

## **Industry response to TRAI Consultation Paper on Review of existing Tariff for Domestic Leased Circuits (DLCs)**

At the outset, we express our sincere appreciation to TRAI for the opportunity to submit our comments on the **Consultation Paper on the Review of Tariff for Domestic Leased Circuits (DLCs)**. We also commend TRAI for its sustained commitment to nurturing a **competitive, innovation-driven, and transparent digital communications framework** in the country.

In this context, we respectfully submit our views **in firm support of the prevailing forbearance regime**, together with recommendations for **further rationalisation of regulatory requirements** to facilitate business expansion, encourage investment, and promote continued technological advancement within the DLC and VPN segment.

### **Background**

TRAI has historically regulated domestic leased circuit (DLC) tariffs, with the last comprehensive review in 2014; since then, it has closely tracked evolving customer needs and technology shifts in the DLC and VPN segments. India's DLC market is intensely competitive, with service providers offering tailored commercial terms based on enterprise needs, geography, and volume, in line with global practice where leased line pricing is market-driven; conversely, prescriptive ceilings would impede custom, outcome-based solutions (such as SD-WAN integration and cloud-optimized connectivity). VPN services likewise remain outside tariff control.

The core purpose of tariff regulation is to remedy demonstrable market failure and protect consumer welfare; where multiple competitive alternatives exist and enterprises possess bargaining power, uniform ceiling regulation is not proportionate. A more balanced approach is a forbearance-led framework with periodic monitoring and targeted intervention only where clear distortions arise. Any review should uphold technology neutrality (reflecting layered cost structures across core, access, and managed components), preserve investment incentives for resilience, redundancy, and expansion into underserved areas, confine oversight to high-cost or structurally low-competition regions, maintain a clear distinction between traditional point-to-point DLCs and value-added MPLS-VPN/managed services, and align with international light-touch regimes. Such a forward-looking model—anchored in expanded forbearance, ongoing market surveillance, and transparency safeguards—will best promote competition, affordability, reliability, and digital inclusion while strengthening enterprise growth and infrastructure resilience.

Therefore, **DLC tariffs must continue under full forbearance and remain governed by competitive market dynamics**. In our assessment, **no additional regulatory intervention is warranted** for either the DLC or VPN segment, as such intervention would risk **distorting price efficiency, constraining service innovation, and dampening investment incentives** in a market that is already competitive and technologically evolving. Allowing market forces to determine pricing—consistent with the current treatment of **VPN services and higher-capacity DLC offerings**—ensures flexibility for operators to design solutions tailored to diverse enterprise needs. International regulatory practice further validates this approach, as **tariff forbearance has consistently been shown to foster healthy competition, promote customer-centric service design, and accelerate adoption of next-generation technologies**.

**Issue-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.**

**Response:**

The enterprise DLC market demonstrates strong competitive discipline, with multiple NLD providers participating through tender-based procurement and offering a variety of connectivity options such as MPLS, SD-WAN, Ethernet, and cloud services via 17 registered VNOs. Pricing for high-grade DLCs reflects a combination of factors—including SLAs, uptime guarantees, redundancy, cybersecurity compliance, and end-to-end management—which collectively influence price variation and support commercial viability. While permitting ISP participation may lead to marginal reductions in certain segments, it is unlikely to result in significant structural or disruptive price declines. Furthermore, expanding DLC provisioning rights to ISPs could impact the financial sustainability of NLD/ILD licensees, who currently rely on DLC and VPN revenues to offset declines in long-distance voice revenues due to OTT substitution. Diluting rights among numerous ISPs could weaken the economic foundation of licensed long-distance providers and potentially hinder investment in backbone capacity, resilience, and nationwide reach.

The Indian DLC market is already characterized by a high level of saturation and competition. With 71 NLD licenses, the market hosts a substantial number of players, contributing to an overcrowded environment. Competitive pressures have driven tariffs to historically low levels, often below TRAI ceiling rates, with operators offering deep discounts. Given that tariffs on many routes are near or at marginal costs, the potential for further significant price reductions through the entry of ISPs appears limited. In such a saturated and price-pressured market, there is no evident market failure, and the existing competitive forces are well-positioned to ensure fair and efficient pricing without the need for regulatory intervention.

**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.**

**Response:**

While DLC tariffs are an important input for ISP-B/C licensees—especially those without their own transmission— overall pricing reflects a broader cost stack that includes wholesale backhaul and capacity leases, colocation/PoP infrastructure, power and maintenance, statutory levies, equipment deployment, and operating overheads. In practice, bandwidth and transmission costs are positively shaped by negotiated commercial terms—volume, tenure, geography, SLA levels, and bundling—rather than the headline tariff in isolation. A forbearance-led framework preserves contractual flexibility, enables volume and term discounts, supports tailored SLA design, and helps smaller ISPs optimise effective unit costs. Accordingly, continued tariff forbearance remains the most effective mechanism to sustain ISP-B/C viability, encourages customer-centric solutions, and promotes healthy, pro-competitive outcomes for end-users.

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

**Response:**

We believe that MPLS-VPN DLCs should continue to remain outside the tariff regulation framework and under forbearance, based on the following considerations:

1. **Market Dynamics and Competition:** The Indian VPN market is already highly competitive, with multiple providers offering a range of services. This competitive environment suggests that regulatory intervention may not be necessary.
  - **Pricing Trends:** Service providers are offering significant discounts, often below the base tariffs of major players, indicating that market forces are effectively shaping prices.
  - **Market-Led Pricing:** The presence of deep discounts and the move toward marginal cost pricing reflect a market-driven process, reducing the need for regulatory price controls. Introducing tariff ceilings might limit flexibility for customized enterprise solutions.
2. **Technology Transition:** MPLS-VPN is increasingly being replaced by more modern and cost-efficient technologies.
  - **Evolving Technologies:** MPLS, which routes traffic via labels for VPN creation over shared infrastructure, is gradually giving way to SD-WAN and cloud-based DLC solutions that offer better integration, dynamic routing, and lower operational costs.
  - **Future Readiness:** Regulating a technology that is in decline could hinder the adoption of newer, more efficient solutions and may not align with the ongoing technological evolution.
3. **Service Characteristics:** MPLS-VPNs are delivered as managed services with value-added components.
  - **Service Components:** These include SLAs, security features, uptime guarantees, and 24/7 support, which contribute to their complex cost structure.
  - **Pricing Complexity:** Due to these additional features, MPLS-VPN pricing cannot be simplified into a distance-based model. Applying tariff ceilings could overlook these complexities and potentially impact service quality.

**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.**

**Response:**

While there are fundamental technical differences between P2P-DLCs and MPLS-VPNs, the complexity of these services and the maturity of the market suggest that tariffs should be primarily determined by market forces. The authority should consider refraining from setting discount limits or imposing rigid tariff structures for the following reasons:

**Service Characteristics and Delivery:**

- **P2P-DLC:** These services provide dedicated, non-shared bandwidth between two fixed locations, ensuring a secure, direct connection.

- **MPLS-VPN:** These leverage shared infrastructure to create flexible and scalable logical circuits, often delivered as managed, SLA-driven services. They typically include bundled elements such as security, network monitoring, and technical support, which add to their complexity.

### **Cost Structures and Customization:**

Pricing for these services is influenced by multiple dynamic factors, including specific SLAs—such as uptime, latency, and packet loss—and enterprise-specific customization needs, including redundancy and deployment location. As a result, discount levels vary based on solution complexity and customer requirements.

### **Market Dynamics and Transparency:**

- The existing market landscape offers extensive choice, with numerous NLDOs and ASPs, ensuring transparency and competitive options for enterprise buyers.
- Buyers in this segment generally possess high bargaining power, often engaging in competitive tender processes to secure optimal pricing and service levels.
- Current market rates are already significantly below existing regulatory ceilings. Any attempt to guide or limit discounts could interfere with natural price discovery, potentially hindering market efficiency.

### **Regulatory Perspective:**

- MPLS-VPN services are architecturally and economically distinct from legacy point-to-point leased lines. They operate over shared, multi-tenant networks with features like traffic engineering and QoS, making them outcome-based managed services rather than fixed, dedicated circuits.
- Imposing tariff controls on these services could restrict design flexibility, impede quality differentiation, and diminish incentives for timely capacity expansion and investment in backbone and edge infrastructure.
- In line with principles of technology neutrality and proportional regulation, MPLS-VPN DLCs should remain under tariff forbearance, with market-based procurement mechanisms ensuring efficient price discovery. Regulatory intervention should be reserved for cases where market distortion is clearly demonstrated.

**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.**

***No Response***

**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.**

***No Response***

**Q7: As an alternative to Q5 & Q6, should the Authority consider technology-neutral tariff models, focussing 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.**

**Response to Q5, Q6, Q7:**

- The existing forbearance-based tariff regime has generally supported the sector by allowing market forces to determine competitive pricing and fostering market growth and competition. However, given the rapid technological evolution, increasing market diversity, and changing needs of customers and service providers, there is a need to reassess the regulatory approach.
- Currently, neither technology-specific tariff regulation nor a technology-neutral framework based solely on bandwidth or service commitments appears necessary or justified. The existing tariff framework, established under the Telecommunication Tariff Order (TTO) of 1999 and last revised in 2014, was originally designed for a market where DLCs were the primary, and often the only, reliable enterprise connectivity option. At that time, regulatory oversight helped ensure fair access, prevented anti-competitive practices, and supported enterprise adoption.
- Since then, the market has undergone significant changes, with a broader range of connectivity options and technological advancements. These developments suggest that maintaining the current regime, which emphasizes market-driven pricing and minimal regulatory intervention, continues to be appropriate to promote innovation and accommodate ongoing technological shifts.

**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.**

**Response:**

Since service commitments differ significantly across customers, it is neither practical nor appropriate to standardize tariff benchmarks based on predefined service parameters.

**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?**

**Response:**

The current forbearance-based DLC framework provides a flexible, technology-neutral approach that allows for SLA-bundled pricing reflecting factors such as bandwidth scalability, access options (including fibre, wireless, OTN, Ethernet), distance, and redundancy. This flexibility enables large enterprises to leverage scale and allows smaller customers to optimize costs through tailored bundles and managed solutions, guided by benchmarking, market intelligence, and customer feedback.

Introducing staggered tariffs based on service commitments or geographic regions would limit this commercial flexibility, reduce SLA differentiation, and potentially weaken investment incentives. Maintaining a market-led regime supports efficient price discovery, sustains competition, and encourages continued network investment, thereby supporting India's digital growth and innovation.

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

**Response:**

No additional reporting requirements should be mandated for discounts or service bundling in the DLC segment. The enterprise connectivity market is already highly competitive and price-sensitive, and further regulatory reporting could reduce operational flexibility without addressing any existing market failure.

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

**Response:**

Given that DLCs are delivered as customized, SLA-backed managed services with pricing determined by factors such as bandwidth, availability commitments, service scope, and network design, mandating a standardized tariff disclosure format is unnecessary and may not be appropriate within a forbearance-based 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.**

*No Response*

**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?

*No response*

**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.**

**Response:**

Industry suggests that, instead of focusing on specific cost-based methodologies such as BU FAC, the Authority may consider adopting a regime of complete tariff forbearance for P2P DLCs. Given the current market's maturity and competitiveness, the relevance of the 2014 cost-based regulatory approach may be diminished.

**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.**

**Response:**

The Authority may consider maintaining regulatory forbearance for DLC tariffs across all capacities and technologies. Given the current market conditions, implementing technology-specific tariff regulation or a technology-neutral framework based on bandwidth or service commitments may not be necessary at this time.

**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.**

**Response:**

Global experience indicates that in highly competitive markets, retail tariff regulation may not be necessary. Countries such as Japan and South Korea have demonstrated that effective competition can help maintain efficient prices without relying on prescriptive cost-based models.

Considering the level of competition, technology diversity, and the prevalence of commercially negotiated pricing in the Indian enterprise connectivity market, applying foreign cost-based methodologies for P2P DLC tariffs may not align with the local market conditions. India's market dynamics are distinct and may be better supported through continued market-led price discovery within a framework of regulatory forbearance.

**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.**

**Response:**

Industry suggests that there may not be a need to prescribe separate ceiling tariffs or adopt different cost methodologies for local lead and trunk segments. Further fragmentation of the tariff structure could potentially impact the alignment with current technological and market realities.

It would be advisable for the Authority to consider maintaining a holistic, technology-neutral approach, focusing on tariff forbearance. This approach could support the continued delivery of simplified, bandwidth-based managed services to enterprises through the market.

**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.**

**Response:**

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**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.**

**&**

**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.**

**Response: 18 &19 & 20**

Industry suggests that continuing VPN DLC tariff regulation under a regime of regulatory forbearance may be a preferable approach. This strategy has supported the organic development of the market without introducing regulatory distortions.

**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.**

**Response:**

The spectrum charges recommended for a point-to-point link of 28 MHz paired bandwidth in the 6 GHz (lower) band should not be taken as reference for DLC ceiling tariff and the same should be left to market forces under forbearance.

**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.**

**Response:**

Industry notes that the distance-based pricing model and the closely spaced distance slabs specified in the 2014 TTO (57th Amendment) may no longer be applicable for setting ceiling tariffs for P2P DLCs. Additionally, it may not be necessary to introduce new distance slabs for either the local lead or trunk segments.

**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.**

**Response:**

Industry suggests that it may not be necessary to prescribe separate ceiling tariffs for remote and hilly areas, regardless of the location of the end points of the DLC.

**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.**

**Response:**

TRAI has historically regulated domestic leased circuit (DLC) tariffs, with the last comprehensive review conducted in 2014. Since then, it has monitored the evolving customer needs and technological developments in the DLC and VPN segments. The DLC market in India is highly competitive, with service providers offering customized commercial terms based on enterprise requirements, geography, and volume, which aligns with global practices where leased line pricing is market-driven. Prescriptive ceiling tariffs could potentially limit the ability to offer tailored, outcome-based solutions such as SD WAN integration and cloud-optimized connectivity. VPN services similarly remain outside tariff regulation.

In light of this, it is suggested that DLC tariffs continue to be governed by market forces through full forbearance. It is also considered that additional regulatory intervention for the DLC or VPN segments may not be necessary, as such measures could impact price efficiency, service innovation, and investment incentives in a market that is already competitive and undergoing technological change. Allowing market dynamics to determine pricing—consistent with the current approach for VPN services and higher capacity DLC offerings—provides flexibility for operators to develop solutions suited to diverse enterprise needs. International regulatory practices support this approach, as tariff forbearance has been associated with fostering healthy competition, encouraging customer-centric service design, and promoting the adoption of next-generation technologies.

**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.**

**No Response**

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