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TRAI/FY26-27/52
2nd September 2026

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Subject: Bharti Airtel's Comments on TRAI's Consultation Paper on *Draft Amendments in 'the Standards of Quality of Service of Access (Wireline and Wireless) and Broadband (Wireline and Wireless) Service Regulations, 2024'*

Reference: TRAI's Consultation Paper dated 05th August 2026

Dear Sir,

This is in reference to **TRAI's Consultation Paper on Draft Amendments in 'the Standards of Quality of Service of Access (Wireline and Wireless) and Broadband (Wireline and Wireless) Service Regulations, 2024' dated 05th August 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', written over a light blue circular stamp.

Rahul Vatts
Director Corporate Affairs
&
Group Chief Regulatory Officer

Encl: a.a

BAL's Comments to TRAI CP on Draft amendments in 'The Standards of Quality of Service of Access (Wireline and Wireless) and Broadband (Wireline and Wireless) Service Regulations, 2024

Executive Summary

1. Airtel thanks the Telecom Regulatory Authority of India ("TRAI" or the "Authority") for providing stakeholders an opportunity to submit comments on the Consultation Paper on the Draft Amendments in 'the Standards of Quality of Service of Access (Wireline and Wireless) and Broadband (Wireline and Wireless) Service Regulations, 2024'.
2. Airtel fully supports the Authority's objective of protecting consumers, enhancing transparency and ensuring sustained improvement in the quality of telecommunications services. High-quality, reliable and resilient networks are fundamental to India's digital economy, and Airtel remains committed to continuous investment in network capacity, coverage, resilience, service assurance and customer experience. At the same time, **a robust QoS regulatory framework must be grounded in the realities of modern telecommunications networks and must ensure that regulatory obligations are outcome-oriented, technology-neutral, objectively measurable, statistically representative, proportionate, causally attributable and practically implementable.**
3. In this context, Airtel submits that several proposals in the draft amendment require reconsideration. **The proposed framework, in its present form, risks moving beyond regulation of demonstrable consumer outcomes into regulation of internal network parameters, predictive engineering models, isolated measurements and variables that are inherently dynamic or substantially outside the reasonable control of an operator.** It also introduces multiple overlapping KPIs, granular reporting requirements, ex-ante regulatory controls and financial consequences without, in several instances, an established and universally applicable methodology for measurement, attribution, verification and audit. Such an approach may inadvertently transform normal and technically unavoidable variations in network performance into instances of regulatory non-compliance, even where consumers have not experienced material or sustained service degradation.
4. Telecom networks—particularly mobile and 5G networks—are inherently dynamic, shared and continuously optimized systems. Radio conditions, spectrum availability, traffic distribution, propagation characteristics, network loading, device capabilities, customer-premises equipment, indoor conditions, backhaul, interconnection, content delivery networks, application servers and the wider Internet ecosystem can materially influence the service experienced by an individual customer at a particular point in time. Consequently, a network engineering parameter or an individual measurement cannot, by itself, establish poor consumer experience, service outage or TSP-attributable service deficiency unless the applicable measurement methodology, causation, duration, materiality and attribution have been objectively established.
5. The same principle applies to predictive coverage maps and other model-based disclosures. Coverage maps are engineering predictions generated using defined assumptions, models and datasets; they are not, and cannot reasonably be treated as, real-time ground truth at every location, time and device configuration. Their accuracy can be affected by terrain, clutter, propagation conditions, spectrum bands, network configuration, loading, device characteristics, indoor conditions and temporary network events. Similarly, throughput—whether on wireless or wireline access—cannot be treated as a fixed attribute of a tariff or access line removed from the conditions under which the measurement is made. A regulatory framework that does not adequately account for these characteristics risks

creating obligations that are theoretically precise but operationally incapable of delivering reliable or comparable compliance outcomes.

6. Airtel therefore respectfully submits that regulatory certainty requires measurement certainty. Before a parameter is made subject to a mandatory benchmark, compensation, financial disincentive, public disclosure or adverse regulatory consequence, there must be a clear and standardized methodology covering, inter alia, the measurement point, sampling methodology, denominator, aggregation, equipment, test environment, time window, exclusions, data sources, attribution criteria, audit process and treatment of anomalous events. Equally important, the framework must distinguish between material and sustained TSP-attributable degradation and transient variation, customer-premises conditions, third-party dependencies, force majeure and other circumstances beyond the reasonable control of the TSP.
7. Airtel is also concerned that the introduction of zero-tolerance or 100% compliance requirements for inherently variable parameters may not necessarily advance consumer welfare. Such requirements can encourage compliance-driven network engineering rather than efficient network optimization, increase disputes arising from marginal or anomalous observations, and divert scarce technical and financial resources from network expansion, resilience, restoration and innovation. In particular, ex-ante regulatory approvals or prior-intimation requirements for routine and dynamic network-engineering decisions could constrain the very flexibility that modern networks—including 5G networks and network slicing—are designed to provide.
8. **A proportionate QoS framework should therefore build upon proven, customer-facing and statistically representative indicators, rather than multiplying KPIs or regulating internal engineering inputs merely because they are technically measurable. Where a new parameter is still evolving, lacks standardized measurement methodology, or has not been sufficiently validated across technologies and vendor architectures, it would be more appropriate to initially introduce it through pilot testing and monitoring, without immediate financial or punitive consequences. This would enable the Authority and industry to establish empirical evidence, validate measurement methodologies and calibrate appropriate benchmarks before imposing binding obligations.**
9. Airtel further submits that **financial liability and consumer compensation should follow demonstrable consumer harm and established TSP attribution, and should not arise automatically from a numerical variance, reporting discrepancy, isolated measurement or procedural delay that may be immaterial, inadvertent, technically explainable or capable of correction.** A sound enforcement framework should preserve due process, including disclosure of the underlying basis, verification, reconciliation, an opportunity to explain or correct data, and proportionate escalation for deliberate, material or persistent non-compliance.
10. In addition, any significant change to QoS obligations necessarily requires adequate implementation time. The proposed amendments may entail substantial changes to network architecture, OSS/BSS platforms, data collection and analytics systems, testing arrangements, customer-service processes, reporting interfaces and nationwide operational workflows. Such changes cannot be implemented reliably merely by prescribing an effective date. Technical specifications, calculation methodologies and reporting formats must first be finalized, validated and made available, followed by an adequate transition period for system development, testing, parallel reporting and stabilization.

11. Against this backdrop, **Airtel urges the Authority to adopt a principles-based, evidence-led and proportionate approach to the proposed amendments. Every new KPI or regulatory obligation should be tested against five fundamental questions:**

- a. Is it technically measurable?
- b. Is it objectively comparable?
- c. Is it attributable solely to the TSP?
- d. Does it materially reflect consumer experience?
- e. And is the proposed regulatory consequence proportionate to the demonstrated consumer impact?

Where the answer to any of these questions is uncertain, the appropriate regulatory response should be further consultation, pilot testing and empirical validation—not immediate financial or punitive enforcement.

12. Airtel accordingly recommends that the Authority retain established and demonstrably effective QoS frameworks; avoid duplicative and zero-tolerance obligations; refrain from converting predictive models and internal network metrics into strict consumer-facing compliance obligations; preserve the flexibility required for dynamic 4G/5G network management and innovation; and ensure that compensation, publication and financial disincentives are triggered only where material, sustained and objectively verifiable TSP-attributable deficiencies have been established.

13. Airtel's detailed clause-wise submissions in the Annexure therefore seek to ensure that the final regulatory framework is technically credible, administratively workable, economically proportionate and firmly aligned with actual consumer outcomes. Airtel requests the Authority to consider the proposed deletions, recalibrations, safeguards and implementation measures set out below, so that the final framework achieves its intended consumer-protection objectives without creating perpetual technical non-compliance, unnecessary compliance costs, avoidable disputes or unintended constraints on continued network investment and innovation.

Summary:

1. **Implementation Timeline:** The amendments require material changes across networks, OSS/BSS, analytics, testing, customer-service and reporting systems. Enforcement before finalization of methodologies and system stabilization may create technical non-compliance without corresponding consumer harm. **Airtel requests TRAI to provide a minimum implementation glide path of 3-4 years from the date of notification for implementation of the regulation in this shape, constitute a TRAI–TSP–OEM implementation group, permit sandbox testing and parallel reporting, and allow an initial correction window without financial consequences.**

2. **Coverage Maps:**

- a. Coverage maps are predictive engineering outputs affected by terrain, clutter, spectrum bands, network loading, device characteristics and measurement conditions and, therefore, cannot represent real-time ground truth. In the absence of a validated methodology, a 98% accuracy KPI with ± 3 dB tolerance and associated financial consequences would be technically unsuitable.

- b. The Authority has justified the proposed coverage-map accuracy and validation regime primarily by reference to “global trends”; however, the draft amendment goes materially beyond the cited practices. Of the jurisdictions referenced, only ARCEP in France uses a 98% reliability threshold, and the consultation paper cites that benchmark without disclosing the applicable sample size, confidence interval or whether non-compliance attracts an automatic monetary penalty comparable to Regulations 16 and 16A. ARCEP also reduces the threshold to 95% for smaller areas. By contrast, Ofcom validates modelled predictions against a statistical tolerance band—an average error of ± 3 dB and a standard deviation of up to 8 dB—rather than a binary pass-or-fail test for each sample. The FCC uses a public or crowdsourced challenge-and-concede process, while Bundesnetzagentur expresses coverage as a cell-edge probability of 75–90%, rather than prescribing a percentage-accuracy benchmark for the published map itself. The draft amendment therefore combines ARCEP’s strictest numerical benchmark with a distinct enforcement model—monthly LSA-level sampling, per-sample binary pass or fail, and automatic financial disincentives under Regulations 16(1) and 16A—for which no direct parallel appears in the cited examples. Accordingly, the proposed regime cannot properly be characterized as reflecting global best practice.
 - c. Considering the above, **Airtel requests TRAI to drop the proposed accuracy KPI and financial disincentive and retain coverage maps solely as transparency disclosures. If verification is retained, Airtel further requests TRAI to first establish a standardized methodology covering tolerances, exclusions, audit and dispute resolution.**
- 3. **Mobile Significant Network Outage (SNO) and Rebates:** The existing district-level SNO framework is objective and auditable, whereas a trigger based on more than 10% of LSA subscribers and the undefined concept of “affected subscribers” cannot reliably establish location, duration or actual impact and may divert resources from service restoration. **Airtel requests TRAI to retain the district-level SNO framework and drop the proposed LSA subscriber trigger. If rebates are retained, Airtel further requests TRAI to base them on objective and verifiable criteria, material outage duration and established TSP attribution, with appropriate exclusions for events beyond the TSP’s reasonable control.**
- 4. **Wireless Broadband Speed Disclosures:** Mobile throughput varies with spectrum availability, radio conditions, network loading, device capability, location, backhaul and the wider Internet ecosystem; tariff-level reporting with 100% compliance would therefore convert indicative speeds into an unrealistic guarantee. **Airtel requests TRAI to permit publication of technology-wise typical upload and download speed ranges at the network level, retain quarterly statistically representative assessment, drop tariff-wise and 100% compliance requirements, and exclude factors beyond the TSP’s reasonable control.**
- 5. **PRB Utilization and Network Slicing:**
 - a. PRB utilization is an internal resource-management metric and not a direct measure of customer experience. Mandatory augmentation at an 80% threshold may penalize efficient spectrum use, while 21-day prior intimation would constrain dynamic 5G slicing and time-sensitive use cases.
 - b. Also, TRAI has not indicated any international precedent for the proposed framework. Airtel is likewise not aware of any jurisdiction that imposes a rigid, cell-level PRB-utilization ceiling of 80%

together with a mandatory 21-day ex-ante notification requirement for creation of a network slice. The proposal therefore does not reflect established global regulatory practice; rather, it introduces an unprecedented and intrusive constraint on routine network engineering, efficient spectrum utilization and the dynamic resource orchestration that is intrinsic to 5G networks.

- c. **Airtel requests TRAI to reconsider and drop the proposed PRB KPI, cell-level threshold and prior-intimation requirement, continue assessing established customer-facing QoS indicators, and permit dynamic network slicing subject, if necessary, to limited post-facto reporting.**
6. **Silence Call Rate:** There is presently no standardized, vendor-neutral and independently auditable production methodology for this KPI. RTP gaps do not necessarily establish customer-perceived silence, and the underlying cause may lie in devices, applications, interconnection or external networks. **Airtel requests TRAI to drop the proposed KPI at this stage and instead conduct a TRAI-led TSP/OEM pilot to standardize the methodology and exclusions; any future benchmark should initially be introduced only for non-financial monitoring.**
7. **Wireline Broadband Speeds:** Replacing the existing 90th-percentile benchmark with 100% compliance would create a zero-tolerance regime under which isolated anomalies and customer-premises factors may result in non-compliance. **Airtel requests TRAI to retain the 90th-percentile benchmark and representative sampling, standardize test conditions, exclude factors beyond the TSP's reasonable control, and avoid penalties for isolated measurements that do not demonstrate sustained, TSP-attributable degradation.**
8. **Wireline MTTR:** A universal 10-hour MTTR benchmark would duplicate existing fault-repair and subscriber-relief obligations and may be materially affected by complex faults, customer access, utilities, RoW, third parties and force majeure. **Airtel requests TRAI to withdraw the proposed mandatory benchmark and retain the existing framework. If MTTR data is collected, Airtel further requests TRAI to use it initially only for monitoring, with appropriate exclusions.**
9. **Wireline SNO Based on Throughput Degradation:** A 20% reduction in end-to-end throughput does not, by itself, constitute an outage and may arise from CDNs, content servers, routing, CPE, Wi-Fi or external networks beyond the TSP's control. **Airtel requests TRAI to drop the proposed speed-degradation trigger and the related reporting and compensation provisions, and to confine SNO obligations to objectively identifiable, material and TSP-attributable service outages.**
10. **Billing Complaint Resolution:** Complex billing disputes may involve roaming, interconnection, payment reconciliation, system corrections and third-party dependencies; a seven-day, 100% resolution requirement may therefore incentivize premature closure rather than substantive resolution. **Airtel requests TRAI to retain the existing 28-day period, avoid a zero-tolerance standard, and subject any future reduction to an evidence-based impact assessment with appropriate safeguards for complex cases.**
11. **Wireline Reporting Disaggregation:** Artificial separation of shared CRM, call-centre, billing, payment and service-assurance systems would impose disproportionate IT, operational and audit costs without corresponding consumer benefit. **Airtel requests TRAI to retain aggregated reporting where systems and customer accounts are common and to continue classifying 5G FWA under access service (wireless).**

12. **Quality of Experience Score:** QoE is influenced by subjective and external factors, while the proposed composite score lacks clarity regarding inputs, weightages, normalization, attribution, validation and correction. Public comparisons based on such an unvalidated score may create reputational consequences without adequate due process. **Airtel requests TRAI to drop the proposed publication clause and continue relying on objective QoS measures. Any future QoE framework should be introduced only after consultation, pilot testing, independent validation, access to underlying data and correction safeguards.**
13. **Financial Disincentives and Reporting:** A variance above 1% may arise from rounding, sampling, aggregation or synchronization and does not, by itself, establish false reporting. Further, a reporting delay is distinct from substantive QoS failure, and catch-all penalties do not account for materiality or intent. **Airtel requests TRAI to drop proposed Regulations 16A and 16B, retain the existing ₹5,000 per report per day framework subject to the ₹10 lakh cap, and preserve reconciliation, correction, representation and proportionate escalation safeguards.**
14. **Interest on Financial Disincentives:** Interest and compounding would impose an additional punitive burden even where liability remains under bona fide verification or review. **Airtel requests TRAI to drop proposed Regulation 18. Alternatively, Airtel requests that interest apply only to undisputed amounts remaining unpaid after final determination and due notice, with no accrual during a genuine review or dispute.**

In summary, Airtel request TRAI to adopt the following cross-cutting regulatory safeguards prior to issuance of revised regulation:

- Apply new obligations only after technical feasibility, impact assessment, standardized methodology, pilot validation and adequate transition.
- Reject zero-tolerance standards for inherently variable parameters; use statistically representative and customer-facing measures.
- Link compensation, publication and financial liability to demonstrable, material, sustained and TSP-attributable consumer harm.
- Exclude customer-premises, device, application, interconnection, external-network, power, fibre-cut, RoW, third-party and force-majeure factors beyond reasonable TSP control.
- Ensure prior disclosure, verification, reconciliation, correction, representation and proportionate escalation before adverse action.

Airtel reiterates its support for TRAI's objective of ensuring high-quality telecom services and protecting consumer interests. An effective QoS framework should focus on demonstrable consumer outcomes and distinguish material, TSP-attributable deficiencies from normal technical variability and factors beyond the service provider's reasonable control.

Airtel therefore requests the Authority to retain proven, customer-facing benchmarks; assess dynamic parameters through statistically representative and technically validated methodologies; and subject new or evolving KPIs to pilot testing and an initial monitoring phase. Financial or reputational consequences should arise only where material consumer harm and TSP attribution are objectively established, with appropriate due-process safeguards.

The framework should also preserve the operational flexibility required for efficient spectrum utilization, network optimization, 5G innovation, network slicing, rapid restoration and continued investment. Airtel accordingly requests TRAI to adopt a final framework that is consumer-centric, technically credible, evidence-based, proportionate and implementable, while avoiding unnecessary compliance costs, disputes and perpetual technical non-compliance.

Sl. No.	Draft Notification	Input / Comment / Counter-Comment	Justification with supporting reference, if any
SECTION-I PRELIMINARY			
1	1. Short title, commencement, and application.- (1) These regulations may be called the Standards of Quality of Service of Access (Wireline and Wireless) and Broadband (Wireline and Wireless) Service Regulations, 2024.		
	(1)These regulations shall come into force with effect from 1st October 2026.	Airtel urges the Authority to provide a minimum implementation glide path of 3-4 years from the date of notification. A phased implementation approach is a prudent and well-established regulatory practice for enabling the orderly adoption of significant policy-mandated changes. Also, a glide path can address implementation readiness, but not inherently unmeasurable requirements. The proposed coverage-accuracy, silence-call and 10% subscriber-impact norms lack objective measurement and attribution mechanisms. These requirements should therefore be dropped, not merely deferred.	1. The implementation of this draft Regulation will require radical and massive changes and some changes can't be fully comprehended at this stage. 2. On the minimum side, it will require massive augmentation of network elements, network infrastructure and resources. On customer services' side also, it will need changes and upgradation in our network and IT systems. Further, both network and customer services will require setting up of processes with various cross-functional teams. 3. Most importantly, such radical changes require substantial time for implementation, post notification of the Regulation. 4. Any immediate implementation next month will cause catastrophic impact to network, customer services. It will also cause sudden irreversible disrepute to the brand, if the quality of service is termed as non-compliant by TRAI. 5. While we reiterate that some of the proposed stringent QoS norms are unachievable, in case TRAI

			disagrees with our contention and analysis, we urge the TRAI to provide a minimum implementation glide path of 3-4 years from the date of notification for implementation of the regulation in this shape. 6. However, while an adequate implementation glide path can address system-development and operational-readiness requirements, it cannot cure proposals that are inherently incapable of objective implementation. In particular, the proposed coverage-accuracy, silence-call and 10% subscriber-impact requirements suffer from fundamental measurement and attribution gaps: there is no validated ground truth for coverage, existing OSS platforms lack standardized counters and OEM support for silence-call measurement, and networks cannot reliably identify the subscribers affected by the proposed outage trigger. These requirements should therefore be reconsidered and dropped, rather than merely deferred through a longer implementation timeline.
2. Definitions.-			
2.	(sa) “Physical Resource Block” or “PRB” is the fundamental unit of radio resource allocation in 4G LTE and 5G New Radio (NR) networks. It represents a defined portion of radio spectrum over a specific time interval and serves as the basic scheduling unit through which a cell allocates radio resources to user equipment (UE) for data transmission and reception.	No changes proposed.	
SECTION III QUALITY OF SERVICE PARAMETERS FOR ACCESS SERVICE (WIRED)			

3	4. Quality of Service Parameters in respect of which compliance reports are to be submitted to the Authority.- (1) Every service provider providing access service (wireline) shall meet the benchmarks, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely:- II. Fault Repair (ii) Fault incidences (No. of faults per 100 subscribers/month) Benchmark: ≤ 5 Assessment Period: Quarterly	No changes proposed.	
SECTION IV – QUALITY OF SERVICE PARAMETERS FOR ACCESS SERVICE (WIRELESS)			
4	6. Quality of Service parameters in respect of which compliance reports are to be submitted to the Authority. - (1) Every service provider providing access service (wireless) shall meet the benchmark, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely:-		
	I. Network Availability (i) Availability of service wise Geospatial coverage map on Service provider's website for percentage of working cells Accuracy of service wise Geospatial coverage map Published on	1. The accuracy benchmark should be dropped. The regulatory obligation should remain limited to the publication, availability, prescribed format and periodic updating of service-wise geospatial coverage maps. No financial disincentive should be imposed in	1. The proposed change fundamentally alters the nature of the obligation. 2. The existing requirement is a publication and transparency obligation: TSPs must publish service-wise coverage maps in the prescribed format and keep them updated. An accuracy benchmark is materially

	service provider's Website Benchmark: ≥99% ≥ 98% Assessment Period: Monthly Effective Date: 01.04.2025 01.10.2026	relation to the accuracy of such predictive coverage maps. 2. The service-wise geospatial coverage-map framework itself is relatively recent. TRAI issued its detailed direction on publication of service-wise geospatial coverage maps only on 22 November 2024, pursuant to the QoS Regulations, 2024. The framework became operational from 1 April 2025. The TSPs should therefore be provided adequate time to stabilize the underlying systems, databases, RF-planning models, APIs, processes and governance mechanisms before a fundamentally different accuracy-based compliance obligation is introduced. 3. The coverage maps are inherently prediction-based and indicative representations of outdoor network coverage. They should not be converted into an audited accuracy KPI carrying financial consequences, particularly when the underlying methodology itself recognizes that coverage may be generated either from actual measurements/network analytics or through industry-standard prediction methodologies. TRAI's November 2024 guidelines expressly permit prediction-based coverage maps, subject to sample verification and appropriate	different. It requires ground-truth validation of predictive RF outputs against field measurements. Unlike publication, accuracy depends on the reference methodology, sampling, device, route, timing and environmental conditions. Converting it into a percentage-based QoS KPI would therefore create a far more complex and uncertain obligation. 3. The framework is too recent to justify an additional accuracy benchmark. TRAI notified the revised QoS Regulations on 2 August 2024, effective 1 October 2024, and issued detailed coverage-map directions on 22 November 2024 for implementation from 1 April 2025. The industry has had limited time to operationalize nationwide coverage databases, GIS systems, RF models, technology-wise maps, web interfaces and data pipelines. Introducing a benchmark with regulatory and financial consequences before this framework stabilizes would be disproportionate. 4. Coverage maps are inherently predictive and cannot be equated with ground truth. Coverage maps are engineering estimates generated through RF-planning and network-analytics methodologies under defined modelling assumptions. TRAI's November 2024 guidelines recognize both actual measurements/network analytics and prediction methodologies, with sample verification and suitable correction so maps reflect user experience "as far as possible." This expressly recognizes that predictions cannot match measurements at every location. They should not be converted into a near-absolute accuracy KPI carrying financial consequences.
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		scaling/correction. 4. In the alternative, if TRAI considers it necessary to independently assess the accuracy of published coverage maps, such assessment should be undertaken through a common, independent TRAI-controlled coverage/drive-test mechanism, using a uniform methodology, standardized measurement equipment, defined routes, defined sampling criteria and consistent environmental and network conditions. The TSPs should not be subjected to a financial disincentive based on comparisons generated through disparate third-party applications, consumer devices or non-standardized field measurements. 5. Any future accuracy assessment must, in any event, be preceded by a clearly defined and mutually understood measurement methodology, including the sampling methodology, geographical sample size, route selection, measurement equipment, handset/device specifications, measurement frequency, time of measurement, network loading conditions, treatment of temporary outages, indoor/outdoor distinction, tolerance levels, treatment of 5G anchor-layer coverage and the process for	5. Grid-level prediction cannot be compared mechanically with point measurements: Coverage is typically predicted over an aggregated grid, such as 50 m × 50 m, using a representative value. Actual RF conditions may vary within the same grid due to buildings, terrain, vegetation, street geometry, obstruction, reflection and diffraction. A grid value cannot reproduce signal strength at every point. Accordingly, apparent drive-test deviations do not necessarily indicate a technically unsound map. 6. Drive-test measurements and consumer-app measurements are not like-for-like comparators. Predicted maps cannot be directly compared with drive tests or consumer applications such as MySpeed. Actual measurements are influenced by, among other things: ▪ route, location, time and measurement duration; ▪ network load, site availability and configuration; ▪ equipment, handset, antenna and RF sensitivity; ▪ frequency band, technology and supported bands; ▪ terrain, clutter, buildings and propagation environment; and ▪ temporary outages and local environmental conditions. A deviation from an individual field reading does not, by itself, establish that the published map is inaccurate. 7. A ±3 dB tolerance is technically too narrow for a nationwide Indian network. A ±3 dB tolerance is not a universally achievable threshold for nationwide
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		resolving measurement anomalies. 6. Until such a methodology is comprehensively specified, a numerical accuracy benchmark is premature, technically difficult to administer and susceptible to inconsistent application and disputes. It would also expose the TSPs to regulatory consequences for variations that may arise from factors beyond their reasonable operational control.	coverage mapping. India's dense urban, high-rise, rural, semi-urban, hilly and remote environments produce widely varying propagation conditions, network loads, clutter, handset characteristics and deployment configurations. Rapid 4G/5G expansion and refarming further change the radio environment. A narrow tolerance would therefore treat legitimate engineering variation as non-compliance. The tolerance should also be expressed in dB, not dBm: dBm denotes absolute received power, while dB denotes a relative difference. 8. Several factors affecting actual coverage are outside the service provider's real-time control. Actual coverage may change due to factors that cannot be continuously reflected in a public map. These include: ▪ construction, terrain and vegetation changes; ▪ temporary outages, power or transmission interruptions; ▪ site-access restrictions, local disputes or forced shutdowns; ▪ traffic and network-load variations; ▪ device capabilities and supported bands; and ▪ temporary optimization, rollout or configuration changes. Requiring near-real-time nationwide alignment between a predictive map and these dynamic conditions would be disproportionate and operationally impracticable. 9. Daily or real-time updating cannot reasonably guarantee corresponding field accuracy. The obligation to update a published map must be distinguished from an expectation that it reflects every temporary network change. A map is a modelled
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			representation of network availability, not a live view of every RF condition. Daily or real-time revisions to eliminate transient deviations would be impractical during rollout, integration, optimization and reconfiguration. Coverage maps primarily indicate outdoor coverage; they cannot represent indoor penetration, instantaneous fluctuations or congestion with live-measurement precision. 10. Consumer feedback cannot constitute a reliable accuracy-verification mechanism. Consumer feedback or third-party app measurements would create significant regulatory uncertainty. Results vary across handsets, chipsets, operating systems, applications, supported bands, antenna performance, locations and times. Such heterogeneous data cannot provide a consistent engineering basis for compliance and would invite frequent disputes. 11. The proposed requirement duplicates the existing regulatory audit framework. The Regulation already allows TRAI to verify specified QoS parameters through its officers or an appointed audit agency, supported by separate audit-data directions. A separate predictive-map accuracy benchmark, without a standardized ground-truth methodology, would create an overlapping verification regime. If independent verification is required, TRAI should use its existing audit/drive-test framework and a common methodology applicable to all service providers. 12. A common TRAI-led measurement framework would be preferable. If map-to-field correspondence must be assessed, TRAI should establish or commission a
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			common independent verification framework. Such a framework should prescribe, inter alia: ▪ standardized measurement equipment and handset specifications; ▪ fixed measurement thresholds and protocols; ▪ defined geographical sampling methodology; ▪ representative urban, rural, semi-urban and difficult-terrain samples; ▪ predetermined routes and measurement points; ▪ defined measurement times and network-loading conditions; ▪ treatment of temporary outages and site shutdowns; ▪ separate treatment of outdoor and indoor measurements; ▪ appropriate tolerances reflecting RF engineering realities; and ▪ a transparent process for review and resolution of disputed measurements. This would ensure that any accuracy assessment is consistent, transparent, reproducible and technologically neutral, rather than making each service provider responsible for reconciling its predictive model against potentially inconsistent third-party measurements. 13. The API requirement should also be reconsidered. The proposed API/data-access requirement should be carefully reconsidered to the extent it merely duplicates information already available to TRAI through existing regulatory platforms, submissions, audits or coverage-related sources. Any additional API requirement should have a clearly identified regulatory purpose and should not result in parallel
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			data-generation, data-validation and reporting obligations where substantially similar information is already available to the Authority. 14. The reduction from 99% to 98% does not address the underlying concern. Although the numerical benchmark has ostensibly been relaxed from $\geq 99\%$ to $\geq 98\%$, the change in the parameter from “availability” to “accuracy” is not a minor relaxation or calibration of the existing requirement. It is a fundamental change in the compliance construct. The issue is therefore not whether the threshold is 99% or 98%. The central issue is whether a predictive coverage map can appropriately be subjected to a percentage-based accuracy KPI and financial disincentive when there is no sufficiently precise, uniform and universally applicable methodology for establishing “ground truth”. 15. The Authority has justified the proposed coverage-map accuracy and validation regime primarily by reference to “global trends”; however, the draft amendment goes materially beyond the cited practices. Of the jurisdictions referenced, only ARCEP in France uses a 98% reliability threshold, and the consultation paper cites that benchmark without disclosing the applicable sample size, confidence interval or whether non-compliance attracts an automatic monetary penalty comparable to Regulations 16 and 16A. ARCEP also reduces the threshold to 95% for smaller areas. By contrast, Ofcom validates modelled predictions against a statistical tolerance band—an average error of ± 3 dB and a standard deviation of up to 8 dB—rather than a binary
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		pass-or-fail test for each sample. The FCC uses a public or crowdsourced challenge-and-concede process, while Bundesnetzagentur expresses coverage as a cell-edge probability of 75–90%, rather than prescribing a percentage-accuracy benchmark for the published map itself. The draft amendment therefore combines ARCEP’s strictest numerical benchmark with a distinct enforcement model—monthly LSA-level sampling, per-sample binary pass or fail, and automatic financial disincentives under Regulations 16(1) and 16A—for which no direct parallel appears in the cited examples. Accordingly, the proposed regime cannot properly be characterized as reflecting global best practice. 16. In view of the foregoing, we request TRAI to: a. Drop the proposed accuracy benchmark for service-wise geospatial coverage maps; b. Retain the requirement as a publication/disclosure obligation, covering availability, prescribed format, service-wise presentation and appropriate updating of coverage maps; c. Not impose any financial disincentive for alleged inaccuracies in predictive coverage maps, particularly in the absence of a universally accepted and prescribed ground-truth measurement methodology; d. In the alternative, if accuracy verification is considered necessary, establish a common and independent TRAI-led coverage/drive-test methodology with clearly defined sampling, measurement, device, route, environmental,
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			loading and tolerance parameters before introducing any compliance benchmark; and e. Provide the telecom service providers with adequate time to stabilize the recently introduced coverage-map framework before introducing any additional accuracy-related compliance obligation. A regulatory framework for coverage maps should promote transparency, comparability and informed consumer choice, without converting an inherently predictive engineering model into an absolute representation of real-time network conditions. The proposed accuracy benchmark, in its present form, risks doing precisely that and would consequently create an onerous, uncertain and potentially unworkable compliance obligation without a commensurate regulatory benefit.
(iv) Percentage of significant network outage (services not available in a district for more than 4 hours) reported to the Authority within 24 hrs of start of the outage Note: Significant Network Outage is defined as an event where access service (wireless) In a district remains unavailable for a continuous period exceeding four (4) hours, or where more than ten percent (10%) of subscribers in the Licensed Service Area (LSA) Experience complete loss of Service for a continuous period exceeding four (4) hours. Compensation Rebate to the subscribers	1. Retain the existing district-level definition of Significant Network Outage, based on complete non-availability of wireless access service in a district for a continuous period exceeding four (4) hours. 2. Drop the proposed “more than 10% of LSA subscribers” trigger, as individual subscriber-level impact cannot be objectively and reliably established through the existing network architecture and systems. 3. Retain “subscribers registered in the	Airtel submits that the proposed amendments to the provisions relating to Significant Network Outage (SNO) and the consequential subscriber rebate mechanism require reconsideration. The proposed expansion of the outage trigger and introduction of an undefined category of “affected subscribers” would impose substantial operational, technical and compliance burdens on TSPs, without providing a reliable or objectively verifiable basis for determining subscriber-level impact in a mobile network. Accordingly, Airtel strongly submits that the existing framework should be retained, and the proposed amendments should not be introduced in their present form. 1. Existing district-level outage definition should be	

	for significant network outages of more than 24 hrs: For post-paid subscribers registered in the district or affected post-paid subscribers, as applicable: Proportional rent rebate, as per plan charges, for affected number of days shall be credited in next bill. For the pre-paid subscribers registered in the district or affected pre-paid subscribers, as applicable: The validity of subscribed tariff offering shall be increased by equal number of affected days. Benchmark: 100% Assessment Period: Monthly Effective Date: 01.04.2025 01.10.2026	district” as the subscriber eligibility/basis, and do not introduce the undefined concept of “affected subscribers”. 4. Recognize that individual subscriber-level determination of outage impact is technically infeasible in mobile networks, owing to subscriber mobility and the inability to establish the subscriber's precise location, duration of presence and actual service usage during the outage. 5. Reconsider and withdraw the proposed subscriber rebate obligation for cellular services, particularly where it requires determination of individual subscriber impact or individual duration of service deprivation. 6. In the alternative, if TRAI is not inclined to withdraw the rebate provision altogether, any rebate mechanism must, at a minimum, be based solely on the objectively determinable district-level outage event and subscribers registered in the affected district, with no requirement to identify or establish “affected subscribers” on an individual basis. 7. Reconsider the proposed 24-hour reporting requirement during the	retained. The existing definition of SNO, i.e., non-availability of wireless access service in a district for a continuous period exceeding four (4) hours, is objective, transparent and capable of being reliably established through network-management and operational systems. A district-level outage is a network event that can be identified and evidenced through established network monitoring systems, alarms, outage-management platforms and restoration records. It therefore provides a clear and auditable regulatory metric, avoiding ambiguity and disputes regarding the extent and duration of service impact. In contrast, introducing a second trigger based on “more than 10% of subscribers in the LSA experiencing complete loss of service” would fundamentally alter the nature of the obligation. Such a trigger cannot be reliably determined merely from conventional network-outage data. The proposed LSA-level subscriber-impact threshold would require real-time, subscriber-location-linked analytics capable of establishing which individual subscribers were actually within the affected area, for what duration, and whether they experienced complete loss of service. Such functionality is not available from the existing network architecture and operational systems in a manner that can support a definitive, real-time regulatory determination. The distinction is critical: network non-availability and individual subscriber impact are not synonymous in a mobile network. TRAI should not prescribe a regulatory obligation based on a metric that TSPs cannot objectively and consistently measure. Accordingly, the proposed “>10% of LSA subscribers” trigger should be dropped in its entirety.
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		restoration phase, so that regulatory reporting does not divert critical technical and operational resources away from immediate restoration of services. 8. Airtel submits that regulatory obligations must be founded on objectively measurable network parameters and technically implementable processes. A mobile network cannot be regulated on the basis of individual subscriber impact metrics that the underlying network systems are not designed to establish with certainty. 9. Accordingly, the proposed amendments, particularly the ">10% of LSA subscribers" trigger and the undefined "affected subscribers" category, should not be incorporated into the QoS Regulations. The existing district-level outage framework provides a substantially more objective, transparent and operationally workable basis for regulatory oversight and should be retained.	2. "Subscribers registered in the district" should remain the sole rebate basis. The existing concept of subscribers registered in the affected district provides a defined and administratively ascertainable basis for application of any subscriber-level regulatory relief. The proposed reference to "affected subscribers" is undefined and introduces considerable ambiguity. In a mobile environment, it is not technically feasible to establish, retrospectively and with regulatory certainty, whether an individual subscriber was actually affected by a particular outage. For example: ▪ A subscriber registered in another district may temporarily visit the affected district during the outage. ▪ A subscriber registered in the affected district may be travelling elsewhere when the outage occurs. ▪ A subscriber may enter the affected area only briefly and not remain there for the entire outage duration. ▪ A subscriber may be physically present in the affected area but have the handset switched off. ▪ A subscriber may have consumed part or all of the applicable tariff entitlement before the outage occurred. ▪ A subscriber may move between serving cells or locations during the outage, making determination of the precise duration of individual impact inherently uncertain. These scenarios demonstrate that "affected subscriber" cannot be treated as an objectively determinable regulatory category for mobile services without introducing substantial assumptions, disputes and compliance complexity. Airtel therefore strongly submits that the expression "affected subscribers"
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| | | | <p>should not be introduced, and any reference to subscriber eligibility should continue to be based on subscribers registered in the affected district, if such a rebate provision is retained at all.</p> <p>3. Subscriber rebate for mobile services is technically and operationally impracticable. The proposed rebate mechanism may be theoretically implementable in fixed-line services, where a subscriber is associated with a fixed service address. However, the same premise does not hold for cellular services. The fundamental characteristic of a mobile network is that subscribers are mobile and are not permanently tied to a particular serving location. Consequently, it is not technically possible to establish with the requisite degree of certainty whether, and for how long, an individual subscriber actually experienced service unavailability during a network outage. Any attempt to calculate an individual subscriber-level rebate would therefore create significant scope for erroneous credits, inconsistent treatment and consumer disputes. This issue becomes even more pronounced where the proposed mechanism contemplates extending the validity of prepaid tariff offerings by the number of “affected days” or providing proportional rent rebates to post-paid subscribers. Such a mechanism presupposes that the actual period of service deprivation for each subscriber can be accurately determined. That presumption is technically untenable for mobile networks.</p> <p>4. Reporting within 24 hours would divert critical resources during network restoration. The TSP also strongly objects to imposing an onerous reporting</p> |
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		obligation during the restoration phase of a major network outage. During any significant outage, the TSP's overriding priority is to restore network services at the earliest possible time and minimize disruption to consumers. Such incidents require the immediate mobilization of network operations teams, specialized technical personnel, field teams, restoration teams and other relevant stakeholders. The proposed requirement to report major network outages to TRAI within 24 hours of commencement would impose an additional compliance burden precisely when the TSP's resources are required for service restoration and network stabilization. Investigation of the root cause, identification of corrective actions, preparation of incident reports and, where necessary, obtaining financial approvals for restoration or remedial works are established internal processes. These activities often require inputs from multiple specialized teams and cannot reasonably be expected to be completed in parallel with immediate restoration merely to satisfy a prescriptive reporting timeline. Regulatory reporting requirements should not become an additional operational constraint during an active network emergency. The regulatory framework should instead facilitate rapid restoration and permit detailed reporting after the network has been stabilized. 5. The proposed framework may have unintended consequences for network expansion. Imposing rigid outage-linked rebate and compensation obligations, particularly in areas where infrastructure conditions are challenging, may have unintended consequences for network deployment. There are locations where infrastructure availability, power supply, backhaul,
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			access constraints, geography, right-of-way conditions and other external factors may materially affect network resilience. TSPs nevertheless continue to invest and extend coverage in such areas in the interest of consumers and digital inclusion. A regulatory framework that imposes disproportionate financial exposure for outages arising in such challenging environments could discourage investment and network expansion in precisely those areas where connectivity is most difficult to provide. TRAI should therefore maintain an appropriate balance between the objective of improving network availability and the practical realities of deploying and maintaining mobile networks under varying infrastructure conditions.
IV. Broadband Service (xiv) Tariff offerings in which 80th percentile value of measured test samples for which download and upload speed is $\geq$ offered typical download and upload speed for 4G/5G technology in tariff offerings Benchmark: 80th percentile 100% Assessment Period: Quarterly; Effective Date: 01.10.2024 Assessment Period: Monthly; Effective Date: 01.04.2025 01.10.2026	Airtel requests TRAI to revise the proposed provision as follows: 1. Permit TSPs to display technology-wise typical ranges for download and upload speeds for 4G/5G services rather than mandating a single technology-wise speed value for each tariff offering. 2. Do not mandate technology-wise, per-tariff-offering compliance or reporting to TRAI. QoS assessment should be undertaken at an appropriate aggregate technology/service level. 3. Do not impose a rigid 100% compliance benchmark against the offered typical download/upload speed. Such a requirement is technically inconsistent	Airtel strongly submits that the proposed amendment to Clause (xiv), particularly the shift to a 100% benchmark on a per-tariff-offering basis and the proposed monthly assessment, is neither technically appropriate nor reflective of the actual customer experience of broadband services. The proposed requirement seeks to establish compliance at the level of each individual tariff offering by comparing measured download/upload speeds against the “offered typical” speeds for 4G/5G technology. This approach would unnecessarily convert a technology-dependent and inherently variable network performance parameter into a rigid tariff-level regulatory obligation. Airtel requests TRAI to reconsider the proposed provision in its entirety and adopt a technology-wise speed-disclosure framework based on typical speed ranges, rather than mandating 100% compliance for every	

		with the inherently variable nature of mobile broadband. 4. Recognize that actual throughput is the appropriate customer-facing outcome and should remain the principal indicator of broadband performance. 5. Retain the total sample-size requirement prescribed under the earlier regulation to ensure statistical robustness, continuity and comparability of QoS measurements. 6. Ensure that the existing total sample size is assessed on a representative aggregate basis and is not artificially fragmented by individual tariff offering. 7. Retain the quarterly assessment period instead of moving to a monthly assessment cycle, as quarterly assessment provides a more representative measure of sustained network performance.	individual tariff offering. 1. Permit display of technology-wise typical UL/DL speed ranges. TSPs be permitted to communicate technology-wise typical ranges for download and upload speeds for 4G/5G services, rather than prescribing a single speed value against which every tariff offering must achieve 100% compliance. Mobile broadband throughput is influenced by several dynamic and interdependent factors, including spectrum availability, network loading, radio conditions, propagation characteristics, device capability, network configuration, backhaul conditions and the number of users simultaneously accessing a cell. Consequently, actual throughput experienced by an individual customer will necessarily vary over time and location. A single "typical speed" cannot reasonably be treated as a guaranteed speed that must be achieved in every measurement instance. A technology-wise typical speed range would provide customers with meaningful and transparent information regarding expected network performance, without creating an artificial impression that the stated speed constitutes a guaranteed or universally achievable throughput. 2. Throughput is already the appropriate customer-facing measure. Airtel submits that actual measured throughput is itself the customer-facing outcome and the most appropriate indicator of broadband experience. The purpose of QoS regulation should be to ensure transparency and meaningful information to consumers regarding the service they can reasonably expect. Requiring TSPs to demonstrate that every individual tariff offering achieves a prescribed speed
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		benchmark adds an unnecessary layer of regulatory measurement without necessarily improving the customer's understanding of actual broadband performance. Further, the performance of mobile broadband cannot be disconnected from the technology and prevailing network conditions under which the service is consumed. The same tariff may be experienced differently by customers using different devices, at different locations, times and radio conditions. Accordingly, TRAI should focus on representative network-level throughput performance and transparent disclosure, rather than treating the advertised/typical tariff speed as a rigid service guarantee. 3. 100% compliance at individual tariff-offering level is inappropriate and should not be mandated. The proposed 100% benchmark is particularly concerning. A mandatory 100% compliance requirement effectively implies that the measured speed for every relevant assessment must meet or exceed the stated typical speed. Such a requirement is not technically representative of a mobile broadband network, where throughput is inherently variable and dependent on conditions that may change from moment to moment. Even where the network is functioning normally and delivering a satisfactory customer experience, individual measurements may be lower because of temporary congestion, radio conditions, user density, device limitations or other factors. Therefore, if TRAI decides to retain a benchmark based on offered typical speeds, it must not be converted into a rigid 100% per-tariff-offering compliance obligation. At a minimum, the benchmark should continue to recognize the
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			statistical and variable nature of broadband performance and should be assessed on a representative aggregate basis rather than requiring every tariff offering to independently achieve 100% compliance. 4. Per-tariff-offering compliance and reporting should not be mandated. Airtel also submits that technology-wise, per-tariff-offering compliance/reporting to TRAI should not be prescribed. The networks are engineered and operated primarily on the basis of technology, spectrum, geography, network configuration and traffic demand. Introducing separate regulatory measurement and reporting obligations for every individual tariff offering would create considerable operational and compliance complexity, without a commensurate improvement in the assessment of network QoS. Tariff offerings may differ commercially in terms of data allowances, validity, pricing and other attributes, while the underlying access network and technology serving the customer may remain the same. Requiring separate QoS compliance to be demonstrated for each tariff offering would therefore create an artificial distinction that does not necessarily correspond to differences in underlying network performance. The regulatory framework should consequently assess network performance at an appropriate technology/service level, rather than multiplying compliance obligations across individual tariff offerings. 5. Existing total sample-size requirement should be retained. Airtel specifically requests that the total sample-size requirement prescribed under the earlier
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		regulation be retained. A statistically meaningful and sufficiently representative total sample size is essential for any speed-performance assessment. The results of broadband speed measurements can vary materially depending on the number and distribution of samples. Reducing, altering or fragmenting the existing sample-size methodology—particularly by linking measurement to individual tariff offerings—could result in statistically unreliable conclusions. Maintaining the existing total sample-size requirement will ensure continuity, comparability and statistical robustness of QoS assessments. The sample should be evaluated on an aggregate and representative basis and should not be fragmented into separate compliance pools for each tariff offering, unless a demonstrable statistical basis exists for doing so. 6. Monthly assessment is disproportionate. The proposed move from a quarterly assessment period to a monthly assessment period should also be reconsidered. Broadband network performance is subject to natural variations arising from traffic patterns, seasonal demand, network augmentation, maintenance activities, spectrum utilization and other operational factors. A monthly assessment can disproportionately amplify short-term fluctuations and may not provide a reliable representation of sustained network performance. A longer assessment period provides a more representative basis for evaluating network performance and avoids regulatory conclusions being driven by temporary or anomalous conditions. Accordingly, Airtel requests TRAI to retain the existing quarterly assessment period, or, at a minimum, undertake a detailed impact assessment
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		before introducing a monthly compliance regime. 7. Proposed regulatory framework should recognize the inherent variability of mobile broadband. It is important that the QoS framework distinguish between service availability/performance and a guaranteed throughput commitment. Unlike a fixed, dedicated access connection, mobile broadband is a shared radio-access service. Actual throughput depends on a range of dynamic parameters beyond the simple tariff denomination. A regulatory requirement that treats a typical speed as a guaranteed minimum would not accurately reflect the technical characteristics of 4G/5G networks. The objective should therefore be to ensure transparent consumer communication and representative measurement of network performance, rather than imposing an absolute speed guarantee through a 100% compliance benchmark. Airtel strongly states that a 100% per-tariff-offering compliance obligation is neither technically justified nor proportionate for mobile broadband services. It would effectively transform a typical speed disclosure into a de facto guaranteed speed obligation, which is inconsistent with the operational characteristics of 4G/5G networks. TRAI should therefore adopt a framework that is technology-neutral, statistically robust, operationally implementable and aligned with the actual customer experience, rather than one that imposes artificial and technically unachievable compliance requirements on every individual tariff offering.
V. Network Slicing	PRB utilization is fundamentally an internal	1. PRB utilization is not a customer-experience KPI. PRB

	(xv) Cells having daily PRB utilisation > 80% (in 5G network) Benchmark: $\leq 1\%$ Assessment Period: Monthly Effective Date: 01.10.2026	radio-resource management and network-engineering indicator. It is an input/diagnostic parameter used by TSPs for capacity planning, optimization and network management; it is not, by itself, a measure of QoS or customer experience. Converting such an internal network parameter into a mandatory regulatory compliance benchmark would be technically inappropriate and would not provide a meaningful assessment of the quality actually experienced by customers. Airtel strongly submits that the proposed regulatory benchmark of $\leq 1\%$ of 5G cells having daily PRB utilization above 80% should be dropped in its entirety. This is because: - PRB utilization is an internal radio-resource/input indicator and not a customer-experience outcome. - High PRB utilization does not necessarily mean congestion or degraded QoS. - A well-performing cell may legitimately exhibit high PRB utilization while continuing to deliver throughput above the applicable norms. - The customer impact of congestion, if any, is ultimately reflected in throughput/speed, which is already monitored and reported under the existing QoS framework. - Introducing PRB utilization as an additional compliance KPI would therefore be duplicative and unnecessary.	utilization reflects the extent to which available radio resources are being utilized within a cell during a given period. A high level of PRB utilization does not automatically indicate degradation of customer experience or poor network performance. A cell may experience high or even sustained PRB utilization while continuing to deliver satisfactory throughput to customers, depending on factors such as spectrum bandwidth, radio conditions, traffic characteristics, spectral efficiency, network configuration and the prevailing mix of services. Accordingly, a cell crossing an 80% PRB utilization threshold cannot, by that fact alone, be characterized as congested or as providing inadequate QoS. High PRB utilization can be a characteristic of an efficiently utilized and well-performing network rather than evidence of service degradation. The proposed benchmark therefore risks penalizing TSPs for efficient utilization of scarce radio resources even where customers are receiving satisfactory service. 2. The proposed 80% threshold has no direct correlation with customer impact. The proposed requirement treats 80% daily PRB utilization as a proxy for network congestion, with a further requirement that no more than 1% of cells exceed that threshold. However, there is no necessary one-to-one relationship between PRB utilization and customer-perceived service quality. PRB utilization can fluctuate due to traffic patterns and network conditions, including temporary traffic bursts, changes in user distribution, application mix and other radio-resource characteristics. A cell may therefore cross the 80% threshold without any material deterioration in the actual service experienced by
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		A rigid $\leq 1\%$ benchmark would create artificial network-engineering constraints and could incentivize inefficient capacity deployment without corresponding consumer benefit. Accordingly, the proposed PRB-utilization benchmark should be withdrawn in full. TRAI should continue to regulate mobile broadband QoS through objective, customer-facing outcome parameters rather than internal network-engineering indicators.	customers. Conversely, a lower PRB utilization level does not, by itself, guarantee satisfactory throughput. Thus, prescribing an absolute PRB threshold as a regulatory QoS benchmark would result in regulation of an internal network parameter rather than regulation of the service outcome. 3. Throughput is the appropriate outcome-based measure. Airtel submits that the appropriate regulatory approach should remain outcome-based, with emphasis on the actual service experienced by customers. The relevant customer-facing consequence of congestion or inadequate radio-resource availability is ultimately reflected in throughput/speed and other established QoS outcomes. These parameters already form part of the QoS measurement and reporting framework. Where high resource utilization materially affects customers, such impact would manifest itself through deterioration in measured throughput/speed. Such customer-facing performance indicators therefore provide a much more meaningful basis for assessing QoS than an internal radio-resource utilization metric. There is consequently no regulatory necessity to impose a separate PRB-utilization compliance benchmark in addition to existing throughput/speed monitoring. 4. The proposed KPI is duplicative. The introduction of PRB utilization as an additional compliance KPI would create a duplicative regulatory requirement. TSPs already monitor and report customer-facing network performance through prescribed QoS parameters. These measurements are designed to identify whether customers are receiving the expected level of service.
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			If the objective of the proposed provision is to identify network congestion and its impact on consumers, the same objective can be achieved through the existing throughput/speed metrics. Adding PRB utilization would therefore regulate both the internal network input/condition and the resulting customer outcome, even though the outcome is already being measured. A sound QoS regulatory framework should avoid imposing multiple compliance obligations for the same underlying customer-impact concern, particularly where one of the proposed parameters does not directly measure customer experience. 5. A rigid $\leq 1\%$ compliance benchmark would create unintended network-management constraints. The proposed benchmark that no more than 1% of 5G cells should have daily PRB utilization above 80% is particularly restrictive. Network capacity is dynamically engineered to accommodate changing traffic patterns. A temporary increase in utilization in a particular cell may be entirely normal and may not require immediate capacity augmentation. Requiring TSPs to maintain utilization below an arbitrary threshold in virtually all cells could result in unnecessary network interventions solely for the purpose of regulatory compliance. This could lead to inefficient allocation of spectrum, capacity and capital resources, including premature augmentation of cells that are delivering satisfactory customer experience. The regulatory framework should not incentivize TSPs to engineer networks around an internal utilization threshold that has no established direct correlation with customer-perceived QoS.
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		6. Network slicing should be assessed through service outcomes. The proposed provision is placed under the broader heading of Network Slicing. However, the mere level of PRB utilization in a 5G cell does not establish whether network slicing is adversely affecting any particular service or customer segment. Where slicing is deployed, the relevant regulatory question should be whether the intended service characteristics and customer-facing performance are being delivered. This is appropriately evaluated through actual service performance and throughput outcomes, rather than by prescribing a generic radio-resource utilization ceiling. If TRAI's concern is potential congestion or degradation arising from network slicing, the regulation should focus on demonstrable service-level impact, rather than an internal resource-utilization threshold. 7. Also, TRAI has not indicated any international precedent for the proposed framework. Airtel is likewise not aware of any jurisdiction that imposes a rigid, cell-level PRB-utilization ceiling of 80% together w.r.t. a network slice. The proposal therefore does not reflect established global regulatory practice; rather, it introduces an unprecedented and intrusive constraint on routine network engineering, efficient spectrum utilization and the dynamic resource orchestration that is intrinsic to 5G networks. In view of the above, Airtel requests TRAI to drop the proposed KPI "Cells having daily PRB utilization >80% (in 5G network)" and the associated benchmark of ≤1%.
(2) Every service provider shall, in all its tariff offerings for broadband (wireless)	The proposed requirement should be revised and the TSP shall only be asked to indicate a	The proposed requirement introduces an unnecessary and disproportionate level of granularity into tariff disclosures,

	service, indicate the technology wise typical download and upload speed generally available to the consumers subscribers.	typical range of technology-wise download and upload speeds generally available to subscribers for broadband (wireless) services. Also, such technology-wise typical speed ranges shall not be required to be separately reported to TRAI for each tariff offering. This approach would achieve the objective of meaningful subscriber transparency without imposing unnecessary tariff-level duplication, continuous republication requirements or disproportionate regulatory burden on TSPs.	despite the fact that wireless network performance is not determined by the tariff plan itself. Airtel therefore requests TRAI to adopt a practical, technology-neutral and outcome-oriented approach that provides meaningful information to subscribers without imposing an excessive and continuously evolving compliance obligation on TSPs. 1. Technology-wise speed should be disclosed as a typical range. Airtel submits that, instead of prescribing a single technology-wise typical download and upload speed, TRAI should permit the display of a typical range of technology-wise download and upload speeds. Wireless broadband speeds are inherently variable and cannot reasonably be represented by one fixed speed value applicable to all subscribers or all circumstances. The actual throughput experienced by a subscriber depends on a combination of network, radio, device and environmental conditions. A typical speed range would therefore provide a more accurate and transparent representation of the service that subscribers may generally experience, without creating an artificial impression that a particular speed constitutes a guaranteed or universally achievable throughput. The proposed disclosure should accordingly permit TSPs to publish, for example, an appropriate technology-wise typical UL/DL speed range, based on representative network performance. 2. No requirement to report tariff-wise speed ranges to TRAI. The TSP strongly submits that there should be no requirement to separately report the technology-wise typical speed range for each individual tariff offering to TRAI. Wireless speed is fundamentally a function of the underlying network technology and prevailing network
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		conditions, and not of the commercial tariff selected by a subscriber. Multiple tariff offerings may use the same underlying 4G/5G network and radio resources. Consequently, requiring separate technology-wise speed reporting for each tariff would create artificial duplication without generating a corresponding improvement in QoS oversight. 3. Wireless speeds are inherently dependent on multiple external factors. Actual wireless throughput depends on several factors that are outside the tariff construct and may vary continuously, including: ▪ radio propagation and signal conditions; ▪ terrain, topology and physical obstructions; ▪ spectrum availability and network configuration; ▪ website/server latency and the performance of applications being accessed; ▪ mobile applications and operating-system characteristics; and ▪ the make, model, capability and configuration of the subscriber's handset, modem or CPE. Accordingly, it is technically inappropriate to associate a single typical speed with an individual tariff offering as though the tariff itself determines the speed delivered to the subscriber. The same tariff can produce materially different throughput for two subscribers using different devices, at different locations, at different times and under different radio conditions. Conversely, subscribers on different tariff offerings may experience substantially similar speeds when connected to the same underlying network conditions. 4. Most wireless tariff offerings are technology-agnostic.
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		The proposed requirement also does not sufficiently recognize the manner in which wireless services are actually consumed. Most tariff offerings are technology-agnostic at the point of sale. A subscriber typically purchases a broadband/mobile tariff without being permanently assigned to a particular radio technology. Depending on location, coverage, device capability and prevailing network conditions, the subscriber's device may dynamically attach to 4G or 5G and may transition between technologies as network conditions change. The underlying technology mix is also continuously evolving as 5G deployment expands and network configurations are modified. Therefore, attempting to attribute a fixed technology-wise typical speed to every individual tariff offering would not accurately reflect the manner in which the service is delivered. 5. Continuous changes in technology mix make tariff-wise publication disproportionate. Requiring technology-wise speed disclosure within every individual tariff offering would create an obligation to continuously review, recalculate and potentially republish tariff information whenever the underlying network technology mix or coverage changes. As 5G deployment progresses, the proportion of subscribers served by 4G and 5G will naturally change across locations and over time. Network upgrades, capacity augmentation and optimization can further alter the underlying performance characteristics. The operators would consequently be required to undertake continuous re-computation and re-publication of tariff-level speed information, even though the commercial tariff itself may not have changed. Such a requirement
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			would impose a significant operational and compliance burden that is disproportionate to the stated objective of consumer transparency. 6. Technology-wise speed disclosure should not be treated as a tariff-specific service commitment. The TSP further submits that disclosure of a typical speed range should be clearly distinguished from a tariff-specific guaranteed speed commitment. A typical range is intended to provide subscribers with reasonable and meaningful information regarding expected network performance. It should not be construed as a contractual or regulatory guarantee that a subscriber will continuously achieve a particular throughput. This distinction is particularly important for wireless services because the service experience is inherently dynamic and dependent upon factors beyond the control of the TSP. Airtel proposes that TRAI should adopt the following framework w.r.t. technology-wise download and upload speed: a) TSPs should be permitted to display a typical range of technology-wise download and upload speeds for broadband wireless services, rather than a single typical speed. b) The typical speed range should be disclosed at the technology/network level, rather than being required separately for every individual tariff offering. c) There should be no requirement to report the technology-wise typical speed range under each individual tariff offering to TRAI. d) The disclosure should be treated as a consumer-information measure and not as a tariff-specific
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		guaranteed throughput obligation. In view of the above, Airtel strongly requests TRAI to suitably modify the proposed provision. We submit that it is neither technically appropriate nor operationally practical to indicate a common technology-wise typical download/upload speed for every wireless tariff plan. Wireless performance is dynamic, technology-dependent and influenced by numerous network, environmental and device-related factors. Moreover, tariff offerings are generally technology-agnostic and the underlying 4G/5G technology mix changes continuously.
(3) Every service provider, planning to create a new network slice in their 5G network, shall submit the details of proposed and existing network slice parameters, at least twenty one (21) days in advance to the Authority, clearly demonstrating the availability of sufficient capacity in the cell(s) which are part of different slices, in such manner and format as may be directed by the Authority, from time to time.	Airtel strongly submits that the proposed requirement mandating every service provider planning to create a new 5G network slice to submit details of the proposed and existing network-slice parameters at least 21 days in advance should be dropped in its entirety. Network slicing is fundamentally a network-engineering and commercial capability designed to enable operators to dynamically configure network resources for specific use cases. Subjecting each new slice to a mandatory 21-day prior-intimation process would introduce an unnecessary ex-ante regulatory mechanism into an area that should remain within the operational and commercial discretion of the TSP. At a minimum, if TRAI considers that information regarding network slicing is	1. The proposed 21-day prior-intimation requirement should be dropped. The proposed 21-day advance-intimation requirement is disproportionate and fundamentally inconsistent with the very purpose of network slicing. Network slicing is intended to provide agility, flexibility and rapid deployment of differentiated network capabilities for specific requirements. Use cases may arise with limited lead time and may include enterprise deployments, industrial applications, large events, emergency-response requirements and other time-bound or specialized services. A mandatory 21-day regulatory notification period would effectively prevent TSPs from responding promptly to such requirements. The proposed provision would therefore risk turning a dynamic network-management capability into a regulatory approval-like process, even though the creation of a network slice is fundamentally an internal network configuration and resource-management decision.

		required for regulatory oversight, the requirement should be converted into a post-facto reporting obligation, preferably on a quarterly basis, rather than a prior-notification requirement.	2. Network slicing is a nascent and rapidly evolving technology. 5G network slicing is still an evolving capability, with use cases, deployment architectures, orchestration mechanisms and commercial models continuing to develop. The regulatory framework should therefore be sufficiently flexible to accommodate innovation rather than prescribe a rigid ex-ante process at the very early stage of technology deployment. International regulatory approaches also recognize the nascent nature of network slicing. For example, the U.S. FCC has noted the emerging nature of network slicing and adopted an approach that allows its continued development while monitoring potential effects on broadband performance, rather than imposing a blanket ex-ante restriction on network slicing. Similarly, Ofcom's work on 5G network slicing recognizes its potential to support demanding use cases, including emergency communications, advanced manufacturing and energy distribution, while highlighting the flexibility and agility that slicing can provide. The regulatory approach should therefore facilitate innovation and deployment rather than create a prior-intimation barrier. 3. No justification for regulating an internal network-engineering decision ex ante. The creation, modification or withdrawal of a network slice is fundamentally comparable to other internal network configuration, capacity allocation and optimization decisions undertaken by a TSP in the normal course of network operations. There is no demonstrated consumer benefit from requiring regulatory intimation 21 days before each such technical decision. Importantly, the proposed requirement does not
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			merely seek information for monitoring purposes. By requiring submission before creation of the slice, it effectively introduces a regulatory framework that can delay deployment. Such an approach is disproportionate, particularly when the underlying concern—protection of non-sliced subscribers—is capable of being addressed through existing QoS and network-performance obligations. 4. A 21-day prior notice defeats the agility and commercial purpose of network slicing. The principal value proposition of network slicing is the ability to create differentiated logical network environments in response to specific service requirements. For example, an enterprise may require a dedicated or differentiated service for: ▪ a time-bound industrial deployment; ▪ a major public or sporting event; ▪ emergency-response communications; ▪ a temporary enterprise requirement; ▪ a specialized low-latency application; or ▪ an evolving B2B service requirement. In such cases, requiring the TSP to provide detailed slice information 21 days before deployment could make the service commercially unviable or prevent the TSP from responding to the customer's requirement within the required timeframe. The proposed provision could consequently undermine the very objective of enabling 5G network slicing and place Indian TSPs at a disadvantage in developing and monetizing advanced 5G services. 5. Existing QoS safeguards already address the underlying regulatory concern. We understand that
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			the underlying concern is to ensure that creation of network slices does not adversely affect the service quality available to subscribers using the non-sliced portion of the network. However, this concern is already capable of being addressed through the existing network availability, throughput/speed and other applicable QoS benchmarks. If the deployment of a network slice results in material degradation of service to ordinary subscribers, such degradation would ultimately manifest itself in customer-facing QoS parameters such as throughput/speed or service availability. There is therefore no need to create a separate ex-ante regulatory mechanism merely because a TSP proposes to introduce a new network slice. 6. The proposed requirement is duplicative and imposes disproportionate compliance burden. The proposed requirement would require TSPs to identify and compile details of proposed and existing slice parameters, establish the availability of sufficient capacity across cells associated with different slices, prepare the prescribed information and submit it to TRAI at least 21 days before the proposed creation of each slice. This would require additional internal coordination across network planning, radio, core, transmission, service assurance and commercial teams for every new slice. Such an obligation would be particularly burdensome as the number and diversity of slicing use cases increase. The regulatory benefit of such detailed advance reporting is unclear, particularly where the same underlying objective can be achieved through post-facto monitoring of actual network performance. The Regulation should not require TSPs
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			to obtain regulatory clearance, expressly or effectively, for routine internal network-engineering decisions unless there is a demonstrable and material consumer or public-interest risk that cannot be addressed through outcome-based regulation. 7. Also, TRAI has not indicated any international precedent for the proposed framework. Airtel is likewise not aware of any jurisdiction that imposes a mandatory 21-day ex-ante notification requirement for creation of a network slice. The proposal therefore does not reflect established global regulatory practice; rather, it introduces an unprecedented constraint. 8. Post-facto reporting, if required, is a more proportionate alternative. If TRAI nevertheless considers that information concerning network slicing is necessary for regulatory oversight, the TSP recommends that such information be collected post-facto, preferably on a quarterly basis. A quarterly report could provide, as may be reasonably required: ▪ number of network slices deployed during the reporting period; ▪ broad category/use case of the slices; ▪ relevant high-level parameters; and ▪ confirmation that applicable QoS/network-performance requirements were maintained. This would provide TRAI with adequate visibility into the development and deployment of network slicing without restricting the TSP's ability to respond dynamically to customer and network requirements. A post-facto framework would also enable the Authority to evaluate actual network performance and
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			consumer impact, rather than relying on predictions of capacity sufficiency made 21 days before deployment. 1. Regulation should focus on outcomes, not prior approval of network configuration. Airtel strongly submits that the QoS regulatory framework should focus on what subscribers actually experience, rather than requiring prior regulatory oversight of how the TSP technically configures its network. Network slicing is only one of many mechanisms through which TSPs manage network resources. If every technical configuration decision that could potentially affect resource allocation were subjected to prior regulatory notification, it would significantly impair network operational agility. The appropriate regulatory test should therefore be: Does the introduction or operation of a network slice adversely affect prescribed QoS outcomes for other subscribers? If the answer is no, there is no regulatory justification for preventing or delaying the TSP from deploying the slice. In view of the above, Airtel strongly requests TRAI to: 1. Drop the proposed 21-day prior-intimation requirement in its entirety. 2. Do not introduce any requirement that operates as an ex-ante approval or regulatory mechanism for the creation of a new 5G network slice. 3. Recognize network slicing as a technical and commercial network-engineering capability that requires operational agility and flexibility. 4. Allow TSPs to deploy network slices in response to enterprise, industrial, event-based, emergency and other time-sensitive requirements without being constrained by a mandatory 21-day regulatory lead
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		time. 5. Rely on the existing network availability, throughput/speed and other QoS benchmarks to identify any actual adverse impact on non-sliced subscribers. 6. If TRAI considers reporting necessary, we request to convert the proposed prior-intimation requirement into a post-facto reporting requirement, preferably on a quarterly basis. 7. Ensure that any post-facto reporting is limited to information that is necessary for regulatory oversight and does not require disclosure of commercially sensitive or unnecessarily granular internal network-engineering information. Such mandatory 21-day advance notification for every new 5G network slice is unnecessary, disproportionate and contrary to the agility that network slicing is specifically intended to provide. The proposed provision would introduce an unprecedented ex-ante regulatory mechanism over an internal network configuration decision, potentially delay time-sensitive enterprise and public-interest use cases, increase compliance burden and inhibit innovation and investment in 5G capabilities. The objective of protecting non-sliced subscribers can be adequately achieved through existing outcome-based QoS and network-performance benchmarks. Accordingly, we urge TRAI to drop the proposed 21-day prior-intimation requirement. In the alternative, any information relating to network slicing should be sought only through a proportionate post-facto reporting mechanism, such as quarterly reporting, and should not be made a pre-condition for deployment of any network slice.
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5	7. Quality of Service parameter in respect of which compliance is to be monitored by the service provider and reported to the Authority.- (1) Every service provider providing access service (wireless) shall meet and monitor the benchmarks, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely: – (vii) Silence Call Rate Benchmark: $\leq 1\%$ Assessment Period: Monthly Effective Date: 01.10.2026	Airtel strongly submits that the proposed introduction of “Silence Call Rate” with a benchmark of $\leq 1\%$ should not be introduced at this stage. While we fully recognize the importance of good voice-call quality and continuously undertakes extensive network optimization to minimize instances of degraded voice experience, the proposed parameter, in its present form, is not sufficiently standardized, technically mature or objectively measurable through the existing network OSS environment to support a regulatory compliance and reporting obligation. Accordingly, we request TRAI to drop the proposed Silence Call Rate parameter at this stage. If TRAI nevertheless considers it necessary to pursue this parameter, a detailed methodology-development exercise followed by an industry/OEM feasibility pilot must necessarily precede the introduction of any regulatory benchmark or reporting obligation.	1. IDT observations cannot be converted directly into a network-wide OSS compliance KPI. TRAI has cited Silence Call Rates of up to ~22% in certain Independent Drive Tests (IDTs). However, an IDT is a controlled exercise conducted over selected routes, locations, times, devices, configurations and test conditions; its results are therefore methodology-specific and cannot automatically be extrapolated to the entire network. A regulatory KPI must instead rely on a standardized, consistently available and independently auditable data source covering the relevant population. Although TRAI's IDT methodology treats a continuous RTP gap of at least four seconds as a silence call, a test-side definition is not sufficient for regulatory reporting. A network-wide KPI requires standardized production counters, interfaces, exclusions, aggregation rules and audit procedures. 2. No standardized, vendor-supported OSS counter is presently available. The fundamental impediment is the absence of an OEM-supported, standardized OSS counter or interface capable of reliably identifying silence calls across heterogeneous mobile networks. A mandatory QoS reporting obligation cannot reasonably be imposed when network equipment does not provide a consistent and auditable mechanism to generate the KPI. Requiring operators to create proprietary counters, estimates or indirect derivations would impose material technical and operational burdens, produce inconsistent results, and undermine comparability, transparency and auditability. 3. A complete measurement methodology must precede any benchmark. Before considering a benchmark such
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			as $\leq 1\%$, TRAI should establish, in consultation with TSPs and OEMs, a uniform and unambiguous methodology. Without these common rules, TSPs could legitimately report materially different Silence Call Rates for identical network conditions, rendering the proposed benchmark neither comparable nor auditable. 4. An RTP gap does not by itself establish customer-perceived silence. A technical RTP or media-path gap may arise from transient packet loss, jitter, codec behavior, radio conditions, handovers or other network events and does not necessarily mean that the subscriber experienced complete silence. The IDT measure may assist diagnosis, but it cannot be assumed to be equivalent to a network-wide customer-experience KPI without technical validation. 5. The proposed $\leq 1\%$ benchmark is premature and unsupported. A numerical benchmark presupposes a stable definition, equivalent measurement capability across TSPs, reproducible results, availability of production-system data, independent auditability and sufficient empirical evidence to justify the threshold. None of these prerequisites has yet been demonstrated. Prescribing the benchmark first and developing the measurement architecture later would require compliance with a KPI that the industry cannot yet measure consistently—an approach fundamentally incompatible with a sound regulatory QoS framework. 6. Industry and OEM feasibility validation must precede implementation. If TRAI considers the parameter worthy of further examination, it should first conduct a structured industry/OEM pilot to validate technical
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			feasibility, standardize the counter and methodology, study representative network data and determine whether a separate KPI provides a measurable, non-duplicative consumer benefit. Until then, the existing voice QoS indicators—including Drop Call Rate, Call Setup Time, Voice Quality and Handover Success Rate—should remain the basis of regulatory assessment. Accordingly, we strongly request TRAI to: 1. Drop the proposed Silence Call Rate parameter and refrain from imposing the $\leq 1\%$ benchmark or any reporting obligation at this stage; 2. Recognize that IDT observations, including values of approximately 22%, cannot be treated as a network-wide OSS compliance KPI without validated equivalence between test and production-network measurements; 3. Undertake a formal industry/OEM feasibility pilot if further development is considered necessary; 4. Through that pilot, establish a vendor-supported counter and a complete methodology covering definitions, interfaces, exclusions, aggregation, technology scenarios, data sources and auditability; and 5. Consider any benchmark only after the methodology is standardized, technically validated and supported by representative empirical evidence.
SECTION V – QUALITY OF SERVICE PARAMETERS FOR BROADBAND (WIRELINE) SERVICE			
6	9. Quality of Service Parameters for which compliance reports are to be submitted to the Authority.- (1) Every Service Provider having Internet Service Authorization and		

	providing broadband (wireline) service shall meet the benchmarks, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely:-		
	II. Broadband Service Performance (iv) Tariff offerings in which 90th percentile value of measured test samples for which download and upload speed is ≥ offered typical download and upload speed in tariff offerings Benchmark: 90th percentile 100% Assessment Period: Quarterly	Airtel requests TRAI to: 1. Withdraw the proposed 100% speed-compliance benchmark for broadband tariff offerings. 2. Retain the existing 90th-percentile benchmark for download and upload speed, rather than a zero-tolerance 100% requirement. 3. Recognize the inherent variability in wireline broadband performance arising from last-mile infrastructure, copper condition where applicable, CPE, customer-premises wiring, customer equipment, localized congestion and other factors outside the TSP's complete control. 4. Ensure that an “offered typical” speed is treated as a representative performance indication and not as a guaranteed minimum speed for every individual measurement. 5. Continue to rely on statistically representative measurement methodologies that distinguish sustained network-level service degradation from isolated or customer-specific variations.	Airtel strongly submits that replacing the existing 90th-percentile benchmark with 100% compliance is technically inappropriate, disproportionate and inconsistent with the inherent variability of wireline broadband networks. The proposal would convert an offered typical speed—a representative indication of expected performance—into a de facto guaranteed minimum for every sample. TRAI should therefore retain a realistic percentile-based benchmark, preferably the existing 90th percentile. 1. A 100% benchmark is technically unrealistic and conceptually flawed. Requiring every measured sample to meet or exceed the offered typical download and upload speed would create a zero-tolerance compliance regime. A typical speed reflects performance that customers can generally expect under representative conditions; it is not an absolute throughput guarantee under every measurement condition. Treating it as such would improperly transform a consumer-information metric into a guaranteed service-level commitment. Wireline performance can legitimately vary because of access-network conditions, copper or fibre last-mile characteristics, CPE capability and configuration, in-premises wiring, customer devices, Wi-Fi conditions, temporary congestion, test

		Airtel strongly submits that the proposed move from a 90th-percentile benchmark to 100% compliance is neither technically justified nor proportionate. A zero-tolerance benchmark would make the regulatory KPI excessively sensitive to individual anomalous measurements and customer-premises variability. At a national scale, even a network delivering consistently strong broadband performance would be exposed to technical non-compliance from isolated measurements. The QoS regulation should measure representative service quality, not demand statistical perfection. Accordingly, the TSP strongly recommends that TRAI retain the existing 90th-percentile benchmark.	endpoints and other end-to-end factors not wholly within the TSP's control. A regulatory benchmark must distinguish TSP-attributable network performance from customer-side or external variations. 2. Zero-tolerance compliance is statistically disproportionate and obscures sustained service quality. At a national scale, even one marginally underperforming or anomalous sample would trigger non-compliance under a 100% benchmark. With potentially millions of measurements, isolated deviations are inevitable and may arise without any genuine or persistent deterioration in customer experience. The KPI could therefore become a near-permanent state of technical non-compliance, producing disproportionate consequences while failing to identify material and sustained service deficiencies. 3. Percentile-based assessment is internationally aligned and regulatorily sound. International approaches to fixed-broadband performance generally use statistical, percentile- or average-based measures rather than requiring every observation to meet a stated speed. Regulators such as Ofcom in the UK and ACMA in Australia recognize legitimate variation arising from network, CPE and customer-premises conditions. The existing 90th-percentile approach similarly provides a representative assessment while allowing a limited number of legitimate outliers. Accordingly, Airtel strongly requests TRAI to retain the
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			existing 90th-percentile benchmark. This would preserve a rigorous and consumer-focused standard while ensuring that regulatory compliance reflects representative and sustained network performance rather than isolated exceptions.
	III. Fault Repair (x) Mean Time-To-Repair (MTTR) Benchmark: ≤ 10 hours Assessment Period: Quarterly	Airtel strongly submits that the proposed Mean Time-To-Repair (MTTR) benchmark of ≤10 hours for broadband (wireline) service should not be introduced in its present form. Timely restoration is essential, but the existing framework already requires ≥85% of faults to be repaired by the next working day and ≥99% within three working days, with rent rebate or validity extension for prolonged faults. MTTR would therefore add an overlapping compliance metric for substantially the same operational activity without any demonstrated incremental consumer benefit.	1. MTTR would duplicate the existing fault-repair framework and create conflicting outcomes. The current repair-window benchmarks directly measure the proportion of customers whose faults are restored within defined periods and provide a specific remedy for prolonged outages. An average-based MTTR would assess the same fault population differently: a few complex cases could worsen the average even when the existing repair-window targets are met, while a favorable average could conceal customers whose faults remain unresolved beyond the prescribed period. Applying both approaches could produce divergent regulatory conclusions, duplicate reporting and expose the same fault event to multiple compliance tests. 2. The proposal lacks evidence of necessity and incremental consumer benefit. Increased dependence on broadband does not, by itself, justify another mandatory KPI where stringent repair obligations already exist. Nor can the need to furnish information for an ITU survey justify a compliance benchmark with regulatory consequences. If TRAI requires data for international reporting or benchmarking, it may collect MTTR initially as a monitoring parameter without a separate benchmark or financial consequence. Before imposing any new obligation, the Authority should demonstrate that the existing framework is insufficient

			and that MTTR provides material additional consumer protection. 3. An average MTTR is vulnerable to outliers and factors beyond the TSP's control. MTTR can be materially affected by a small number of complex faults and may not reflect the experience of the majority of subscribers. Restoration may depend on customer availability, access to premises or buildings, internal wiring or customer equipment, right-of-way permissions, third-party infrastructure, utility dependencies, cable damage, force majeure and other site-specific conditions. Unless clearly defined exclusions apply, TSPs could be found non-compliant for delays outside their reasonable control. The existing percentage-based repair windows are therefore more transparent and directly connected to customer outcomes. 4. A phased, evidence-based approach is required if MTTR is retained. A mandatory MTTR KPI would require additional fault-level processing, validation, reconciliation and reporting using data already employed for existing repair KPIs. Consistent with minimum necessary regulatory intervention, TRAI should first conduct an impact assessment and industry consultation to establish a baseline, validate methodology and exclusions, examine variations across network architectures and determine whether MTTR provides meaningful information beyond the current framework. Accordingly, Airtel strongly requests TRAI to: 1. Withdraw the proposed MTTR ≤10 hours benchmark
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			for broadband (wireline) service; 2. Retain the existing repair-window benchmarks and subscriber-relief provisions as the primary compliance framework; 3. Undertake a detailed impact assessment and industry consultation before considering an additional repair-time KPI; and 4. If MTTR data is required, introduce it initially only for monitoring and international benchmarking, without compliance or financial consequences, and consider a mandatory benchmark only if evidence later establishes clear incremental consumer benefit. Therefore, the proposed MTTR benchmark is premature, duplicative and disproportionate. The existing broadband fault-repair framework already provides measurable restoration targets and subscriber relief. TRAI should not add another mandatory KPI for the same operational process unless a comprehensive assessment demonstrates a genuine regulatory gap and clear incremental consumer benefit.
(xi) Percentage of significant network outage reported to the Authority within 24 hrs of start of the outage Note: Significant Network Outage is defined as an event where broadband (wireline) service in a district remains unavailable for a continuous period exceeding four (4) hours, or where more than ten percent (10%) of subscribers in the Service Area experience complete loss of service or material degradation in service quality for a	Airtel strongly submits that the proposed provision on reporting Significant Network Outages (SNOs) within 24 hours, together with the associated subscriber rebate or validity-extension obligation, should be dropped in its present form. By treating a 20% reduction in download or upload speed against the declared typical speed for four hours as an outage, the proposal extends far beyond objectively identifiable network failures and creates	1. The proposed definition improperly equates throughput variation with network outage. Complete district-level service unavailability is an objectively identifiable network event. A 20% reduction in end-to-end throughput is fundamentally different: broadband remains operational and usable, while measured speed may fluctuate around the declared typical value. A typical speed is a representative indication of expected performance, not a guaranteed minimum. Using it as an outage baseline would therefore convert a disclosure metric into a de facto service guarantee and dilute the objectivity of the SNO concept.	

	continuous period exceeding four (4) hours. Material degradation in service quality shall mean a reduction of twenty percent (20%) or more in the download or upload speed experienced by a subscriber vis-à-vis the declared typical download or upload speed. Rebate to the subscribers for significant network outages of more than 24 hrs: • For post-paid subscribers registered in the district or affected post-paid subscribers, as applicable: Proportional rent rebate, as per plan charges, for affected number of days shall be credited in next bill. • For the pre-paid subscribers registered in the district or affected pre-paid subscribers, as applicable: The validity of subscribed tariff offering shall be increased by equal number of affected days. Benchmark: 100% Assessment Period: Quarterly	disproportionate regulatory and financial exposure for variations that may not be attributable to the TSP.	2. End-to-end throughput does not establish TSP-attributable degradation. Subscriber speeds are influenced by peak-hour traffic, content and application servers, CDNs, peering and transit networks, routing and interconnection conditions, customer-premises equipment, internal wiring and the customer's local network. Many of these factors lie outside the access provider's control. A measured reduction cannot therefore be attributed to the TSP without establishing causation, and normal or externally induced variation should not trigger outage reporting or compensation. 3. The subscriber-level trigger is not objectively or proportionately implementable. Implementing the proposed trigger would require continuous determination of each subscriber's reference speed, actual download and upload performance, duration of degradation, the proportion of affected subscribers and the cause of the event. This would entail granular monitoring, correlation and attribution infrastructure that is not part of standard broadband architecture and would still not reliably distinguish access-network faults from customer-side or wider Internet conditions. 4. The reporting and compensation consequences are disproportionate. The proposed sequence—20% speed reduction, SNO classification, reporting within 24 hours and rent rebate or validity extension—could impose the same consequence for a modest or externally caused throughput variation as for a genuine, prolonged outage. During an actual incident, TSP resources should focus on restoration and root-
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			cause resolution rather than complex subscriber-level impact analysis. Any financial relief must be linked to an objectively established, operator-attributable service failure. 5. Existing QoS measures provide the appropriate regulatory mechanism. Broadband performance is already assessed through established speed, throughput and other customer-facing QoS parameters. Sustained network problems should be addressed through those objective measures rather than by creating an overlapping outage, reporting and compensation regime based on individual throughput variation. Accordingly, Airtel requests TRAI to: 1. Drop the proposed subscriber-level speed-degradation trigger and the associated 24-hour reporting and compensation obligations; 2. Confine any SNO framework to objectively identifiable network-level outages attributable to the TSP, with appropriate exclusions for events beyond its reasonable control; 3. Continue assessing broadband quality through established, measurable and outcome-based QoS parameters; and 4. Introduce any broader monitoring framework only after technical feasibility assessment, industry consultation and impact analysis establish objective measurability, causation, operational implementability and clear consumer benefit. The QoS regulation should address demonstrable operator-attributable service failures, not impose
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			reporting and compensation liability for fluctuations in an end-to-end Internet performance metric. The subscriber-level trigger and its consequential obligations should therefore be dropped.
	(2) Every service provider shall, in all its tariff offerings for broadband (wireline) service, indicate the typical download and upload speed generally available to the consumers. Explanation: For the purposes of this regulation, broadband (wireline) service shall include all fixed-wireless-and wireline medium including copper, fibre, cables etc.		
SECTION VI QUALITY OF SERVICE PARAMETERS RELATED TO CUSTOMER SERVICE			
7	10. Quality of Service Parameters in respect of which compliance reports are to be submitted to the Authority.- (1) Every service provider providing access service (wireline) or access service (wireless) or broadband (wireline) service, as applicable, shall meet the benchmarks, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely:- Resolution of billing/ charging complaints within four weeks one week Benchmark: 100% Assessment Period: • Access service (wireline) and broadband (wireline) service - Quarterly	Airtel strongly submits that reducing the billing and charging complaint-resolution timeline from four weeks to one week, while retaining a 100% compliance benchmark, is disproportionate and operationally unrealistic. Although faster grievance redressal is desirable, the proposed framework fails to recognize the varied complexity of complaints and the internal, customer and third-party dependencies required for accurate and conclusive resolution. The existing 4 weeks' timeline should therefore be retained.	1. The seven-day, 100% benchmark creates a disproportionate zero-tolerance SLA. The proposal reduces the permissible period by 75% and requires every complaint, regardless of complexity or external dependency, to be resolved within seven days. A single complex, customer-dependent or third-party-dependent case could therefore result in non-compliance despite timely and reasonable action by the TSP. A QoS benchmark should measure effective service performance, not impose automatic liability for circumstances beyond the service provider's control. 2. Billing and charging complaints vary materially in complexity. Digitization and centralized billing systems facilitate record retrieval but do not make every dispute simple or automated. Complaints may involve disputed charging, tariff validation, usage and

	• Access service (wireless)- ○ Quarterly w.e.f. 01.10.2024 ○ Monthly w.e.f. 01.04.2025		CDR reconciliation, roaming or interconnect records, provisioning, payment reconciliation, refunds, system adjustments and mass-impact incidents. Complex cases may require coordinated investigation across billing, charging, network, IT, customer-service, finance and revenue-assurance functions. 3. Resolution may depend on customers and external entities. International roaming, interconnect and payment-related disputes may require information from other operators, foreign roaming partners, banks or payment aggregators. Resolution may also depend on subscriber clarification, transaction references or supporting documents. The TSP cannot guarantee that independent parties or customers will respond within seven days; periods awaiting such information should not be treated as service-provider delay. 4. Mass-impact incidents require additional investigation and validation. Where a systemic billing issue affects many subscribers, the TSP must identify root cause and affected customers, quantify impact, validate transactions, implement system-level corrections, process credits or reversals and verify the remedy before communication. Compressing this end-to-end process into 7 days could produce incomplete corrections, repeat complaints and greater customer dissatisfaction. 5. Regulatory timelines should prioritize accurate and conclusive resolution. A rigid seven-day deadline may incentivize premature closure before investigation is complete, leading to reopened complaints, incorrect adjustments and avoidable operational burden. The
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			regulatory objective should be timely, accurate and final resolution. The existing 28-day framework better balances promptness, investigation quality and customer protection. Accordingly, Airtel requests TRAI to: 1. Drop the proposed reduction from four weeks to one week and retain the existing 28-day timeline; 2. avoid a universal 100% compliance benchmark that disregards complaint complexity and dependencies; 3. undertake a data-driven impact assessment and industry consultation before considering any shorter timeline. In conclusion, digital records do not eliminate the inherent complexity of disputed billing and charging cases. A 7-day zero-tolerance requirement would create routine non-compliance and risk premature, inaccurate closure rather than better customer outcomes. The existing four-week timeline should therefore be retained; any future reduction should follow comprehensive assessment and include safeguards for complex and externally dependent cases.
	Provided that the service provider providing both access service (wireline) and broadband (wireline) service shall meet the benchmarks for both the services on aggregated basis. Explanation: For the purposes of this regulation, broadband (wireline) service shall include all fixed wireless and wireline medium including copper, fibre, cables etc.	Airtel strongly submits that the proposed deletion of the aggregation proviso should be reconsidered. TRAI's objective of ensuring that wireless broadband connections, including 5G FWA, are reported under access service (wireless) can be achieved through clear technological classification without disaggregating common customer-service and operational parameters for access service (wireline) and broadband (wireline).	1. Technological classification does not require operational disaggregation. The issue identified by TRAI concerns the proper classification of broadband connections according to the underlying access medium. That objective is distinct from the aggregation of customer-care, complaint, billing and payment KPIs. Wireless broadband may be correctly reported under access service (wireless) while common wireline customer-service functions continue to be measured on an aggregated basis.

		The existing aggregation proviso should therefore be retained.	2. Shared systems and bundled services support aggregated reporting. Call centres, CRM and complaint platforms, billing and charging systems, payment infrastructure and service-assurance processes are commonly operated across access (wireline) and broadband (wireline). This is particularly true for Combo offerings and common subscriber accounts, where a customer interaction may not correspond neatly to a single regulatory service category. Aggregated measurement therefore reflects the actual service-delivery architecture more accurately than artificial allocation of shared events. 3. Disaggregation would impose disproportionate cost without improving consumer protection. Separate reporting would require new tagging, taxonomy, reconciliation, validation, KPI logic and audit processes solely to divide events generated through shared systems. These changes would create material IT, operational and compliance burden but would not, by themselves, improve complaint resolution, billing accuracy or customer experience. Where the underlying consumer-facing function is common, aggregated reporting remains representative and fully consistent with consumer protection. 4. The limited standalone segment offers little incremental regulatory value. New broadband subscribers are acquired primarily through Combo offerings, while the standalone legacy voice base is limited and declining. Further, no valid billing and payment complaints were observed in the standalone segment during the last year. Establishing and
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			maintaining a separate reporting architecture for this small segment would therefore be disproportionate to the limited additional regulatory insight it could provide. Accordingly, Airtel requests TRAI to: 1. retain the existing aggregation proviso for access service (wireline) and broadband (wireline) where customer-service functions are shared; 2. retain the proposed clarification that broadband delivered through wireless technologies, including 5G FWA, must be reported under access service (wireless); 3. avoid mandating artificial separation of shared call-centre, complaint, billing and payment operations solely for regulatory reporting; and 4. continue combined reporting under Broadband where systems, processes and customer accounts are common. TRAI can secure correct PMR classification by access technology without dismantling an aggregation framework that accurately reflects shared customer-service operations. Separate reporting would add cost and artificial complexity without a demonstrated consumer-protection benefit. The existing aggregation proviso and combined Broadband reporting practice should therefore be retained.
SECTION VII RECORD KEEPING, REPORTING, AUDIT AND PUBLICATION OF QUALITY-OF-SERVICE PERFORMANCE			
8	15. Publication.- (1) The Authority may publish, in such manner and in such format, as may be decided by the Authority from time to time-	Airtel strongly submits that the proposed provision empowering TRAI to publish a service-wise Quality of Experience Score (QoES) should be dropped. Consumer	1. QoE is materially different from objective QoS. QoS is based on defined technical parameters, benchmarks and measurement methods. QoE also reflects device capability, application and content performance,

	(e) Service wise Quality of Experience Score (QoES) of service providers based on various parameters of network performance, consumer service, and consumer perception collected through multiple sources; through its website or through press releases or through advertisements in the print or electronic media, for the information to the public.	experience is important, but QoE is broader and more context-dependent than objectively measurable QoS. Reducing diverse network, service and perception inputs to a single comparative score—without a fully specified, validated and auditable methodology—would risk misleading consumers and causing disproportionate reputational and competitive harm.	location, mobility, usage patterns, customer interactions, expectations and other subjective factors. Consumers using the same network under similar technical conditions may therefore report different experiences. Perception can be a useful supplementary input, but it should not be treated as equivalent to an objective measurement or converted into a regulator-published ranking without exceptional methodological safeguards. 2. The scoring methodology and data safeguards are undefined. The draft does not define the parameters, data sources, weightages, normalization, sampling, statistical confidence, geographical representation, attribution rules, treatment of missing data and outliers, validation, audit or correction process. These gaps are especially serious where information is drawn from multiple sources with differing populations, coverage, collection methods, definitions and reliability. Without standardization and independent validation, the score may reflect methodological choices rather than actual service quality and cannot be regarded as transparent, reproducible or comparable. 3. Public comparison would create serious market consequences without due-process safeguards. Publication through TRAI's website, press releases or advertisements could directly influence consumer choice, brand reputation and competitive position. Even a lower score driven by subjective, incomplete, duplicated or incorrectly attributed inputs could have material commercial consequences. Before any operator-specific publication, TSPs must be able to access and verify the underlying data, identify
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			anomalies, provide clarification, contest attribution and secure correction. The present clause provides no such representation, correction or appeal mechanism. 4. Existing QoS oversight and TSP-led frameworks are more appropriate. TRAI already receives extensive objective network and service-performance information through the QoS framework. Specific consumer-experience concerns can be examined through targeted surveys, focused studies, service-specific assessments or stakeholder consultation without creating a single composite ranking. Individual TSPs are also best placed to assess and improve customer experience in the context of their network architecture, technology mix, service portfolio, device ecosystem and customer usage patterns. Accordingly, Airtel strongly requests TRAI to: 1. drop the proposed QoES publication clause and leave QoE assessment to individual service providers; 2. continue addressing consumer-experience concerns through objective QoS measures and targeted studies rather than a composite public ranking; 3. if a common framework is explored, first conduct industry consultation, pilot testing and independent statistical validation; and 4. before any operator-specific publication, establish transparent methodology, standardized and auditable data, and a binding process for TSP verification, representation and correction. In conclusion, consumer experience should be improved through objective regulation and provider-level action, not through a ranking that creates a false impression of
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			precision and fairness. The clause should therefore be dropped; any future framework must first satisfy rigorous consultation, validation, audit and due-process requirements.
	(3) Every service provider providing access service (wireless) shall publish on its website the service wise geospatial coverage maps in such a manner and format, as broadly specified under Schedule III and as may be directed by the Authority from time to time, for the geographical areas where wireless voice or wireless broadband service is available for subscription by consumers .		
SECTION VIII CONSEQUENCES FOR FAILURE TO COMPLY WITH THE REGULATIONS			
9	16. Consequences for the failure of service providers to meet the benchmark of Quality of Service parameters.- (1) If a service provider fails to meet the benchmark of QoS parameters specified under sub-regulation (1) of regulation 4 or sub-regulation (1) of regulation 6 or sub-regulation (1) of regulation 9 or sub-regulation (1) of regulation 10, it shall, without prejudice to the terms and conditions of its license, or the Act or rules or regulations or orders made, or directions issued, thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees one lakh per benchmark per compliance report for the first		

	contravention as the Authority may, by order, direct:		
	<i>Provided that</i> if the service provider fails to meet the benchmark of the same parameter consecutively in two or more subsequent months or quarters, as applicable, he shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees two lakhs for the second consecutive contravention and not exceeding rupees three lakhs for each consecutive contravention occurring thereafter:		
	(2) If the compliance report furnished by the service provider under regulation 13 is found to be false, it shall, without prejudice to the terms and conditions of its license or authorization, or the Act or rules or regulations or orders made, or, directions issued thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees two lakhs per benchmark per compliance report, for which such false report has been furnished, for the first contravention as the Authority may, by order, direct: Provided that if the compliance report furnished by the service provider under regulation 13 is found to be false for the same parameter consecutively in two or more subsequent months or quarters, as		

applicable, the service provider shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees five lakhs for the second consecutive false reporting and not exceeding rupees ten lakhs for each consecutive false reporting occurring thereafter.		
(3) No order for payment of any amount by way of financial disincentive shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention of the regulation observed by the Authority.		
(4) The amount payable by way of financial disincentive under these regulations shall be remitted to such head of account as may be specified by the Authority. 16A. Consequences for the failure of service providers to submit correct compliance reports. - (1) If the compliance report furnished by the service provider under regulation 13 is found to be false, it shall, without prejudice to the terms and conditions of its license or authorization, or the Act or rules or regulations or orders made, or, directions issued thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees two lakhs per benchmark per compliance report, for which such false report has	Airtel strongly submits that proposed Regulations 16A and 16B would disproportionately expand the financial-disincentive framework. Enforcement should distinguish deliberate or materially misleading reporting from bona fide data discrepancies, and substantive QoS failures from minor procedural or administrative lapses. Accordingly, the proposed 1% deeming provision under Regulation 16A and Regulation 16B in its entirety should be dropped.	Regulation 16 A: A numerical mismatch should not be deemed false reporting. A difference between a TSP's reported value and a value later calculated by TRAI or observed during audit does not, by itself, establish false reporting. False reporting should require deliberate, knowing or materially misleading conduct. In large telecom QoS datasets, minor variances can legitimately arise from rounding, decimal precision, sampling, aggregation, extraction timing, processing sequences, database refresh cycles, inclusion or exclusion rules and reconciliation methods. The proposed 1% threshold is arbitrary and disproportionately low. A variance exceeding 1% of the benchmark may still be bona fide, particularly where the underlying data is correct and the difference results from methodology or calculation

been furnished, for the first contravention as the Authority may, by order, direct: <i>Provided that</i> if the compliance report furnished by the service provider under Regulation 13 is found to be false for the same parameter consecutively in two or more months or quarters, as applicable, the service provider shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees five lakhs for the second consecutive false reporting and not exceeding rupees ten lakhs for each consecutive false reporting occurring thereafter. Explanation: If, upon examination of the information in the compliance report or in any other report pertaining to the performance of QoS parameters furnished by the service provider, the Authority finds that there is a mismatch in the data or value of any parameter reported by the service provider and the performance calculated by the Authority from value or the data given by the service provider in its report or observed during the audit, to the extent that absolute value of difference exceeds 1% of the prescribed benchmark, then such events shall also be considered as false reporting. 16B. Consequences for the failure of service providers to comply with any other provisions of the regulations.- (1) If		sequence. Treating such a reconciliation issue as a financial offence is disproportionate. Repetition also does not establish intent where the same systemic interpretation or processing difference continues across reporting periods. 3. A fair verification and correction process is essential. Before imposing any financial disincentive, TRAI should disclose the basis of the discrepancy and allow the TSP to examine the data, reconcile calculations, explain methodological differences and correct any inadvertent error. Escalation should apply only where the Authority establishes that the TSP knowingly continued to furnish materially false information after being given such opportunity. Regulation 16 B: 1. A blanket penalty for “any provision” is disproportionate. Regulation 16B would permit financial disincentives of up to ₹5 lakh per instance, escalating to ₹8 lakh and ₹10 lakh for consecutive contraventions, for failure to comply with almost any provision. This catch-all approach does not distinguish material QoS failures affecting consumers from minor or curable issues involving records, documentation, reporting formats, procedural timelines, system processes or audit facilitation. 2. Financial disincentives should be targeted at clearly defined, substantive non-compliance having a demonstrable QoS or consumer impact. For procedural deficiencies, the proportionate sequence should be identification, clarification or correction, reasonable opportunity to comply, and escalation only
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	a service provider fails to comply with any of the provisions of the regulations excluding provision mentioned in sub-regulation (1) of regulation (7), it shall, without prejudice to the terms and conditions of its license, or the Act or rules or regulations or orders made, or directions issued, thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees five lakh per instance of such non-compliance as the Authority may, by order, direct: <i>Provided that</i> if the service provider fails to comply the same provision of the regulations consecutively in two or more subsequent months or quarters, as applicable, he shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees eight lakhs for the second consecutive contravention and not exceeding rupees ten lakhs for each consecutive contravention occurring thereafter: <i>Provided that</i> this regulation shall not be applicable if any non-compliance attracts the provision of regulation 16 or regulation 16A or regulation 17 or regulation 18.		for persistent and material failure. 3. Without such safeguards, Regulation 16B would create uncertainty, inconsistent enforcement and excessive compliance burden without necessarily improving service quality. In conclusion, the proposed provisions would impose punitive consequences for bona fide data variations and procedural deficiencies that may have no consumer or QoS impact. Regulatory enforcement should focus on deliberate false reporting and material non-compliance, supported by due process and a reasonable opportunity to rectify. Airtel therefore strongly recommends deletion of the 1% deeming provision under Regulation 16A and deletion of Regulation 16B.
10	17. Consequences for failure of the service providers to submit compliance reports.-(1) If a service provider contravenes the provisions of regulation 13, it shall, without prejudice to the terms and conditions of its license or	Airtel strongly submits that the proposed amendment should be reconsidered and the existing framework retained. The current financial disincentive of ₹5,000 per report per day, subject to an overall cap of ₹10 lakh, already provides a meaningful enforcement	1. Reporting delay is distinct from substantive QoS non-compliance. A delayed compliance report does not, by itself, establish failure of an underlying QoS benchmark, consumer harm, inaccurate data or deliberate suppression of information. Financial consequences should therefore remain proportionate

authorization, or the provisions of the Act or rules or regulations or orders made, or, directions issued, thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees five thousand per report for every day during which the default continues, subject to the maximum amount of rupees ten lakhs, as the Authority may, by order, direct: Provided that no order for payment of any amount by way of financial disincentive shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention of the regulation observed by the Authority. <i>Provided that if service provider fails to submit the compliance report within a period of three (3) months from due date then be liable to pay an amount, by way of financial disincentive, not exceeding rupees ten lakhs per report.</i> (2) The amount payable by way of financial disincentive under these regulations shall be remitted to such head of account as may be specified by the Authority. 17A. Common provisions for financial disincentives.- (1) No order for payment of any amount by way of financial disincentive, under regulation 16 or	mechanism. Removing the cumulative cap and introducing a separate liability of up to ₹10 lakh per report after three months would create disproportionate exposure for what is fundamentally a procedural default.	to the procedural nature and materiality of the lapse rather than arise automatically because additional time was needed to compile and validate the submission. 2. QoS reports require extensive collection, reconciliation and validation. QoS reports may require data from multiple network elements, OSS/BSS and measurement platforms, LSAs and internal teams, followed by validation, reconciliation and quality checks. Mismatches, incomplete feeds, anomalies, processing errors, system upgrades or technical interruptions may require further investigation before responsible submission. Regulation should encourage accurate and complete reporting, not incentivize premature filing merely to avoid escalating penalties. 3. The overall ₹10 lakh cap is an essential proportionality safeguard. Because a daily disincentive accumulates over time, the existing cumulative cap prevents a procedural delay from attracting a financial consequence disproportionate to the underlying default, particularly where there is no consumer harm or substantive QoS failure. The proposed three-month trigger does not justify removing this safeguard: the cause of delay, the TSP's efforts and the materiality of the lapse should remain relevant. 4. Financial disincentives must remain corrective, not revenue-oriented. The purpose of the framework should be to secure accurate and timely compliance. Any disincentive should be proportionate, linked to the seriousness of the contravention, sensitive to circumstances beyond the TSP's reasonable control and applied as a compliance-enforcement measure rather
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	regulation 16A or regulation 16B or regulation 17, shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention of the regulation observed by the Authority. (2) The amount payable by way of financial disincentive under regulation 16 or regulation 16A or regulation 16B or regulation 17 shall be remitted to such head of account as may be specified by the Authority.		than a source of revenue. 5. Regulation 17A may be retained as a common procedural safeguard. The TSP supports consolidation of the reasonable-opportunity and remittance provisions into Regulation 17A. A meaningful opportunity to explain technical, operational or data-validation circumstances before any disincentive is imposed is an essential due-process protection. This drafting consolidation should, however, remain without prejudice to the TSP's substantive objections to Regulations 16A and 16B. Airtel's Submission 1. Retain the existing ₹5,000 per report per day framework and the overall ₹10 lakh cap. 2. Drop the proposed separate liability of up to ₹10 lakh per report after three months. 3. Consider the cause, materiality and circumstances of delay, including data validation, reconciliation, technical issues and multi-team or LSA coordination. 4. Retain Regulation 17A's common due-process and remittance provisions, without prejudice to the TSP's objections to Regulations 16A and 16B. In conclusion, Airtel submits that delayed submission of a compliance report is a procedural issue and should not attract disproportionate financial consequences. The existing capped framework appropriately balances enforcement with the need for accurate, complete and timely regulatory reporting. Accordingly, the existing provision should be retained and the proposed three-month/₹10 lakh amendment be dropped.
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11	18. Consequences for the failure of the service providers to pay financial disincentive within the stipulated time.- (1) If a service provider fails to make payment of financial disincentive under regulation 16 or regulation 16A or regulation 16B or regulation 17 within a period of twenty one days from the date of issue of order for payment of financial disincentive or as stipulated in the order for payment of financial disincentive, it shall be liable to pay interest at a rate which will be 2% above the one year Marginal Cost of Lending Rate (MCLR) of State Bank of India existing as on the beginning of the Financial Year (namely 1st April) in which last day of the stipulated period falls and such interest shall be compounded annually. Explanation: For the purposes of this regulation, a part of the month shall be reckoned as a full month for the purpose of calculation of interest and a month shall be reckoned as an English calendar month.	Airtel strongly submits that proposed Regulation 18 should be dropped in its entirety.	1. Regulation 18 cannot be separated from the underlying disputed liabilities. Airtel has already raised fundamental objections to Regulations 16A and 16B, which broaden financial exposure through a deemed false-reporting threshold and a catch-all penalty for failure to comply with any provision. Adding interest and annual compounding before the necessity and proportionality of those underlying liabilities are settled would create an unjustified layering of financial consequences. 2. Interest would disproportionately compound an already substantial financial exposure. A financial disincentive may be subject to factual disagreement, data reconciliation, methodological interpretation, verification, representation or other legitimate regulatory proceedings. Additional interest should not accrue merely because payment is withheld while the basis or computation of the liability is under bona fide review. Otherwise, a procedural or disputed matter could progressively attract financial disincentive, escalation, interest and compounded interest. 3. The framework should remain corrective and compliance-oriented. Financial disincentives should encourage compliance, not operate as a source of revenue or an automatically escalating punitive mechanism. TSPs should receive a reasonable opportunity to comply, rectify deficiencies and respond to alleged contraventions, particularly where there is no deliberate misconduct or material consumer harm. 4. Bona fide disputes require express procedural safeguards. Where the amount or basis of a financial
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			disincentive is under genuine dispute, clarification, reconciliation or an available statutory or regulatory remedy, Regulation 18 should not impose an additional monetary consequence. At minimum, interest should be suspended until the dispute is finally determined and should apply only to an undisputed amount that remains unpaid after due notice and opportunity. Airtel's Submission 1. Drop proposed Regulation 18 in its entirety and retain the existing framework governing financial disincentives. 2. Drop proposed Regulations 16A and 16B, for the reasons submitted separately. 3. Ensure that financial disincentives remain proportionate, targeted and compliance-oriented, with reasonable opportunity to comply, rectify and make representations. 4. Without prejudice, exclude bona fide disputed, reviewed, reconciled or clarified amounts from interest until final determination. Regulation 18 is disproportionate and not required because it adds interest and compounding to an already expanded and contested financial-disincentive regime. Enforcement should promote compliance while preserving proportionality and due process. Accordingly, Regulations 16A, 16B and 18 should be dropped and the existing framework retained.
OTHER ISSUES			
12	SINR Threshold Parameter – “Connections with Good Voice Quality”	Airtel strongly submits that the proposed SINR threshold of ≥ 0 dB for determining “Connections with Good Voice Quality” is	1. Negative SINR is a legitimate feature of cell-edge and mobility conditions. Cellular networks require overlapping coverage for continuity and seamless

		overly stringent and does not reflect actual cellular-network operating conditions. The threshold should be revised to ≥ -6 dB.	handover. At cell boundaries, serving- and neighbouring-cell signal levels can become comparable, reducing SINR below 0 dB—often to around -3 dB or lower depending on propagation and interference. These are normal operating conditions and should not automatically be classified as poor voice quality. 2. SINR alone is not a reliable proxy for subscriber voice experience. SINR is a radio-condition input, whereas voice quality reflects the combined performance of mobility management, scheduling, coding, retransmission, bearer configuration, packet delivery, delay control and codecs. LTE handover decisions also use RSRP and other measurement criteria rather than SINR alone. A negative SINR reading therefore does not necessarily indicate packet loss, call impairment or perceptible degradation. 3. LTE mechanisms preserve voice performance under adverse radio conditions. LTE networks dynamically use robust modulation and coding, including QPSK and forward-error correction, to maintain reliable transmission at lower SINR. TTI bundling, uplink coordination techniques where deployed, suitable bearer configurations, BLER and delay controls, and codecs such as EVS and wideband voice further improve resilience. These mechanisms demonstrate why a rigid radio-layer threshold cannot be equated directly with actual voice quality. 4. A 0 dB limit would create an artificial compliance boundary. A ≥ 0 dB threshold would classify technically valid connections as deficient despite satisfactory voice
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		service, penalise normal mobility and cell-edge conditions, and incentivise optimisation toward an artificial radio value rather than the regulatory objective of good customer experience. Assessment should therefore be outcome-based and reflect field conditions and network resilience. Therefore, the SINR threshold for “Connections with Good Voice Quality” should be revised from ≥ 0 dB to ≥ -6 dB. This threshold better reflects overlapping coverage, cell-edge and handover conditions; avoids treating a single radio metric as a direct measure of voice quality; and recognises the ability of LTE radio and voice mechanisms to maintain satisfactory service under lower SINR conditions.
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