

Consultation Paper No. 04 /2014



Telecom Regulatory Authority of India



Consultation Paper

on

**'Review of the Standards of Quality of Service of
Basic Telephone Services (Wireline) and Cellular
Mobile Telephone Services'**

21st May, 2014

Mahanagar Doorsanchar Bhavan,
Jawahar Lal Nehru Marg, (Old Minto Road),
New Delhi – 110002, India

Stakeholders are requested to send their comments, preferably in electronic form, by 12th June, 2014 and counter comments by 19th June, 2014 on email Id advqos@traigov.in. For any clarification /information, Shri A. Robert J. Ravi, Advisor (CA&QoS) may be contacted at Tel. No. +91-11-23230404, Fax: +91-11-23213036.

CHAPTER-I

1. Background

1.1 The TRAI ACT, 1997 (as amended in 2000) provides for establishment of the Telecom Regulatory Authority of India ("TRAI") and the Telecom Disputes Settlement and Appellate Tribunal ("TDSAT") to regulate telecommunication services, adjudicate disputes, dispose of appeals and to protect the interests of service providers and consumers of the telecom sector and to promote and ensure orderly growth of the telecom sector. The Telecom Regulatory Authority of India Act, 1997 (24 of 1997), section 11, sub-clause (v) of clause (b) of sub-section (1) mandates the Authority to lay down the standards of quality of service to be provided by the service providers and ensure the quality of service, apart from conduct of periodical survey of such service provided by the service providers to protect interest of the consumers of telecommunication services. In the discharge of these functions and in order to

- (i) create conditions for customer satisfaction by making known the quality of service which the service provider is required to provide and the user has a right to expect;
- (ii) measure the quality of service provided by the Service Providers from time to time and to compare them with the laid down benchmarks so as to assess the level of performance; and
- (iii) to generally protect the interests of consumers of telecommunication services,

the Authority, in exercise of its functions under the above provisions in the TRAI Act, had notified the "Regulation on Quality of Services (QoS) of Basic and Cellular Mobile Telephone Services, 2000" vide Notification dated 5th of July, 2000. The QoS standards in the above regulation were reviewed in 2005, keeping in view the performance of service providers against the QoS standards, the international standards on QoS and utility of the laid down QoS parameters. These regulations

were further reviewed in 2008-09 and the Authority, after undertaking extensive consultation process, notified "The Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009" on 20th March 2009.

1.2 These regulations were further amended by "The Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service (Amendment) Regulations, 2012" on 7th May 2012 to address the Quality of Service requirements for 3G mobile services. The various Quality of Service parameters and benchmarks prescribed in the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009, as amended by the Amendment Regulations dated 7th May, 2012, are enclosed at **Annexure-A**.

1.3 The Authority, through the second amendment to these regulations issued on 8th November, 2012 has prescribed the following financial disincentives to be imposed on TSPs:

(a) Basic Telephone Service (wireline):

S.No.	Item	Amount
1	Non-compliance with the benchmarks	Not exceeding Rs.50,000 per parameter
2	False reporting of compliance with the benchmarks	Not exceeding Rs.10 lakh per parameter
3	For failure to submit compliance report	Not exceeding Rs.5,000 for every day during which the default continues

(b) Cellular Mobile Telephone Service:

S.No.	Item	Amount
1	Non-compliance with the network related benchmarks	(i) Not exceeding Rs.50,000 per parameter

		(ii) second or subsequent such contravention, to pay an amount not exceeding rupees one lakh per parameter for each contravention
2	Non-compliance with the customer related benchmarks	Not exceeding Rs.50,000 per parameter
3	False reporting of compliance with the benchmarks	Not exceeding Rs.10 lakh per parameter
4	For failure to submit compliance report	Not exceeding Rs.5,000 for every day during which the default continues

1.4 TRAI has been monitoring the performance of service providers against the benchmarks for the various Quality of Service parameters reported by service providers through submission of compliance report and has been imposing financial disincentives on TSPs, wherever there has been failure to comply with the benchmarks by various TSPs. A detailed table showing parameter-wise performance in terms of number of licensees not meeting the benchmarks during the last three Quarters for basic telephone service providers and customer related parameters for Cellular Mobile Telephone Service is given below:

A. Basic Service (wireline):

S.NO	PARAMETERS	BENCHMARK	NO. OF LICENSEES NOT MEETING THE BENCHMARK		
			Mar-13	Jun-13	Sep-13
			Out of 103	Out of 111	Out of 111
Network Parameter					
1	Fault Repair				
i.	Fault incidences per 100 subs/month	≤5	10	12	11
ii.	% of faults repaired by next working day	By next working day: ≥ 90%	13	15	13
iii.	% of faults repaired within 3 days	For urban areas: 100%	19	20	20

iv.	% of faults repaired within 5 days	For rural and hilly areas: 100%	15	15	14
2	Mean Time to Repair (MTTR)	≤ 8 Hrs	8	10	12
3	Call Completion Rate (CCR)	≥ 55%	1	0	0
4	Answer to Seizure Ratio	≥ 75 %	0	0	0
5	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)	≤ 0.5%	0	0	0
Customer related Parameter					
6	Metering and Billing credibility - post paid	≤ 0.1%	4	2	1
7	Metering and billing credibility - pre paid	≤ 0.1%	2	0	0
8	Resolution of billing/charging/validity complaints	100% within 4 weeks	1	2	1
9	Period of applying credit/waiver/adjustment to customer's account from the date of resolution of complaints	one week of resolution of complaint	0	0	0
10	Response time to the customer for assistance				
i.	Accessibility of call centre/ customer care	≥ 95%	1	6	1
ii.	Percentage of calls answered by the operators (voice to voice) within 60 seconds	≥ 90%	0	24	18
11	Termination / closure of service				
i.	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	16	9	5
ii.	Time taken for refund of deposit of closures	100% within 60 days	1	1	0

B. Cellular Mobile Telephone Service:

S. NO	PARAMETERS	BENCHMARK	NO. OF LICENSEES NOT MEETING THE BENCHMARKS		
			March, 2013	June, 2013	Sept, 2013
			Out Of 218	Out Of 187	Out Of 183
Customer related Parameters					
1	Metering and Billing credibility - post paid	≤ 0.1%	7	13	6
2	Metering and billing credibility - pre paid	≤ 0.1%	5	9	4
3	Resolution of billing/charging/validity complaints	100% within 4 weeks	10	6	2
4	Period of applying credit/waiver/adjustment to customer's account from the date of resolution of complaints	within one week of resolution of complaint	1	3	3
5	Response time to the customer for assistance				
(i)	Accessibility of call centre/ customer care	≥ 95%	9	6	4
(ii)	%age of calls answered by the operators (voice to voice) within 60 seconds	≥ 90%	66	63	60
6	Termination / closure of service				
(i)	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	9	6	7
(ii)	Time taken for refund of deposits after closures	100% within 60 days	6	7	3

1.5 From the monitoring of performance of basic TSPs, TRAI has observed that compliance with the benchmarks for the parameters relating to fault incidences, fault repair and response time to the customer for assistance have been a problem area for these operators, especially the state owned service providers, M/s BSNL and M/s MTNL who provide about 80% of the wireline connections. TRAI has been pursuing with these TSPs to improve their performances and has also been imposing financial disincentives wherever non-compliance with the benchmarks is observed. In this regard, they have been representing to TRAI that though they have always tried to meet the benchmarks as laid down by the Authority for QoS, but, in certain cases, there are practical difficulties in achieving the prescribed benchmarks. Accordingly, they have requested the Authority to revise the benchmarks for some of the QoS parameters. Some of the practical difficulties mentioned by these TSPs are:

- (a) The services- both Basic and Broadband telecom services- are mostly provided through underground/Duct, Paper core /Jelly filled cables. Underground cables are damaged during the period development works are undertaken by various civic agencies and restoration of the same takes considerable time.
- (b) In a number of places, underground and duct cables are stolen and there is a delay in subsequent restoration because of the delay in getting permissions for digging from local civic authorities. In some areas, during monsoon season, permission for digging the roads has been barred.
- (c) Many of the cables are very old and there are multiple joints resulting in low insulation that results in deterioration of service. In the coastal regions, the underground cables get corroded, resulting in sudden cable faults. Replacement of such cables involves time and money.

(d) The PSUs, being government entities, have to procure material through tenders and because of procedural delays, material is not supplied in time and this further affects the QoS.

(e) Delay also happens because of frequent 'bandhs', landslides and of law & order issues, especially in hilly and insurgency prone areas.

1.6 A meeting of all Basic Telephone Service (wireline) providers and Cellular Mobile Telecom Service providers was called on 04.02.2014 to discuss the matter. The matter was discussed at length and the concerns of TSPs were noted. The TSPs were asked to provide additional comments, if any, in writing. M/s Tata, M/s BSNL and M/s MTNL vide letters dated 6th February 2014 have submitted additional suggestions.

1.7 In these initial consultations, the TSPs have requested the Authority to relax the benchmarks for various QoS parameters. The Authority observed that the benchmarks for some of these parameters are under the control of TSPs and with some extra efforts, the prescribed benchmark can be achieved. However, for some of the parameters, there could be practical and genuine difficulties in achieving the benchmarks.

1.8 However, before taking a final view on the representations of the TSPs, the Authority has decided to seek the views of all the stakeholders on the various constraints/difficulties pointed out by the TSPs in achieving the Quality of Service benchmarks. The various QoS parameters, against which relaxation of benchmarks have been sought by the TSPs are discussed in Chapter-II. All the stakeholders are requested to send the views on the issues raised in the consultation paper.

CHAPTER-II

2 DISCUSSION ON REVIEW OF BENCHMARKS FOR QUALITY OF SERVICE PARAMETERS

A. Benchmarks related to Basic services

2.1 Fault incidences (No. of faults/100 subscribers/ month):

Fault incidences indicate the No. of faults per 100 subscriber per month. This is measured on quarterly basis as below:

$$= \frac{\text{Total number of faults in the Quarter (3 months)} \times 100}{\text{Total No. of DELs at the end of the Quarter} \times 3}$$

The existing benchmark for this parameter is $\leq 5\%$. While some of the TSPs, have developed ingenious ways to achieve these parameters, for reasons stated in chapter-I, and specifically due to large scale developmental activities all over the country, it has become difficult to achieve this parameter for most of the TSPs. Hence, some of the basic TSPs have suggested that the benchmark may be modified to $\leq 8\%$, while others suggested that it should be $\leq 10\%$. It is noticed from the performance monitoring reports of TSPs for quarter ending September 2013, that this benchmark is not met in 10% of the service areas.

Question 1: In your view, does the benchmark for the parameter “Fault incidences (No. of faults/100 subscribers/ month)” for Basic Telephone Service need revision? If so, what should be the benchmark? Please give your comments with justification.

2.2 Fault Repair by next working day:

This parameter is about rectification of faults by the next working day subsequent to its registration. The existing Benchmarks are--

For urban areas: By next working day: $\geq 90\%$ and within 3 days: 100%; and

For rural and hilly areas: By next working day: $\geq 90\%$ and within 5 days: 100%;

During the recent consultations with the TSPs, most of the TSPs have expressed the view that faults booked after 5pm in the evening, can only be marked for fault attending by 10 am next morning. This compounds the delay in attending the fault complaints by next working day. The benchmark should provide for tolerance to accommodate such delays. Also the non-availability of the customers, when the TSPs representative visits their homes, compounds the problem, in addition to those mentioned in the chapter-I. The TSPs have further represented that there could always be certain exceptional cases where the rectification of fault within prescribed time limit is beyond their control; in such scenario the benchmark of 100% could not be achieved. Accordingly, the TSPs have requested to relax the benchmarks as:

For urban areas: By next working day: $\geq 70\%$; within 3 days: 90%; and within 5 days: 100%;

For rural and hilly areas: By next working day: $\geq 70\%$; within 3 days: 80%; within 5 days: 90%; and within 7 days: 100%.

Question 2: In your view, does the benchmark for parameter “Fault Repair by next working day” for Basic Telephone Service need revision? If so, what should be the benchmark for faults repaired by next working day and by 3, 5 or 7 days? Please give your comments with justification.

2.3 Mean Time to Repair (MTTR):

This parameter indicates the average time taken to repair a fault within a quarter. This is measured as

$$\text{MTTR} = \frac{\text{sum of duration of each repair time in hours for all the fault incidences in a Quarter (3 months)}}{\text{Total number of fault incidences in a Quarter (3 months)}}$$

The existing benchmark is ≤ 8 Hrs. For reasons stated in chapter-I, and specifically due to abnormal delay in getting permission from local bodies, the TSPs have expressed difficulties in achievement of this parameter. Some of the TSPs have suggested that the benchmark may be relaxed to ≤ 12 Hrs.

Question 3: What are your views on relaxing the benchmark for parameter "Mean Time to Repair (MTTR) to ≤ 12 Hrs" for Basic Telephone Service? Please give your comments with justification.

2.4 (a) Call Completion Rate within a local network or, (b) Answer to Seizure Ratio (ASR):

(a) Call Completion Rate (CCR) is defined as the ratio of the number of successful calls to the number of call attempts. Not all call attempts result in successful calls i.e. called party answers. Calls will not be successful, when the called number is busy or during no answer or if the network experiences congestion and also because of subscriber behavior patterns like premature release, wrong dialing etc.

(b) "Answer Seizure Ratio" is generally defined as the ratio of calls answered to the calls processed by the switch.

The existing benchmarks for these parameters are (a) 55% and (b) 75% respectively. Because of the reduction in landline telephones, it is seen that sufficient exchange capacities exists in the TSPs network and there are no technical constraints in meeting these parameters. In the Performance Monitoring Reports of the TSPs also, these parameters are met by all the

TSPs. The Authority is of the view that the performance against these parameters may not be reported to TRAI, but monitored by TSPs.

Question 4: What are your views on removing the parameters for Basic Telephone Service (a) Call Completion Rate within a local network or, (b) Answer to Seizure Ratio (ASR) from reporting of compliance to TRAI? Please give your comments with justification.

B. Benchmarks related to both Basic and cellular services

2.5 Resolution of billing/charging complaints:

The performance against this parameter is measured as per the following formula:

%age of billing complaints (for post-paid customers)/ charging, credit & validity (for pre-paid customers) resolved within 4 weeks =

$$= \frac{\text{number of billing complaints for postpaid customers or charging, credit or validity complaints for prepaid customers resolved within 4 weeks during the quarter} \times 100}{\text{number of billing or charging, credit or validity complaints received during the quarter}}$$

The existing benchmark is 100% within 4 weeks. During deliberations with TSPs, they have represented that even delay of resolution for very few cases because of unforeseen reasons, results in delay in resolution of complaints beyond 4 weeks. Hence they have requested that the benchmark of 100% achievement shall be relaxed to 98% within 4 weeks and 100% within 8 weeks.

Question 5: In your view, does the benchmark for parameter “Resolution of billing/charging complaints” within 4 weeks for Basic Telephone Service and Cellular Mobile Telephone Service need revision? If so, what shall be the benchmark? Please give your comments with justification.

2.6 Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints:

Once the TSP resolves the billing issue, the credit waiver or adjustment to the customer's account should be made within one week of such resolution. The existing benchmark is 100% within 1 week of resolution of complaint. During deliberations with TSPs, they had expressed that due to certain unforeseen reasons; there could be delay in applying credit/waiver/adjustment within one week of resolution of billing complaint in few cases. Hence the TSPs have suggested that the benchmark may be reduced to 95% within 1 week of resolution of complaint and 100% within two weeks of resolution of complaint.

Question 6: In your view, does the benchmark for parameter "Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints" for Basic Telephone Service and Cellular Mobile Telephone Service need revision? If so, what shall be the benchmark? Please give your comments with justification.

2.7 Response time to the customer for assistance, -- Percentage of calls answered by the operators (voice to voice) within 60 seconds:

The performance on response time to the customer for assistance indicates the effectiveness of the complaint centre. There are two parameters that assess the performance of TSPs viz "Accessibility of call centre number (benchmark \geq 95%)" and "Percentage of calls answered by the operators (voice to voice) within 60 seconds (benchmark \geq 90%)".

Some of the TSPs have requested the Authority to reduce the benchmark for the parameter "Percentage of calls answered by the operators (voice to voice) within 60 seconds" to \geq 60%, in line with the benchmarks prescribed under

broadband services for this parameter. While some of the TSPs suggested relaxing the same to $\geq 80\%$. There was also a suggestion to revise the parameter as "Percentage of calls answered by the operators (voice to voice) within 90 seconds" keeping the benchmark of 90% unchanged.

Question 7: In your view, does the benchmark for parameter "Percentage of calls answered by the operators (voice to voice) within 60 seconds" for Basic Telephone Service and Cellular Mobile Telephone Service need revision? If so, what shall be the benchmark? Can the 'Percentage of calls answered by the operators (voice to voice)' be made within 90 seconds instead of 60 seconds? Please give your comments with justification.

2.8 Termination/ closure of service:

This parameter specifies the benchmark for the period within which the connections should be closed when requested by the subscriber. The existing benchmark is ≤ 7 days. This period would normally cover the efforts made by the TSP for retention of the customer and towards recovery of customer premises equipment (CPE). (In case the CPE is the property of the TSP). The TSP shall cease to charge rental or any other charges beyond the period of 7 days from the date of request for closure made by the customer. In all such cases of request for closure/ termination, the request is to be complied within 7 days of such request from the customer. The TSPs have requested to relax the benchmark to 95% within 7 days of registration of demand.

Question 8: Shall the benchmark for parameter "Termination/ closure of service" for Basic Telephone Service and Cellular Mobile Telephone Service be revised? If so, what shall be the revised benchmark? Please give your comments with justification.

CHAPTER-III

3 ISSUES FOR CONSULTATION

Question 1: In your view, does the benchmark for the parameter “Fault incidences (No. of faults/100 subscribers/ month)” for Basic Telephone Service need revision? If so, what should be the benchmark? Please give your comments with justification.

Question 2: In your view, does the benchmark for parameter “Fault Repair by next working day” for Basic Telephone Service need revision? If so, what should be the benchmark for faults repaired by next working day and by 3, 5 or 7 days? Please give your comments with justification.

Question 3: What are your views on relaxing the benchmark for parameter “Mean Time to Repair (MTTR) to ≤ 12 Hrs” for Basic Telephone Service? Please give your comments with justification.

Question 4: What are your views on removing the parameters for Basic Telephone Service (a) Call Completion Rate within a local network or, (b) Answer to Seizure Ratio (ASR) from reporting of compliance to TRAI? Please give your comments with justification.

Question 5: In your view, does the benchmark for parameter “Resolution of billing/charging complaints” for Basic Telephone Service and Cellular Mobile Telephone Service need revision? If so, what shall be the benchmark? Please give your comments with justification.

Question 6: In your view, does the benchmark for parameter “Period of applying credit/ waiver/ adjustment to customer’s account from the date of resolution of complaints” for Basic Telephone Service and Cellular Mobile Telephone Service need revision? If so, what shall be the benchmark? Please give your comments with justification.

Question 7: In your view, does the benchmark for parameter “Percentage of calls answered by the operators (voice to voice) within 60 seconds” for Basic Telephone Service and Cellular Mobile Telephone Service need revision? If so, what shall be the benchmark? Can the ‘Percentage of calls answered by the operators (voice to voice)’be made within 90 seconds instead of 60 seconds? Please give your comments with justification.

Question 8: Shall the benchmark for parameter “Termination/ closure of service” for Basic Telephone Service and Cellular Mobile Telephone Service be revised? If so, what shall be the revised benchmark? Please give your comments with justification.

Basic Service (wireline)

Serial Number	Name of Parameter	Benchmark	Averaged over a period
(i)	Fault incidences (No. of faults/100 subscribers /month)	≤ 5	One Quarter
(ii)	Fault repair by next working day	<p>For urban areas: By next working day: ≥ 90% and within 3 days: 100%.</p> <p>For rural and hilly areas: By next working day: ≥ 90% and within 5 days: 100%.</p> <p>Rent Rebate Faults pending for >3 days and ≤7 days: Rent rebate for 7 days. Faults pending for >7 days and ≤15 days: Rent rebate for 15 days. Faults pending for >15 days: rent rebate for one month.</p>	One Quarter
(iii)	Mean Time To Repair (MTTR)	≤ 8 Hrs	One Quarter
(iv)	(a) Call Completion Rate within a local network shall be better than	≥ 55%	One Quarter
	or,		
	(b) Answer to Seizure Ratio (ASR)	≥ 75 %	One Quarter

(v)	Point of Interconnection (POI) Congestion (on individual POI)	$\leq 0.5\%$	One month
(vi)	Metering and billing credibility – post paid	Not more than 0.1% of bills issued should be disputed over a billing cycle	One Billing Cycle
(vii)	Metering and billing credibility -- pre-paid	Not more than 1 complaint per 1000 customers, i.e., 0.1% complaints for metering, charging, credit, and validity	One Quarter
(viii)	Resolution of billing/ charging complaints	100% within 4 weeks	One Quarter
(ix)	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	One Quarter
(x)	Response Time to the customer for assistance		
	(a) Accessibility of call centre/ customer care	$\geq 95\%$	One Quarter
	(b)Percentage of calls answered by the operators (voice to voice) within 60 seconds	$\geq 90\%$	One Quarter
(xi)	Termination/ closure of service	≤ 7 days	One Quarter
(xii)	Time taken for refund of deposits after closures	100% within 60 days.	One Quarter

Cellular Mobile Telephone Service

Serial Number	Name of Parameter	Benchmark	Averaged over a period
A	Network Service Quality Parameters:		
(i)	Network Availability		
	(a) BTSs and Node Bs Accumulated downtime (not available for service)	$\leq 2\%$	One Month
	(b) Worst affected BTSs and Node Bs due to downtime	$\leq 2\%$	One Month
(ii)	Connection Establishment (Accessibility)		
	(a) Call Set-up Success Rate(within licensee's own network)	$\geq 95\%$	One Month
	(b) SDCCH/ Paging Channel and RRC Congestion	$\leq 1\%$	One Month
	(c) TCH and Circuit Switched RAB Congestion	$\leq 2\%$	One Month
(iii)	Connection Maintenance (Retainability)		
	(a) Call Drop and Circuit Switched Voice DropRate	$\leq 2\%$	One Month
	(b) Worst affected cells having more than 3% TCH drop (call drop) and Circuit Switched Voice Drop rate	$\leq 5\%$ upto 31.03.2011 $\leq 3\%$ From 01.04.2011	One Month

	(c) connections with good voice quality and Circuit Switched Voice Quality	≥ 95%	One Month
(iv)	Point of Interconnection (POI) Congestion (on individual POI)	≤ 0.5%	One Month
B	Customer Service Quality Parameters:		
(v)	Metering and billing credibility – post paid	Not more than 0.1% of bills issued should be disputed over a billing cycle	One Billing Cycle
(vi)	Metering and billing credibility -- pre-paid	Not more than 1 complaint per 1000 customers i.e. 0.1% complaints for metering, charging, credit, and validity	One Quarter
(vii)	(a) Resolution of billing/ charging complaints	100% within 4 weeks	One Quarter
	(b) Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	One Quarter
(viii)	Response Time to the customer for assistance		
	(a) Accessibility of call centre/ customer care	≥ 95%	One Quarter
	(b)Percentage of calls answered by the operators (voice to voice) within 60 seconds	≥ 90%	One Quarter
(ix)	Termination/ closure of service	≤ 7 days	One Quarter
(x)	Time taken for refund of deposits after closures	100% within 60 days	One Quarter