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TRAI/FY25-26/06
19th May, 2025

Shri Vijay Kumar
Advisor (Financial & Economic Analysis)
Telecom Regulatory Authority of India,
World Trade Centre, Nauroji Nagar,
New Delhi – 110029

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

Reference : TRAI's Pre-Consultation Paper dated 29th April 2025

Dear Sir,

This is in reference to TRAI's Pre-Consultation Paper on *Review of Tariff for Domestic Leased Circuits (DLCs)s* dated 29.04.2025.

In this regard, we are pleased to enclose our comments on the said pre-consultation paper for your kind consideration.

Thanking You,

Yours' Sincerely,
For **Bharti Airtel Limited**

Rahul Vatts
Chief Regulatory Officer

Encl: a.a

Copy to:
1. Shri. Atul Kumar Chaudhary, Secretary, TRAI
2. Shri. D. Manoj, Pr. Advisor (F&EA), TRAI

Response to Pre-Consultation Paper on
Review of Tariff for Domestic Leased Circuits (DLCs)

airtel

Preamble:

1. Airtel would like to thank the Telecom Regulatory Authority of India (**"Authority"**) for giving it the opportunity to express its views on the Authority's pre-consultation paper on, 'Review of Tariff for Domestic Leased Circuits (DLCs)'. We appreciate the Authority's continued efforts to foster a competitive, transparent, and forward-looking telecom ecosystem in India.

2. **DLCs have historically served as a reliable point-to-point connectivity solution within India. However, their relevance in the current market has significantly declined due to the emergence of advanced networking technologies. This transition is being driven by evolving enterprise requirements, advancements in technology, and the availability of competitive, agile, cost-effective and scalable alternatives.**

3. It is also important to highlight that DLCs are powered entirely and exclusively by physical fiber infrastructure. That fiber must be dug, laid, maintained, and upgraded across terrain that is governed by more than 7,000 urban local bodies and multiple state and central agencies. This process is heavily shaped through Right of Way (RoW) policies and restoration norms governed by multiple authorities with varying levels of integration into the Gati Shakti Sanchar Portal. Despite regulatory progress, most operators still face substantial inconsistencies, delays, and high costs in securing RoW.

4. Restoration charges where defined, are often excessive, and where undefined, remain arbitrary and unpredictable. The result is a high, and in many cases rising cost of deploying and maintaining fiber infrastructure. Unlike technology costs that tend to decline with time, the cost of fiberization remains largely immune to such reductions.

5. **The cost associated with fiber deployment has not decreased; on the contrary, it has become increasingly fragmented and unpredictable. To assume that tariffs should decline in such a cost environment is to disregard fundamental economic principles.** The underlying cost structures vary significantly, and it is essential that tariffs be permitted to reflect these differences through market-driven mechanisms.

6. With a commitment to delivering high-quality services, **Airtel has made substantial investments in DLCs, recognizing their importance in supporting digital spread, enterprise services, and government applications. However, the unpredictability and costliness of fiber rollout continue to consume substantial capital, especially in expanding into Tier 2 and Tier 3 regions where commercial returns are modest but policy goals are high.**

7. In this context, we submit that the current framework has allowed operators to plan investments more rationally, absorb cost volatility, offer competitive solutions at scale, and as such, there is no evidence of market failure but plenty of evidence of infrastructural burden.

8. **Therefore, considering the existing market dynamics, we submit that the Indian DLC market is sufficiently competitive, efficient, and responsive to user needs. The existing light-touch regulatory approach has served the sector well and should be continued to sustain the positive trajectory of the industry. Any interference to the status quo would not only distort the market but also risk undermining future investments in high-capacity enterprise connectivity, an outcome neither industry nor the Authority would intend.**

9. In addition to above, we 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 recognized as deductible under the same framework.

10. **In this context, we submit 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. Such a provision would not only promote network and infrastructure sharing but would also **incentivize further investment in the expansion and enhancement of telecom infrastructure across the country.**

In addition to above, please find below our detailed views related to the following aspects as sought by TRAI.

A. Development Trends and Current Status of the DLC Market in the Country

We submit that the DLC market is operating under conditions of effective and sustainable competition, supported by the following factors:

1. **Competitive Market Structure:** The DLC market in India comprises multiple active service providers, including large-scale incumbents as well as circle-based and specialized players. These providers compete across geographies and customer segments, ensuring that no single entity holds excessive market power. **The availability of Infrastructure Providers (IP-I) and passive infrastructure sharing has further enhanced competition by lowering barriers to entry.**

2. **Market-Driven Pricing and Innovation:** The competitive market forces determine the pricing of DLC services, with service providers offering a wide range of options tailored to enterprise and institutional needs. **There has been a consistent decline in tariffs for leased circuits over the past decade, accompanied by improvements in service levels and technology upgrades (including SD-WAN, Ethernet over fiber, and managed services).**

3. **Increasing Infrastructure Investment:**

   a. Ongoing investments in fiber networks, coupled with data center expansion and network modernization, reflect strong commercial incentives among service providers to meet growing enterprise demand. Such capital expenditure is being driven by competitive market dynamics rather than regulatory compulsion.

   b. Most importantly, it must be emphasized that the cost of fiber deployment forms the single most significant input in DLC provisioning. **Unfortunately, as highlighted in the preamble, this critical input continues to be plagued by high and inconsistent RoW charges and restoration fees.**

   c. Further, fiber cable prices themselves have not seen any significant decline, and input costs such as duct leasing, trenching, and manpower have remained static or increased due to inflationary pressures. In such a scenario, any expectation of tariff reduction or further regulatory price caps would be inconsistent with ground realities.

4. **Absence of Market Failure or Consumer Harm:** There is no evidence of market failure or denial of access in the DLC market. Enterprises today enjoy the freedom to choose between multiple providers, often receiving bundled solutions at negotiated rates. SLA enforcement and service quality continue to improve due to commercial and reputational incentives.

Airtel's Recommendations: The DLC ecosystem has matured significantly under the guidance of the Authority. TRAI's gradual shift from direct price regulation to forbearance for certain capacities has encouraged service innovation, competition, and affordability. The DLC sector now thrives on technological evolution, price competition and diverse service offerings; as such, there is no case for fresh regulatory intervention.

B. Effectiveness of the existing tariff framework for Domestic Leased Circuits (DLCs)

The existing tariff framework for DLCs, first issued through the Telecommunication Tariff Order (TTO), 1999 and last revised by TRAI in 2014, was formulated in a context where DLCs were the primary and often the only reliable enterprise connectivity option available in the market. At that time, regulatory oversight on pricing was necessary to ensure fair access, prevent abuse of dominance, and promote enterprise adoption. However, the market environment now in 2025 is fundamentally different. Over the past decade, the enterprise connectivity landscape in India has transformed significantly due to the following key developments:

1. **Proliferation of Competitive Players:** Today, multiple TSPs, including Pan-India operators, regional players, and IP-1s, offer DLCs and alternative connectivity services. This has driven sustained price competition, innovation in service offerings, and customer-centric contractual models, reducing the need for regulatory tariff controls.

2. **Emergence of Technological Alternatives:** A wide array of alternative technologies and connectivity models have emerged since 2014, including:

   a. Software-Defined WAN (SD-WAN)
   b. Internet Leased Lines (ILLs)
   c. Carrier-neutral data center connectivity
   d. Direct Cloud Interconnects and IP-VPNs
   e. 4G/5G business-grade wireless solutions and private networks

   These alternatives have given enterprises greater flexibility to design hybrid and cost-optimized network architectures, thereby significantly reducing dependence on traditional DLCs.

3. **Customer driven Market-Based Pricing:** In today's competitive ecosystem, DLC pricing is determined through commercial negotiations, with rates varying by location, bandwidth, SLA terms, and bundle configurations. Enterprises routinely receive customized price quotes from multiple operators. **The current market reality is such that TRAI's 2014 tariff benchmarks are rarely invoked or relied upon, and pricing, in practice, has become market-driven.**

4. **No Evidence of Market Abuse or Tariff Inflexibility:** There is no evidence to suggest that enterprises are being denied access to DLCs or that they face anti-competitive pricing practices. On the contrary, customers have access to diverse options, resulting in price flexibility, performance improvements, and better service assurance than what was possible under a regulated tariff regime.

5. **Sustaining Fiberization Requires Tariff Stability:** The continued fiberization by operators has enabled seamless connectivity. However, as iterated earlier, fiberization demands substantial capital investment with long gestation periods. In a market where surplus capital for network expansion is sourced largely from internal accruals, **any artificial tariff suppression or unwarranted interference with the status quo would directly impact the financial headroom available to operators, thereby slowing down ongoing and future fiber rollouts.**

Airtel's Recommendations: Given these developments, it is clear that the existing DLC tariff framework remains adequate. Any move to re-regulate or revise tariffs in an otherwise well-functioning and technology-diverse market would:

a. Create distortions in commercial contracting.
b. Disincentivize investment in advanced connectivity solutions.
c. Undermine the natural evolution toward hybrid, cloud-first networks.
d. Constrain financial headroom required for sustaining fiber-based infrastructure investments.

We therefore submit that regulatory forbearance for all capacities, along with a stable policy framework, should be practiced in the interest of long-term market efficiency and innovation.

C. Prevailing Tariff Structures for DLCs offered by Service Providers across different Technologies, Bandwidths and Distances
And
D. Disparities in Tariffs across different Routes and Geographical Regions

1. There is no uniform or prevailing tariff structure for DLCs offered by service providers across various technologies, bandwidths, and distances. **Tariff frameworks vary significantly from one provider to another, sometimes influenced by the extent of their operational footprint—whether they operate on a Pan-India basis or are limited to select service areas or telecom circles.**

2. Our tariff model is distance-agnostic, reflecting our nationwide presence and integrated network architecture. In contrast, many other providers implement distance-based pricing structures, primarily due to their geographically limited operations, which necessitate reliance on third-party infrastructure for inter-circle connectivity. As a result, the cost structures and corresponding tariffs across providers are inherently diverse and shaped by their individual network capabilities and regional presence.

3. In recent years, however, the **basis for determining tariffs has shifted significantly.** Instead of geographical location or route, the tariff for DLCs and other alternatives is now driven primarily by factors such as:

   a. **Service Level Agreements (SLAs):** Tariffs are increasingly influenced by the level of service expected by enterprises—such as uptime, latency, and network availability—which varies depending on specific customer requirements. Custom SLAs ensure that enterprises receive the appropriate quality of service for the price they pay, regardless of their location.

   b. **Capacity and Bandwidth Requirements:** Pricing is closely tied to the capacity or bandwidth required by the customer. Higher capacities necessitate more robust infrastructure and hence higher costs, but these are applied uniformly across all geographies.

   c. **Other SLA Factors:** Additional considerations like response time, support services, redundancy, and security features also impact pricing, ensuring that tariffs reflect enterprise needs rather than regional variances.

4. This transition to a service and quality-based pricing model has led to greater predictability and transparency, allowing enterprises to assess pricing based on their specific needs rather than arbitrary locational factors.

5. As a TSP with Pan-India presence and given that many of our enterprise customers operate branches across multiple states and regions, including metropolitan, urban, and remote locations, our tariffs are uniform across routes and geographical regions within the country for such customers.

6. This standardized pricing approach is consciously adopted to ensure simplicity, transparency, and fairness in service delivery, particularly for end-users with a widespread national presence. In our case, the absence of route-based or region-specific price differentiation eliminates complexity in billing and promotes equitable access to high-quality leased circuit services, regardless of location. **In totality, we ensure that the tariffs are designed in a non-discriminatory and customer-centric manner.**

Airtel's Recommendations: In light of the uniform tariff structure currently implemented for DLC services, wherein charges remain consistent across all routes and geographical regions, it is our considered view that there should be no disparities in tariffs based on location or distance.

This approach ensures fairness, transparency, and ease of business for end-users with a Pan-India footprint, and it upholds the principles of non-discriminatory access and equitable service provision. Accordingly, any deviation from this uniform structure would risk introducing inefficiencies and inconsistencies that are contrary to the interests of both service providers and consumers.

E. Impact of New Technological Advancements on the Evolving DLC Ecosystem and Associated Tariff Considerations

The DLC market has witnessed substantial innovation and service differentiation, driven entirely by competition rather than regulation. The service providers continuously upgrade their offerings to remain relevant in a dynamic enterprise connectivity environment. Some of such notable trends are listed below:

1. **Migration from legacy means to Ethernet and MPLS:** Traditional DLC services based on TDM technologies are being rapidly replaced by more efficient and scalable solutions such as Ethernet over fiber and MPLS-based IP-VPNs, offering better bandwidth utilization, flexibility, and service quality.

2. **Adoption of SD-WAN:** Many enterprise customers are transitioning from fixed-point leased circuits to SD-WAN solutions, which combine multiple access technologies (including leased

lines, broadband, and 4G/5G) with application-aware routing, centralized control, and improved security. These solutions are layered on top of DLC infrastructure and are being offered competitively by multiple entities.

3. **Network Function Virtualization (NFV) and Cloud Integration:** Operators are embedding virtualized network services (e.g., firewalls, load balancers, WAN optimizers) into leased line offerings, enabling customers to manage their connectivity more flexibly and cost-effectively. Integration with public and private cloud environments is also being facilitated through direct cloud interconnect and hybrid connectivity models.

4. **Enhanced Service Level Agreements (SLAs) and Performance Monitoring:** With increased enterprise demand for mission-critical connectivity, service providers now offer differentiated SLAs, proactive fault management, and real-time performance dashboards, all enabled by advanced network analytics and automation.

5. **Support for Emerging Applications:** Upgraded DLC infrastructure is supporting high-bandwidth, low-latency applications such as remote operations, video surveillance, smart factory automation, and edge computing, highlighting the critical role of leased circuits in India's digital transformation.

Airtel's Recommendations: These innovations are the direct result of competition among operators to win and retain enterprise customers, and they reflect a healthy, evolving market. There is no indication that regulatory intervention is necessary to stimulate technology deployment or service improvements in this space.

F. Approaches and Methodologies Adopted by Service Providers for Determining Tariffs of DLCs (presently under forbearance)

Under the prevailing partial tariff forbearance regime, the service providers are free to determine tariffs for certain capacities. However, we adopt the mix of following key approaches to determine tariffs of DLCs:

1. **Cost Based Pricing:** Tariffs are calculated based on the underlying cost of infrastructure, including:
   a. Network equipment and fiber rollout
   b. Operation & maintenance
   c. Manpower
   d. Capital recovery
   e. Margin - added for profit, typically based on service and customer profile.

2. **Market-Based (Competitive) Pricing:** Rates are also determined by prevailing market conditions, including:

a. Availability of infrastructure providers in a region
b. Customer size and bouquet of offerings taken
c. Service demand and supply

3. **Volume-Based Pricing:** In the DLC scenario, tariffs decrease with higher usage or bandwidth, for eg:
   a. Per Mbps cost is lower for 100 Mbps than for 10 Mbps.
   b. Large enterprises benefit from bulk discounts or tiered pricing models.
   c. Encourages long-term, high-volume commitments.

4. **Distance-Based Pricing:** For certain DLC offerings, pricing is also determined by the distance between endpoints (e.g., in km), for eg: Inter-circle cost more than intra-city or intra-circle links.

5. **Custom (Negotiated) Pricing:** In this case, tailored pricing is provided to entities like banks, financial institutions, Government, IT sector, data centers, basis their customer requirements, such as:
   a. SLA expectations (latency, uptime)
   b. Security/compliance needs
   c. Infrastructure sharing

6. **Bundled or Value-Based Pricing:** Sometimes, the determination of tariffs is also based on bundling with other services as listed below. In such a case, the tariff is dependent on the value delivered or total solution price.
   a. Managed services
   b. Equipment (e.g., routers, firewalls)
   c. Cloud interconnectivity or data center access

Airtel's Recommendations: In the current forbearance regime, we adopt a mix of cost-driven, market-responsive, and customer-centric approaches to pricing. Any future refinements in tariff framework for DLCs should only be left to forbearance, hence, aiming to balance flexibility with greater transparency and equitable access.

G. Evolving Customer Requirements and Expectations in Relation to DLC Services

There is a migration in enterprise connectivity preferences away from DLCs to more agile, software-defined, and cloud-integrated solutions. Some of the reasons behind DLCs, no longer being the go-to solution for general connectivity in today's scenario are as below:

1. **Rise of SD-WAN and Hybrid Networks:** Enterprises are increasingly adopting SD-WAN, which allow them to combine multiple access technologies, such as broadband, 4G/5G, and DLCs,

into a single, centrally managed, application-aware network. This reduces reliance on traditional point-to-point leased lines, while enhancing performance and control.

2. **Greater Use of Internet Leased Lines (ILLs) and Broadband for Business:** For less latency-sensitive or non-critical workloads, enterprises are substituting DLCs with dedicated Internet Leased Lines and even high-speed business broadband services. These services are competitively priced, widely available, and increasingly reliable due to improved last-mile infrastructure.

3. **Cloud-First Strategies:** As enterprises migrate their core applications and data to public and hybrid cloud environments, the demand is shifting from static DLC links to cloud interconnect solutions and multi-site managed IP-VPNs, which offer greater flexibility and scalability.

4. **Carrier-Neutral and Data Center Connectivity:** With the growth of carrier-neutral data centers, enterprises now procure last-mile and cross-connect services directly from multiple providers co-located at these hubs, enabling them to bypass traditional DLC arrangements and optimize costs and routing.

5. **Emerging 5G and Private Networks:** The rollout of private 5G networks and dedicated enterprise wireless solutions is expected to further diversify the connectivity mix, particularly in manufacturing, mining, and campus environments where fiber deployment is complex or cost-prohibitive.

Airtel's Recommendations: These shifts clearly demonstrate that DLCs are no longer the default choice for enterprise connectivity. The market is already offering abundant options, enabling customers to mix-and-match based on cost, performance, and strategic alignment.

H. Challenges Faced by Small Service Providers, Customers or New Entrants in the Current DLC Market

Based on our ongoing experience and stakeholder engagement, **we assess that the current DLC market is operating in a stable and non-discriminatory manner. We do not identify any material challenges that would hinder the participation or operations of small service providers, customers, or new entrants.** The market framework continues to support equitable access, efficient service provisioning, and fair competition and the following reasons substantiate this assessment:

1. **Open and Non-Discriminatory Access:** All service providers, regardless of size or market tenure, are provided with fair and non-discriminatory access to DLC infrastructure and services. This has ensured a level playing field across the market.

2. **Transparent Licensing and Compliance Procedures:** Regulatory requirements for entry, including licensing, technical compliance, are clearly defined and consistently applied by the Government and the regulator. This reduces ambiguity and encourages new entrants to participate without undue administrative burden.

3. **Established Interconnection and Infrastructure Sharing Norms:** The DLC market benefits from well-established infrastructure sharing frameworks. These provisions allow smaller providers to leverage existing networks without facing high capital costs or access limitations.

4. **Robust Customer Choice and Market Competition:** Customers have access to multiple service providers, ensuring healthy competition. This competitive environment has already resulted in cost-effective and reliable service offerings, with no major reports of access or quality-related challenges.

5. **No Reported Bottlenecks in Service Delivery:** We have not observed systemic issues related to provisioning delays, technical barriers, or coordination gaps that would impact small players or new entrants in accessing or delivering DLC services.

6. **Technology-Neutral and Scalable Framework:** The DLC market design supports a technology-neutral approach, allowing both legacy and newer players to adopt appropriate solutions without being constrained by legacy systems or exclusive dependencies.

Airtel's Recommendations: The above validates that competitive alternatives exist, and the DLC market is functioning without any structural bottlenecks or dominance. The DLC market continues to exhibit characteristics of openness, transparency, and operational efficiency. At present, we do not see any specific challenges being faced by small service providers, customers, or new entrants that would warrant regulatory or structural intervention.

Summary:

1. We appreciate the Authority's continued efforts in fostering a fair, transparent, and competitive telecom ecosystem in India. However, **in reference to any potential review or consultation concerning the DLC market, we humbly submit that no regulatory intervention is warranted at this stage, as the market is already operating under conditions of effective competition.**

2. Given the above, we believe that **continued regulatory forbearance in the DLC segment is in the best interest of the market and end-users. Any ex-ante intervention at this juncture may lead to:**

a. **Unintended disruption of market-based pricing mechanisms**
b. **Reduced incentives for investment and innovation**
c. **Higher compliance burden on service providers, ultimately affecting consumers.**

3. **Hence, we recommend that the Authority should ensure to:**
   a. **Maintain regulatory forbearance.**
   b. **Avoid imposing any new price ceilings.**
   c. **Allow the market to continue driving service innovation, affordability, and infrastructure growth.**

We reiterate our commitment to collaborating with the Authority to achieve the shared goal of a digitally empowered and connected India.

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