidated solution.
4. In a competitive market, operators internally account for the cost of local access and trunk transport while pricing services. Tariffs are determined through commercial negotiations and competitive bidding, reflecting geography, topology, technology mix and SLA requirements. Regulatory segmentation is therefore redundant.
5. Thus, developing separate regulatory cost models for local lead and trunk segments would require arbitrary allocation of shared network costs across diverse technologies and architectures and such prescription risks distortions, regulatory arbitrage and compliance complexity.
6. It is worth reiterating that the enterprise connectivity market is competitive, technologically diverse and commercially negotiated. There is no evidence of excessive pricing or denial of access that would require tariff intervention. Continued forbearance supports flexibility, innovation and investment in fiber and advanced network infrastructure.
7. In view of the above, **Airtel submits that prescribing separate ceiling tariffs or distinct cost methodologies for local lead and trunk segments is unjustified. The Authority should maintain regulatory forbearance for DLC services in the interests of market efficiency, competitive neutrality and sustained infrastructure investment.**

**Q18. Should the Authority adopt BU-FAC, LRIC or any other methodology for computing ceiling tariffs for VPN DLCs? Please support your view with a detailed justification along with data and assumptions.**

**Airtel's Comments to Q18:**

1. **Airtel strongly submits that the VPN-DLC tariff regulation should continue to be governed by forbearance, as maintained in the TTO (57th Amendment), 2014. It should not be**

**subjected to detailed cost-based ceiling tariff methodologies such as BU-FAC, LRIC or any other prescriptive model.**

2. VPN DLC services operate in a deeply competitive telecom market with multiple service providers offering differentiated pricing and service quality. The regulatory forbearance, settled in the TTO, 2014, has enabled market forces to determine efficient pricing structures, foster innovation and maximise consumer welfare without tariff constraints. Mandating a prescriptive cost model risks distorting competition and undermines well-established market dynamics.
3. Further, regulatory forbearance provides TSPs with the flexibility to innovate, invest in capacity expansion and respond to evolving enterprise requirements for VPN services. Introducing rigid cost-based ceilings would disincentivise long-term investment in network capacity that underpins all digital enterprise services.
4. For these reasons, **Airtel submits that the Authority should maintain forbearance for VPN DLC tariffs and refrain from adopting BU-FAC, LRIC or alternative cost accounting methodologies for ceiling tariff computation.**

**Q19. What should the bandwidth capacities, including the minimum and maximum bandwidth capacity, of VPN DLC for which ceiling tariffs need to be prescribed? Please provide your response with justification.**

**Airtel's Comments to Q19:**

Please refer to Airtel's comments in response to Q18. VPN DLC services should remain under regulatory forbearance, consistent with the TTO (57th Amendment), 2014.

**Q20. Should the Authority consider the cost methodologies used in other countries for determining tariffs for VPN-DLCs? If so, which methodologies would be appropriate for the present exercise? Please provide your response with justification along with data and assumptions.**

**Airtel's Comments to Q20:**

Please refer to Airtel's comments in response to Q18. VPN-DLC services should remain under regulatory forbearance, consistent with the TTO (57th Amendment), 2014.

**Q21. Should the spectrum charges recommended for a point-to-point link of 28 MHz paired bandwidth in the 6 GHz(lower) band, be taken as reference for DLC ceiling tariff? If yes, what could be the approximate order of multiple between the backhaul link charges and DLC ceiling tariff? Should the reference be considered for local lead or trunk segment or on overall basis? Please provide your response with justification.**

**Airtel's Comments to Q21:**

1. **Airtel strongly submits that spectrum charges for a point-to-point link of 28 MHz paired bandwidth in the 6 GHz (lower) band should not be taken as a reference for determining DLC ceiling tariffs. Furthermore, Airtel strongly advocates that the Authority maintain a regulatory forbearance regime for DLC services across all technologies and capacity segments, rather than anchoring tariff ceilings to spectrum pricing metrics.**

**a) Spectrum Charges are Not a Cost Proxy for DLC Services**

- i. Spectrum charges for 6 GHz point-to-point links reflect the cost of exclusive radio frequency usage for specific backhaul applications. Such charges are determined through regulatory pricing frameworks that factor in spectrum scarcity, competitive allocation goals and policy objectives. Spectrum fees are inherently distinct from the cost drivers underlying DLC services provided over diverse technologies (optical fiber, microwave, millimeter wave, hybrid networks, etc.).
- ii. Unlike spectrum, DLC provisioning involves a broad range of cost inputs, including:
  - Fiber deployment and maintenance costs;
  - Local access construction and RoW;
  - Restoration and optical equipment;
  - Power, site lease and equipment amortisation.
  - Service assurance, monitoring and SLA commitments.
- iii. In enterprise markets, customised SLAs, route diversity, latency guarantees and managed service components dictate pricing far more than incremental spectrum costs. Spectrum cost is but one component — and in many cases a minor one — of the total cost of delivering DLC connectivity, especially where DLC is provided over fiber or hybrid architectures. As such, using 6 GHz spectrum pricing as a reference for DLC tariff ceilings would yield a misaligned and unrepresentative cost benchmark

**b) Use of Spectrum Charges as a Reference would Undermine the Forbearance Regime**

- i. The market for enterprise connectivity services has matured into a competitive, market-driven environment where pricing is determined through commercial negotiation, not regulatory imposition. Multiple operators routinely bid for enterprise DLC contracts and pricing varies based on location, capacity, contractual terms, service levels and competitive intensity.

- ii. Regulatory tariff ceilings predicated on spectrum costs would introduce unnecessary price controls in an otherwise well-functioning market. Such an intervention would:
  - Undermine the regime of regulatory forbearance that has enabled competition and investment;
  - Interfere with commercial pricing freedom;
  - Distort the natural evolution of service offerings;
  - Deter investment in new infrastructure, including fiberisation and next-generation networking solutions.
2. Also, given the absence of demonstrable market failure or evidence of anti-competitive conduct in the DLC segment, forbearance is the most appropriate regulatory stance.
3. **For the reasons articulated, Airtel submits that:**
  - a. **Spectrum charges for 6 GHz backhaul links are not an appropriate or meaningful reference for DLC ceiling tariffs;**
  - b. **The Authority should adopt a regime of regulatory forbearance for DLC services, allowing tariffs to be determined by competitive market forces and commercial negotiations; and**
  - c. **Any attempt to impose tariff ceilings based on spectrum reference will distort competition, undermine investment and disrupt service innovation.**

Lastly, Airtel urges the Authority to only adopt forbearance in the interests of market efficiency, investment stability and enhanced service delivery for prescribing DLC tariffs. This approach is consistent with economic principles, competitive market outcomes and the long-term sustainability of enterprise connectivity infrastructure.

**Q22. Is the distance-based pricing, based on distance slabs contained in the 2014 TTO (57th Amendment), still relevant for prescribing ceiling tariffs for P2P DLCs? Should the Authority consider new distance slabs, separately for both the local lead and trunk segments, for prescribing ceiling tariffs for P2P DLC? Please provide your response with justification.**

**Airtel's Comments to Q22:**

1. Over the years, the P2P-DLC market has undergone a fundamental transformation marked by robust infrastructure expansion, widespread fiberisation, significant capacity augmentation and intense competition among multiple TSPs, including access providers, NLD operators and infrastructure providers. These developments have resulted in market-driven pricing that is demonstrably efficient, competitive and substantially below the existing regulated ceilings, particularly on high-density and commercially viable routes.
2. In such an environment, continued tariff regulation risks being misaligned with market realities, potentially distorting price signals, constraining service innovation and limiting the commercial flexibility required to cater to diverse enterprise requirements. The presence of

multiple suppliers, availability of substitute connectivity solutions (including Ethernet services, IP-MPLS, SD-WAN and dark fiber) and increasing buyer sophistication will collectively ensure that competitive forces are sufficient to discipline prices, thereby safeguarding consumer interests without regulatory intervention.

3. Furthermore, the economic relevance of traditional cost drivers—particularly distance—has been significantly eroded due to advancements in optical transport technologies, scaleable network architectures and declining unit costs of bandwidth. Consequently, attempts to prescribe or revise tariff ceilings based on distance slabs, whether legacy or newly defined, would be inherently arbitrary and inconsistent with modern network economics. In contrast, a forbearance regime allows tariffs to naturally reflect actual cost structures, demand-supply dynamics and service differentiation parameters such as bandwidth, latency, redundancy, and service-level commitments.
4. It is also pertinent to note that TRAI has, in several other market segments characterised by adequate competition, successfully relied on forbearance as a regulatory tool. A similar regulatory approach is both logical and consistent for DLCs, where no systemic evidence of predatory pricing, collusion or consumer harm has been established. TRAI must, therefore, adopt a largely distance-agnostic and forbearance-forward approach for prescribing ceiling tariffs for DLCs as well.
5. In this regard, the following points clearly indicate that the Authority should refrain from prescribing or revising ceiling tariffs for P2P-DLCs and recognise that market-determined pricing under a forbearance regime is better suited to addressing heterogeneous enterprise connectivity requirements:
  - a. **The 'Death of Distance' Concept in Modern ICT Economics:** Rapid advancements in ICT effectively render geographical distance a secondary factor in the economics of connectivity. High-capacity transport infrastructure, widespread fiber deployment and innovations in network design have flattened cost curves across distance ranges. From Airtel's perspective, distances within a country are becoming increasingly immaterial to the core cost of provisioning capacity. There is a fundamental shift from distance-driven incremental cost to bandwidth-and-service quality driven cost structures, reinforced by technologies such as SD-WAN and managed networking platforms where service levels (latency, uptime, throughput) matter more in SLAs than kilometers of fiber deployed.
  - b. **Technological Evolution has Diluted the Cost Signified by Distance:** Over the past decade, advances such as fiber-optic networks, DWDM (Dense Wavelength Division Multiplexing), SD-WAN and Ethernet over fiber have undermined the economic rationale for tightly spaced distance slabs (e.g., 5 km intervals up to 500 km) originally introduced in 2014. Distance is no longer the dominant cost driver it once was, particularly for segments utilising modern optical transport and networking technologies.

- c. **Market Dynamics and Competitive Pricing make Legacy Slabs Obsolete:** Current market pricing for DLCs demonstrate that operators on dense routes routinely offer tariffs significantly below the 2014 ceilings, largely independent of precise distance bands. TRAI's own consultation paper acknowledges that *'the role of distance seems to be significantly reduced in costing and tariffs'*. This indicates that **market forces — and not rigid distance slabs — now drive pricing outcomes in most parts of the country.**
  - d. **Regulatory Efficiency and Predictability are the need of the day:** Maintaining an archaic distance slab regime imposes regulatory complexity and a compliance burden on both TRAI and TSPs without yielding commensurate benefits to end customers. Simplification through fewer, logical segments (or distance-agnostic tariffs tied to bandwidth and SLA parameters) will enhance regulatory transparency, reduce administrative overhead and provide predictability of price for enterprise consumers — all while embracing competitive market dynamics.
6. **Therefore, from Airtel's standpoint, the distance-based pricing structure predicated on 2014 distance slabs is no longer relevant for prescribing ceiling tariffs for DLCs. The Authority should now follow the 'death of distance' concept and adopt a forbearance regime for Point-to-Point Domestic Leased Circuits (P2P-DLCs), as the prevailing market conditions, technological advancements and competitive dynamics no longer require the prescription of regulated ceiling tariffs, whether distance-based or otherwise.**
  7. Adopting a forbearance regime will promote investment, innovation, service customisation and efficient resource allocation, while ensuring that enterprise customers continue to benefit from competitive pricing and improved service quality. Such an approach is consistent with the principles of light-touch regulation and aligns with the evolving maturity of India's telecom and data connectivity markets.

**Q23. Is there a need for prescribing separate ceiling tariffs for remote and hilly areas? What criteria should be used to define such regions? Please provide your response with justification.**

**Airtel's Comments to Q23:**

1. **No, there is no justification or necessity for prescribing separate ceiling tariffs for DLCs in remote or hilly areas.** The existing tariff framework, based on uniform, non-discriminatory ceilings applicable across all routes and geographies, has functioned demonstrably well and continues to meet the regulatory objectives of affordability, transparency and nationwide availability of services.
2. The current uniform tariff regime enables TSPs to plan, deploy and operate networks on a pan-India basis, while efficiently managing variations in deployment and operating costs through network scale, technological efficiencies and cross-geographical averaging. This

approach ensures predictability and fairness for enterprises and Government users with multi-location and nationwide requirements and avoids artificial price differentiation based on location or terrain.

3. Introducing separate or location-specific ceiling tariffs for remote or hilly regions would be counter-productive. Such differentiation would fragment the market, increase regulatory and operational complexity and distort commercial incentives necessary for continued investment in network infrastructure, particularly in difficult geographies. It would also undermine the foundational principles of non-discriminatory access and tariff transparency and complicate contracting, provisioning and billing arrangements for customers.
4. Further, any attempt to define or classify 'remote' or 'hilly' areas for tariff purposes would be inherently subjective and administratively burdensome. Given the dynamic nature of network expansion, infrastructure availability and service footprints, such classifications would inevitably lead to ambiguity, disputes and regulatory uncertainty without delivering any commensurate benefit to end-users.
5. In fact, TRAI itself in its Explanatory Memorandum of The Telecommunication Tariff (Fifty Seventh Amendment) Order, 2014 dated 14<sup>th</sup> July, 2014 explicitly mentioned the following:

*25. The Authority examined the issue carefully and observed that the lack of adequate competition is not limited only to some specific geographical regions such as Assam, North East and Jammu & Kashmir but is also prevalent in pockets of Himachal Pradesh, Uttarakhand, Jharkhand, Bihar, Madhya Pradesh etc. and in small cities of the country. Any attempt to classify such areas would essentially be a challenging task. Further, while 'higher' ceiling tariffs for DLCs for areas characterized by low level of competition are likely to discourage customers from subscribing DLCs in such areas, 'lower' ceiling tariffs are likely to disincentivize the TSPs who chose to invest there. Besides, dissimilar ceiling tariffs on the basis of geography would run counter to the principle followed by the Authority in prescription of uniform interconnection usage charges, ceiling tariff for national roaming service, tariffs for rural wire-line services etc. in the country.*

*26. Further, based on the information submitted by the NLDs, who are present in North East and Assam, it has been observed that the present capital cost of setting up an OFC system in such areas is more or less same as that in the remaining parts of the country. In view of the above, the Authority has decided to continue with the practice of prescribing ceiling tariffs for DLCs regardless of the location of the end points of the DLC.*

6. In addition, Airtel would like to highlight that affordability in high-cost or low-density areas is already being effectively addressed through market-led mechanisms, including infrastructure sharing, continual technology upgrades and operational efficiencies, rather than through differential tariff ceilings. The existing framework provides TSPs with the necessary flexibility

to sustainably extend services across diverse geographies while maintaining overall tariff stability.

7. In view of the above, **Airtel submits that prescribing separate ceiling tariffs for remote and hilly areas is unwarranted and unnecessary. The Authority should adopt a regulatory forbearance regime for DLCs across the country as it will be the most efficient, transparent and investment-friendly approach for ensuring equitable access to DLC services across the country.**

**Q24. How can the Authority ensure affordability in low-competition areas, such as remote and hilly areas, without distorting market incentives? Please provide your response with justification.**

**Airtel's Comments to Q24:**

1. Please refer to Airtel's comments in response to Q23 above.
2. The DLC market is already functioning under conditions of effective competition, supported by a uniform, non-discriminatory tariff framework that applies equally across all routes and geographies.
3. The existing uniform tariff structure ensures that DLC charges remain consistent irrespective of location, terrain or distance. This approach enables the service providers to efficiently plan and operate nationwide networks, absorb cost variations across geographies through scale and offer seamless services to customers with pan-India requirements. Any form of region-specific pricing, cost-based ceilings or targeted regulatory intervention would introduce artificial market segmentation and risk distorting commercial incentives.
4. Importantly, affordability in remote and hilly areas is already being addressed through market-driven efficiencies, infrastructure sharing and continuous technology upgrades, rather than through regulatory price controls. The TSPs make long-term investments on a national basis and uniform pricing allows cross-subsidisation across regions without creating location-based disparities for end-users. This promotes fairness, transparency and ease of doing business, particularly for enterprises and government users operating across multiple geographies.
5. While ensuring affordability of DLCs in low-competition markets, such as remote and hilly areas, is essential for inclusive digital growth, it is equally important that regulatory interventions preserve market incentives for sustained investment, innovation and quality service delivery. Introducing differentiated tariffs or special regulatory treatment for low-competition areas would increase complexity, undermine pricing transparency and potentially discourage further investment by constraining commercial flexibility. Such measures could also lead to inconsistencies in service provisioning and billing, which would be contrary to the interests of both service providers and consumers.

6. Considering all of this, **Airtel submits that the Authority should allow the market to continue driving affordability, service innovation and infrastructure expansion, including in remote and hilly regions. Adopting the regulatory forbearance approach across the country best upholds the principles of non-discriminatory access, equitable service provision and regulatory certainty. Any deviation from this approach risks introducing inefficiencies without delivering commensurate consumer benefits and is therefore not required at this juncture.**

**Q25. Are there any other relevant issues related to revision of tariff framework for DLCs which the Authority should keep in mind, while carrying out the present review exercise, to further the broad objectives as espoused in this Consultation Paper? Please provide full details and justification for consideration of the same.**

**Airtel's Comments to Q25:**

1. In addition, Airtel would like to highlight that in the case of a Virtual Network Operator (VNO), all charges paid to the underlying TSP on whose network the services are provisioned are permitted as deductions from GR/ ApGR. However, when a TSP procures bandwidth or related network capacity from another TSP in order to complete its own service delivery, such expenditures are currently not recognised as deductible under the same framework.
2. In this context, Airtel submits that charges of a pass-through nature, such as bandwidth charges, leased line charges and similar network infrastructure-related costs, should be clearly and explicitly defined in the license. This clarity is essential to ensure consistency in the interpretation of pass-through charges and to prevent any ambiguity in regulatory or financial treatment and in order to prevent a cascading effect on the price. Such a provision would not only promote network and infrastructure sharing but would also incentivise further investment in the expansion and enhancement of telecom infrastructure across the country.

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