



No.: CNPL/TRAI-L/174

Date: 2nd September 2026

To,

The Advisor (QoS-I)
Telecom Regulatory Authority of India (TRAI)
World Trade Center, Tower-F,
Nauroji Nagar, New Delhi – 110029

Subject: Submission of comments on TRAI 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 05.08.2026

Dear Sir,

This is with reference to the Telecom Regulatory Authority of India (TRAI) 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 05.08.2026.

In this regard, **Shyam Spectra Private Limited** appreciate the Authority’s continued efforts towards strengthening the Quality-of-Service framework and improving customer experience. While Spectra is broadly aligned with the objectives of the proposed amendments, certain provisions may benefit from further clarity in respect of measurement methodology, implementation, operational applicability and treatment of situations beyond the service provider’s reasonable control. These aspects have been highlighted in the enclosed detailed response for the Authority’s consideration.

We request the Authority to kindly take the enclosed comments on record and consider the same while finalizing the proposed amendments.

Thank you.

Yours sincerely,

For Shyam Spectra Private Limited

(Nadia Kohli)

Assistant General Manager – Regulatory
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Encl.: Spectra’s point-wise comments on the TRAI Consultation Paper on Draft Amendments in QoS Regulations, 2024 dated 05.08.2026

COMMENTS OF SPECTRA ON TRAI CONSULTATION PAPER ON DRAFT AMENDMENTS TO THE STANDARDS OF QUALITY-OF-SERVICE REGULATIONS, 2024

Subject: Comments on 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 5 August 2026

Spectra welcomes the opportunity to submit its comments on the proposed amendments to the Quality-of-Service Regulations.

Spectra is committed to providing reliable and consistent broadband connectivity to its customers and supports the objective of strengthening the Quality-of-Service framework and improving transparency for consumers.

At the same time, broadband services are delivered through complex end-to-end networks where service performance can be affected by several factors, including last-mile conditions, access network loading, customer premises equipment, power availability, upstream connectivity, internet exchange/interconnection conditions and events beyond the reasonable control of the service provider.

Accordingly, Spectra requests that the proposed parameters and associated measurement methodologies be implemented in a manner that measures the actual service experience while also ensuring that the methodology is practical, technically measurable and consistently applicable across service providers.

Our comments on the provisions relevant to Broadband (Wireline) services are set out below.

1. Fault Incidence – Number of Faults per 100 Subscribers per Month

Relevant provision: Regulation 9(1)(vii)

Proposed amendment:

The parameter is proposed to be specified as:

“Fault incidences (No. of faults per 100 subscribers/month)” – Benchmark ≤ 5 , assessed quarterly.

The proposed methodology converts the quarterly number of faults into a monthly average.

Spectra’s Comments

Spectra support the clarification of the parameter as a monthly fault incidence, as this provides a more meaningful representation of network performance.

We also appreciate that the proposed methodology brings the regulatory requirement in line with the clarification already issued by TRAI in March 2025.

However, Spectra requests that the definition of a “fault” and the treatment of repeated complaints relating to the same underlying network incident be clearly specified.

In a large network, a single underlying outage may result in multiple customer complaints. Counting each customer interaction as an independent network fault can materially distort the actual network fault incidence.

Spectra's Recommendation

Spectra requests TRAI to clarify that:

- Multiple complaints relating to the same underlying network incident should be treated as one network fault/event for the purpose of fault-incidence measurement; and
- Customer-generated issues, CPE-related issues and other matters demonstrably outside the service provider's network should be appropriately identified and treated in accordance with the prescribed methodology.

This will ensure that the parameter measures network reliability rather than customer contact volume.

2. Mean Time-To-Repair (MTTR)

Relevant provision: Regulation 9(1)(x)

Proposed benchmark: ≤ 10 hours, quarterly

The proposed methodology for MTTR for Broadband (Wireline) uses the time taken from registration of the fault until rectification, with the prescribed working-hour methodology.

Spectra's Comments

Spectra support the introduction of MTTR as an additional indicator of network service quality.

However, MTTR should be calculated only for valid network faults which are attributable to the service provider and are capable of being rectified by the service provider.

Broadband fault resolution may involve situations where restoration is dependent upon factors outside the direct control of the service provider, including:

- customer premises access;
- customer availability;
- power-related issues at customer premises;
- third-party infrastructure;
- road cutting or local permissions;
- force majeure events; and
- other circumstances where restoration cannot reasonably be completed within the service provider's control.

Spectra's Recommendation

TRAI may prescribe a clear list of permissible exclusions / pause conditions for MTTR calculation.

Further, Spectra recommends that the clock should stop when the fault has been technically restored and service is available, rather than waiting for subsequent customer confirmation where such confirmation is not received despite reasonable attempts.

A standardised definition will also ensure that MTTR is calculated consistently by all service providers.

3. Significant Network Outage (SNO)

Relevant provision: Regulation 9(1)(xi)

Proposed benchmark: 100% reporting within 24 hours

TRAI proposes defining an SNO where:

1. Broadband (Wireline) service in a district remains unavailable for more than four continuous hours; or
2. More than 10% of subscribers in the Service Area experience complete loss of service or material degradation for more than four continuous hours.

Material degradation is proposed to mean a reduction of 20% or more in download or upload speed compared with the declared typical speed.

Spectra's Comments

Spectra support the objective of ensuring timely reporting of significant outages.

However, the proposed definition combines complete loss of service with speed degradation, which are technically very different events.

A complete outage can normally be detected through network monitoring systems. Speed degradation, on the other hand, can arise from several factors and may vary considerably between customers depending on customer equipment, Wi-Fi conditions, usage patterns and other factors.

The proposed requirement to determine whether more than 10% of subscribers have experienced a 20% or greater reduction in speed for four continuous hours may therefore require extensive real-time, subscriber-level measurement infrastructure.

Spectra's Recommendation

Spectra requests TRAI to reconsider the speed-degradation limb of the SNO definition or provide a practical and standardized definition & measurement methodology.

In particular, TRAI may clarify:

- how speed degradation is to be measured; clarification of the degradation criterion.
- whether the measurement is based on network-side testing or customer-end measurements;
- how Wi-Fi and CPE-related limitations are excluded;
- how customers with no active traffic/session during the relevant period are treated; and
- how the 10% subscriber threshold is to be calculated.

Spectra also recommend that an SNO should be determined based on objective network-level indicators, wherever technically feasible, rather than requiring continuous individual subscriber-level speed assessment.

4. SNO Reporting Within 24 Hours

TRAI proposes that all qualifying SNOs be reported within 24 hours from the start of the outage, followed by submission of the root cause and corrective action after restoration.

Spectra's Comments

Spectra support timely reporting of significant outages.

However, where an outage is initially below the SNO threshold and subsequently becomes an SNO, the 24-hour clock should be linked to the point at which the event meets the prescribed SNO criteria, rather than retrospectively starting from the beginning of the underlying event.

This will also avoid situations where an event becomes an SNO only after several hours of monitoring.

Spectra's Recommendation

TRAI may clarify that the 24-hour reporting period should commence when the event is identified as meeting the SNO criteria, with appropriate records maintained regarding the beginning and evolution of the incident.

5. Compensation for SNO Continuing Beyond 24 Hours

TRAI proposes proportional rent rebate for post-paid customers and equivalent validity extension for prepaid customers where an SNO continues beyond 24 hours. An outage exceeding 12 hours in a calendar day is proposed to be treated as one full day for this purpose. Recorded and reported force majeure events may be excluded.

Spectra's Comments

Spectra support the principle of compensating customers for prolonged service outages.

However, the proposed provision needs greater clarity where the SNO threshold is triggered because more than 10% of subscribers experience an outage or material degradation.

In such a situation, it is not clear whether compensation should be provided to:

- all subscribers in the affected district; or
- only those subscribers demonstrably affected by the outage.

The distinction is important because a network event affecting a portion of subscribers should not automatically result in compensation to customers whose service remained available and unaffected.

Spectra's Recommendation

Spectra requests TRAI to clarify that compensation should be provided to customers actually affected by the qualifying SNO, wherever subscriber-level identification is technically possible.

TRAI may also provide a clear methodology for determining the affected customer population where the SNO threshold is triggered on the basis of the 10% subscriber criterion.

6. Declared Typical Download and Upload Speed

The draft requires service providers to indicate the typical download and upload speed generally available to consumers for each Broadband (Wireline) tariff offering.

Spectra's Comments

Spectra support transparency regarding the typical speeds available under each tariff offering.

However, broadband speed can vary depending upon network utilisation, customer equipment, Wi-Fi environment, internet destination, content provider/server capacity and other factors.

The regulatory framework should therefore distinguish between network-side performance and the actual speed experienced at a customer's device.

Spectra's Recommendation

TRAI may clarify that declared typical speed is intended to represent the typical network performance under defined testing conditions and should not be interpreted as a guaranteed speed at every customer device under all circumstances.

TRAI may also consider issuing common guidelines or standardized methodology for declaration of typical speed so that the basis remains consistent across service providers.

7. Speed Compliance – 90th Percentile

Relevant provision: Regulation 9(1)(iv)

Benchmark: 100%, quarterly

The draft proposes that all tariff offerings be considered for measurement and that a tariff offering will be treated as non-compliant where the 90th percentile measured download or upload speed is below the corresponding declared typical speed.

Spectra's Comments

Spectra support the objective of ensuring that declared speeds are representative of actual network performance.

However, a 100% compliance benchmark at tariff-offering level may result in the overall Service Area being treated as non-compliant due to the performance of a single tariff offering, even where the overall customer experience remains satisfactory.

This becomes particularly relevant where tariff offerings have a small customer base.

Spectra's Recommendation

Spectra recommend that TRAI consider a reasonable statistical tolerance for individual tariff offerings, particularly where the subscriber base of the offering is small.

Alternatively, TRAI may consider a materiality threshold so that an isolated deviation in a very small tariff offering does not automatically result in non-compliance for the entire Service Area.

8. Customer Notification and Corrective Action for Speed Shortfall

TRAI proposes that where the measured speed of a plan falls below its declared typical speed, the service provider must notify affected customers and take corrective action before submission of the next compliance report.

Spectra's Comments

Spectra support timely corrective action where a sustained network-level performance issue is identified.

However, automatic customer-level notification based solely on a limited regulatory test sample may create unnecessary customer communication and may not accurately establish that an individual customer is experiencing a persistent speed shortfall.

Broadband performance can vary because of factors outside the service provider's network, including customer premises equipment, Wi-Fi conditions, device capability and internet application/server limitations.

Spectra's Recommendation

Spectra recommend that customer notification be triggered where:

- the speed shortfall is established as a persistent network-level issue; and
- the affected customer population can be reasonably identified.

TRAI may also clarify that corrective action should be assessed at the network/plan level, rather than requiring individual customer-level remediation for every test observation. Hence, requesting practical implementation methodology.

This approach would provide meaningful consumer protection without creating a large administrative process based on isolated measurements.

9. Speed Measurement – Sample Size

The draft retains the existing minimum sample sizes but introduces the provision that the lower of the prescribed minimum sample or 5% of the subscriber base of each tariff offering may be considered.

Spectra's Comments

Spectra welcome this proposed change as It provides a more practical approach for tariff offerings with a relatively small subscriber base and avoids disproportionate testing requirements.

Spectra also support the proposal relating to proportional subscriber selection where tariff offerings with the same typical speed are grouped.

10. Billing and Charging Complaint Resolution – One Week

Relevant provision: Regulation 10(1)(ii)

Proposed benchmark: 100% within one week

The existing four-week period is proposed to be reduced to one week.

Spectra's Comments

Spectra recognize the importance of resolving billing and charging complaints quickly and supports improvement in customer experience.

However, a blanket 100% benchmark within seven days may be difficult in cases where resolution depends on third-party information, payment reconciliation, banking/payment gateway confirmation, customer documentation or investigation of complex billing transactions.

A strict 100% requirement also means that a small number of exceptional cases can result in non-compliance despite otherwise effective complaint management.

Spectra's Recommendation

Spectra requests TRAI to consider:

- a clearly defined list of customer/third-party dependent cases that may be excluded from the regulatory clock; or

- a reasonable tolerance for exceptional cases; and
- a phased implementation of the one-week benchmark.

The objective should be to ensure faster resolution without encouraging premature closure of complaints merely to meet the prescribed TAT.

11. Application of Adjustment to Customer Account Within One Week

The existing requirement for applying credit, waiver, adjustment, rent rebate or validity extension within one week remains applicable.

Spectra's Comments

Spectra support the provision and agree that once a customer has been determined to be eligible for a credit, waiver, rebate or other adjustment, the benefit should be provided promptly.

However, where an adjustment depends on customer-provided information or successful payment/refund validation, reasonable exceptions should be recognised.

Spectra recommend that the methodology clearly distinguish between:

- delay attributable to the service provider; and
- delay caused by incomplete or incorrect information provided by the customer.

12. Refund of Deposits Within 45 Days – Including Non-Provisioning

The draft expands the parameter to cover refund of deposits following both closure of service and non-provisioning of service.

Spectra's Comments

Spectra support the objective of ensuring timely refund of customer deposits.

However, the treatment of non-provisioning cases requires clarification because such cases can arise at different stages of the order lifecycle and may involve circumstances where provisioning could not be completed for reasons beyond the service provider's control.

Spectra's Recommendation

TRAI may clarify:

- the date from which the 45-day period will commence in non-provisioning cases;
- treatment where customer details required for refund are incomplete;
- treatment of cases where the customer does not provide the required refund information; and
- treatment of cases where the order is cancelled before service activation due to customer request.

The framework should ensure that the service provider is accountable for delays within its control while not treating customer-dependent delays as service-provider non-compliance.

13. Removal of Aggregated Reporting for Access (Wireline) and Broadband (Wireline)

The draft proposes deletion of the provision allowing a service provider offering both Access (Wireline) and Broadband (Wireline) to meet customer-service benchmarks on an aggregated basis.

Spectra's Comments

Spectra have no objection to service-wise reporting where separate services are offered.

However, the reporting framework should ensure that the same customer/service event is not duplicated across multiple service categories.

Spectra requests TRAI to provide a clear service classification methodology at the point of complaint/fault registration.

14. Documentation of QoS Data Collection and Processing

TRAI requires service providers to maintain proper documentation of the process through which QoS data is collected, mapped, processed and reported, including the relationship with primary records.

Spectra's Comments

Spectra support the requirement for transparent and reproducible QoS reporting.

A properly documented data lineage will improve consistency and make the audit process more effective.

Spectra recommend, however, that TRAI prescribe a standardised template for such documentation so that all service providers maintain information in a consistent manner.

15. Quality of Experience Score (QoES)

The draft enables TRAI to publish a service-wise Quality of Experience Score based on network performance, customer service and consumer perception.

Spectra's Comments

Spectra support the objective of improving transparency around consumer experience.

However, a composite QoES can be meaningful only when the methodology is transparent and consistently applied across all service providers.

The proposed framework does not presently specify the weightages, data sources, normalisation methodology or treatment of different service categories.

Spectra's Recommendation

Spectra requests TRAI to undertake a separate stakeholder consultation before operationalising the QoES framework.

The methodology should clearly specify:

- parameters included;
- weightage assigned to each parameter;
- data sources;
- sample size;

- treatment of exceptional events;
- treatment of different technologies and customer segments; and
- methodology for comparison across service providers.

16. Financial Disincentive for False Reporting

The draft provides that a mismatch exceeding 1% of the prescribed benchmark between reported and TRAI-calculated/audited performance may be treated as false reporting.

Spectra's Comments

Spectra fully support accurate and transparent reporting.

However, the proposed 1% threshold should not result in genuine data-reconciliation differences being treated in the same manner as deliberate or material misreporting.

Differences can arise due to differences in data extraction timing, system processing, rounding, subsequent data corrections or reconciliation of large datasets.

Spectra's Recommendation

Spectra requests TRAI to introduce a materiality threshold and reconciliation opportunity before classifying a discrepancy as false reporting.

The service provider should be given an opportunity to explain and reconcile the difference where there is no evidence of intentional misreporting.

This will ensure that the financial-disincentive framework remains focused on material or deliberate reporting failures.

17. Financial Disincentive for Other Regulatory Non-Compliance

The proposed Regulation 16B introduces financial disincentives of up to ₹5 lakh per instance for non-compliance with other provisions, increasing for consecutive contraventions.

Spectra's Comments

Spectra understands the need for effective regulatory compliance.

However, the expression “any other provisions of the regulations” is very broad and may result in similar financial consequences for materially different types of non-compliance.

Spectra's Recommendation

Spectra requests TRAI to adopt a proportionate approach based on:

- materiality of the non-compliance;
- impact on consumers;
- duration of the non-compliance;
- whether the issue was intentional or inadvertent;
- corrective action taken by the service provider; and
- whether the service provider has voluntarily identified and rectified the issue.

TRAI may also consider providing an opportunity for rectification before imposing a financial disincentive for first-time procedural deviations which do not have a material impact on consumers.

18. Modification of QoS Measurement Methodology Through Direction or Order

The draft proposes that details contained in the Schedule may be modified by TRAI through direction or order in view of technological advancement.

Spectra's Comments

Spectra recognize that technology and network architecture continue to evolve and that the QoS framework needs to remain relevant.

However, changes to measurement methodology can have a direct impact on network planning, system development, reporting processes and compliance costs.

Spectra's Recommendation

Spectra requests that any material change to:

- QoS definitions;
- measurement methodology;
- sampling methodology;
- calculation formula;
- reporting requirements; or
- compliance thresholds

should be accompanied by adequate notice and reasonable implementation time.

Where the proposed change has a material impact on compliance or reporting, stakeholder consultation may also be considered.

19. Overall Submission of Spectra

Spectra support TRAI's objective of strengthening the QoS framework and improving customer experience.

At the same time, Spectra believes that QoS regulations should remain outcome-oriented, measurable and technology-neutral, while recognising the practical realities of operating broadband networks.

In particular, Spectra requests TRAI to consider the following principles while finalising the amendments:

1. Measure actual network performance through objective and technically reproducible methods.
2. Clearly distinguish network-related issues from customer premises, CPE, Wi-Fi and other factors outside the service provider's network.
3. Provide clearly defined exclusions and pause conditions wherever the service provider cannot reasonably control the time taken for resolution.
4. Avoid treating isolated or statistically insignificant deviations as overall service non-compliance.
5. Provide a practical methodology for identifying customers affected by SNOs and speed degradation.
6. Ensure that customer compensation is linked to customers actually affected by the qualifying service disruption wherever such identification is technically feasible.

7. Introduce reasonable tolerance/materiality thresholds for parameters carrying a 100% benchmark, particularly where small sample sizes or exceptional cases are involved.
8. Provide adequate implementation time for changes requiring system development, data integration or significant operational changes.
9. Ensure that financial disincentives remain proportionate to the nature and impact of the non-compliance.
10. Adopt standardised measurement and reporting methodologies across service providers to ensure fair comparison and consistent regulatory interpretation.

Spectra remain committed to working constructively with TRAI in further strengthening the QoS framework and ensuring that the regulatory framework continues to support reliable, transparent and customer-centric broadband services.