



PUBLIC UTILITIES COMMISSION

Lot 106 New Garden Street, Queenstown, Georgetown

*Regulating utilities for efficient services
and protecting consumers' interests.*

May 16, 2022

Dear Stakeholder

Public Consultation - Telecommunications Quality of Service Standards

The Public Utilities Commission (hereinafter referred to as the Commission) is a statutory body, established under the Public Utilities Commission Act (PUC) of 1990 as an independent, multisectoral regulator for the Electricity, Telecommunications, and Water and Sewerage sectors in Guyana.

On October 5, 2020, the liberalization of the telecommunications sector saw the issuance of Licenses to service providers Guyana Telephone & Telegraph Company Ltd (GTT), U Mobile (Cellular) Inc (Digicel), and E-Networks Inc. This also included the bringing into operation of the Public Utilities Commission Act No. 19 of 2016, the Telecommunications Act No. 18 of 2016 followed by the subsequent official gazetting of the Telecommunications Regulations on the 23rd day of October 2020.

As part of the Commission's mandate and in compliance with the provisions of the Telecommunications Act 2016 and the Telecommunications (Consumer Protection) Regulations 2020, we are required to monitor the quality of service offered by the telecommunications service providers.

Since the month of October, 2021, the Commission has held several preliminary consultations with the Guyana Telephone & Telephone Co. Ltd, a licensed provider of fixed and mobile telecommunications services in Guyana. These consultations, together with a forensic review of all quality of service complaints received and upon receipt of a charge from the Prime Minister (the Honourable Brigadier (ret'd) Mark Anthony Phillips MSS MP) who has oversight for the sector and the Commission, it was determined that there is an urgent need to review the quality of service parameters as contained in Schedules 1 and 2 of the Telecommunications (Consumer Protection) Regulations 2020.

Regulation 8(3) of the Telecommunications (Consumer Protection) Regulations 2020 makes provision for the Commission on its own initiative after consultation with the service providers and consumers to make recommendations to the Minister to add, remove or revise any quality of service standard applicable to any of the offered telecommunications services.

The Commission is cognizant that this consultative exercise would, be incomplete without the solid input from valued stakeholders who may be directly affected by the existing quality of service parameters. As a selected stakeholder, your robust contribution will greatly aid in the creation of improved parameters.

In light of the foregoing, we have compiled the attached Consultative Document, Docket No. CP – 1/2022 for your perusal and consideration. Accordingly, we invite you and/or your agent or representative to provide us with any comments, suggestions, and recommendations as it relates to the reform and revision of the standards using the form supplied an appended to the Consultative Document and marked Appendix B. You may if necessary, provide additional information and guidance in a separate Microsoft word document.

Responses to Consultative Document should be addressed to the Chairman and submitted to the Commission electronically at pucommission@gmail.com or via post to P.O. Box. 1081 no later than May 16, 2022.

The table below highlights the timeframe for this consultative process:

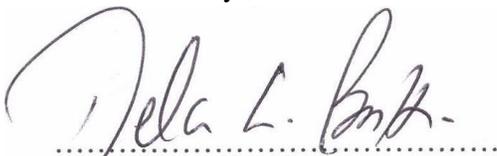
Activity	Dates
Submission of Comments	May 16, 2022 - June 30, 2022
Publication of Comments (www.puc.org.gy)	July 01, 2022 - July 11, 2022
PUC's Review	June 30, 2022 - July 11, 2022
Publication of Recommendations (www.puc.org.gy)	July 19, 2022

Kindly view link to Docket No. CP — 1/2022 — www.puc.org.com

Should you have any queries or concerns kindly email us at pucommission@gmail.com.

With anticipatory thanks.

Yours sincerely


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Dela Britton
Chairman



**A REVIEW OF TELECOMMUNICATIONS QUALITY OF SERVICE
STANDARDS AS SET OUT IN SCHEDULES 1 & 2 OF REGULATION No.
19 OF 2020 - THE TELECOMMUNICATIONS (CONSUMER
PROTECTION) REGULATIONS 2020
A CONSULTATIVE DOCUMENT**

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PART 1: OVERVIEW

1.1 INTRODUCTION

The Public Utilities Commission (hereinafter referred to as the Commission) is a statutory body, established under the Public Utilities Commission Act (PUC) of 1990 as an independent, multisectoral regulator for the Electricity, Telecommunications, and Water and Sewerage sectors in Guyana.

On October 5, 2020, the liberalization of the telecommunications sector saw the issuance of Licenses to service providers Guyana Telephone & Telegraph Company Ltd (GTT), U Mobile (Cellular) Inc (Digicel), and E-Networks Inc. This also included the bringing into operation of the Public Utilities Commission Act No. 19 of 2016, the Telecommunications Act No. 18 of 2016 followed by the official gazetting of the Telecommunications Regulations on the 23rd day of October 2020.

The expectation of liberalization of the telecommunications sector is to provide for an open and competitive environment for telecommunications which may be attractive to new market entrants and investors and will in turn result in greater choice, lower prices, and improved quality of service (hereafter referred to as “QoS”) for consumers.

The Regulations which were promulgated under the Telecommunications Act has expanded the regulatory scope of the Commission, and these are namely:

1. Regulation No. 7 of 2020, Telecommunications (Interconnection and Access) Regulations 2020.
2. Regulation No. 8 of 2020, Telecommunications (Pricing) Regulations 2020.
3. Regulation No. 9 of 2020, Telecommunications (Consumer Protection) Regulations 2020.
4. Regulation No. 10 of 2020, Telecommunications (Competition) Regulations 2020.

As conferred by the PUC Act and other related legislation, the functions of the Commission are regulatory, advisory, investigatory and enforcement. Additionally, the Commission has the power to initiate and conduct investigations into the operations and standards of service of any public utility and telecommunications undertaking under its purview. Further, the Commission is mandated to monitor the QoS offered by the telecommunications service providers in Guyana in accordance with the provisions of the Telecommunications Act of 2016 and the Telecommunications (Consumer Protection) Regulations 2020.

1.2 PURPOSE OF CONSULTATION

The Commission, after conducting a forensic review of the telecommunication QoS standards and in preliminary consultation with the Guyana Telephone & Telegraph Co. Ltd (GTT) has recognized that it may be difficult to attain some of the QoS standards as stipulated in Schedule 1 of the Telecommunications (Consumer Protection) Regulations 2020 as it relates to the residential narrowband (voice) access. This together with direct recommendations from the Honorable Prime Minister, by way of letter dated the 6th day of April, 2022, have resulted in the Commission embarking upon this consultative process.

Further Regulation (8) of the Telecommunications (Consumer Protection) Regulations 2020 makes provision for the Commission to make recommendations to the Minister, who has ministerial oversight for the Commission, to add or remove any QoS parameters after consultation with service providers and affected consumers. This is in keeping with section 23 of the PUC Act No. 19 of 2016 which provides that *“the Commission shall act in an advisory capacity to the Minister in such matters concerning public utilities and telecommunications undertakings as are referred to it by the Minister.”*

By way of the aforementioned letter, the Honorable Prime Minister proposed the following QoS parameters as an addition to the current parameters for QoS:

- i) Availability
- ii) Packet Loss Ratio (Upload and Download)
- iii) Average Throughput for Packet Data
- iv) Latency
- v) Jitter

The aim of this consultation therefore is to (1) review the minimum QoS parameters for the reported and unreported fault clearances of the residential narrowband (voice) access services and (2) to consider new QoS parameters with respect to fixed and mobile public telecommunications services.

1.3 QUALITY OF SERVICE – SERVICE PROVIDER OBLIGATION

The Telecommunications (Consumer Protection) Regulations 2020 is the focal point for the purposes of this consultative document. The intent of these Regulations is to create an environment of improved QoS by providing for the establishment of minimum QoS standards to be met by the service providers and consequential penalties for failure to attain the required QoS. The regulations also set out the principles governing the resolution of consumers’ complaints, the confidentiality of information and the obligations of service providers to its consumers.

The Regulations also mandate that the service providers are required to submit quarterly reports to the Commission detailing their performance and to maintain and produce at the request of the Commission performance logs which generate QoS data as it relates to the telecommunications services offered in keeping with Regulations 13 (1) and 14 (1). The expressed sections read as follow:

Regulation 13 (1):

Beginning no later than ninety days after the effective date of these Regulations, a service provider that provides telecommunications services included in regulation 8(1) and the Schedules or as provided for in regulation 10 shall establish and maintain a performance log in which it shall record –

- (a) quality of service data; and*
- (b) measurements of its provision of each telecommunications service in accordance with-*
 - (i) the criteria and parameters set out in the Schedule relevant to such telecommunications services; or*
 - (ii) the service provider's more stringent standards.*

Regulation 14 (1):

A service provider shall submit to the Commission a written report as to each of the telecommunications services set out in the Schedules that it provides to consumers –

- (a) by April 30, July 31, October 31 and January 31 of each year-*
 - (i) covering its performance during the just-previous quarter; and*
 - (ii) with a copy of the relevant performance logs covering the just-previous quarter; and*
- (b) by January 31 of each year-*
 - (i) covering its performance during the just-previous year; and*
 - (ii) with a copy of the relevant performance logs covering the just-previous year.*

The framers of the regulations inserted a further requirement which is intended to hold service providers accountable and provide added layers of scrutiny by mandating the publication of the performance logs on their websites and in a newspaper of nationwide circulation in Guyana. The Regulations set out in Schedules 1 and 2, (see **Appendix A** to this document) the parameters relating to the fixed and mobile public telecommunications services respectively, which the operators are required to achieve. These QoS standards are measured in duration of days and percentages.

In addition to the penalties which may be imposed upon a defaulting service provider, Regulation 16 of the Telecommunications (Consumer Protection) Regulations 2020 provides that where the Commission finds that the performance as it relates to QoS is not in accordance with the stipulated standards, the Commission has the power on its own initiative or on the filing of a complaint by any consumer or class of consumers to issue an order directing compliance within a prescribed timeframe.

1.4 STAKEHOLDER PARTICIPATION

In an effort to advance the discourse on the issues relating to QoS for fixed and mobile public telecommunications services, the Commission hereby undertakes to engage key stakeholders in this exercise.

The Commission is of the opinion that stakeholders indeed the general public are key actors in the development of any regulatory mandate of the Commission which has an impact on their financial, economic and social development. Further, the Commission is cognizant of the rapid growth of Information Communication Technologies (ICT) and the central role of internet services in a post COVID world.

As such, stakeholder participation is necessary as we seek to promote and foster a collaborative and evidence-based initiative(s) which will engender transparency.

PART 2: REVISIONS TO EXISTING QOS STANDARDS

2.1 RATIONALE

- 2.1.1 After reviewing the existing QoS parameters as set out in Schedule 1 (2) Residential narrowband (voice) access of the Telecommunications (Consumer Protection) Regulations 2020; submissions by the service provider and preliminary consultations; the Commission has determined a number of the existing parameters may not be attainable.
- 2.1.2 Further, the Commission took into consideration the recommendations put forward by the Honorable Prime Minister in which it was expressed that the existing QoS parameters are inadequate as it relates to the technical QoS for the fixed and mobile broadband internet services.
- 2.1.3 The Commission believes that a timely intervention is warranted which can lead to the implementation of revised and new QoS standards in the telecommunications sector.

2.1.4 The following represents the proposed revision of QoS standards to the existing standards as contained in the Telecommunications (Consumer Protection) Regulations 2020.

2.2 SCHEDULE 1 – FIXED PUBLIC TELECOMMUNICATIONS SERVICES

2.2.1 Residential Narrowband (voice) access

The Commission after reviewing the quarterly submissions and considering the concerns raised by GT&T as it relates to the company’s challenges in achieving a number of QoS standards on its narrowband (voice) network, has sought to review and bring these standards to an attainable level. The Commission in its review and deliberations of the proposed parameters below took into account the topography of Guyana, the length of time it will take a service provider to allocate its manpower to rectify the reported faults and at the same time to ensure that consumers continue to receive internationally comparable level of services.

Quality of Services Parameters	Existing Standards		PUC’s Proposed Standards	
	Duration (Hrs.)	Standard (%)	Duration (Hrs.)	Standard (%)
% of unreported faults cleared within	2	80	24	80
% of unreported faults cleared within	6	90	48	90
% of unreported faults cleared within	12	98	96	98
% of unreported faults cleared within	24	100	120	100
% of reported faults cleared within	2	75	24	75
% of reported faults cleared within	6	85	48	85
% of reported faults cleared within	12	98	96	98
% of reported faults cleared within	24	100	120	100
PUC’s Proposed Additional Standards				
Reconnection of service within three hours after payment of overdue amounts.	90%			
Customer Care Accessibility	100%			

2.2.2 Broadband Internet services for residential consumers

Schedule 1 of the Telecommunications (Consumer Protection) Regulations 2020 provides the QoS parameters to measure connectivity, billing, and complaints resolution as it relates to broadband internet services but omits parameters to measure the technical components of the network. It is crucial that the networks are configured to provide a service which will result in an uninterrupted

internet service and as such, the Commission proposes that the following technical parameters be included in Schedule 1 to measure the level of internet services received by consumers.

2.2.3 Fixed Broadband internet services for residential customers

Quality of Services Parameters	PUC's Proposed Standards
Availability	Greater than or equal to 99%
Packet Loss	Less than 2%
Packet Throughput	Greater than or equal to 90%
Latency	Less than or equal to 70 milliseconds
Jitter	Less than or equal to 30 milliseconds
Signal strength	Greater than or equal to -85 decibels
Reconnection of service within three hours after payment of overdue amounts	90%
Customer Care Accessibility	100%
Data Service access time	Less than or equal to 5 seconds

2.2.4 Fixed Wireless Broadband internet services for residential customers

Broadband technology has evolved exponentially and it facilitates both fixed and wireless technologies. The Commission is of the view that it is now prudent to implement QoS parameters to measure and monitor the levels received by users of the fixed wireless network and therefore it has proposed that the following QoS Parameters be included in Schedule 1.

Quality of Services Parameters	PUC's Proposed Standards
Availability	Greater than or equal to 99%
Packet Loss	Less than 2%
Packet Throughput	Greater than or equal to 90%
Latency	Less than or equal to 70 milliseconds
Jitter	Less than or equal to 30 milliseconds
Signal strength	Greater than or equal to -85 decibels
Reconnection of service within three hours after payment of overdue amounts.	90%
Customer Care Accessibility	100%
Data Service Availability	Greater than or equal to 96%
Data Service access time	Less than or equal to 5 seconds
Supply time for initial connection (urban)	6 days
Supply time for initial connection (rural)	20 days
% of technical complaints resolved within 12 hours	85
% of technical complaints resolved within 24 hours	95
% of technical complaints resolved within 36 hours	99

Number of billing errors per 1000 bills	3
% of billing complaints resolved within 2 weeks	90
% of billing complaints resolved within 3 weeks	100

2.3 SCHEDULE 2 – MOBILE PUBLIC TELECOMMUNICATIONS SERVICES

The use of mobile broadband internet services is now prevalent in today’s world and subscribers are reliant on the Over-the-Top (OTT) technologies which accompany mobile services. Schedule 2 of the Telecommunications (Consumer Protection) Regulations 2020 makes provision for call set up, dropped calls, billing complaints *inter alia*, but does not provide for the measurement of the quality of service received by mobile broadband users. The Commission is of the considered opinion that it is now timely to implement such measures. The following are the proposed QoS parameters to be included in Schedule 2.

(1) Mobile Broadband Internet Services

Quality of Services Parameters	PUC’s Proposed Standards
Availability	Greater than or equal to 99%
Packet Loss	Less than 2%
Packet Throughput	Greater than 90%
Latency	Less than or equal to 20 milliseconds
Jitter	Less than 5 milliseconds
Reconnection of service within three hours after payment of overdue amounts.	90%
Customer Care Accessibility	100%
Service Coverage	Greater than or equal to 75 decibel milliwatts (for indoors), Greater than or equal to 85 decibel milliwatts (for inside vehicle), Greater than or equal to 95 decibel milliwatts (for outdoors)
Call connection success rate	Greater than 99%
Data Service access time	Less than or equal to 5 seconds
Data Access success rate	Greater than or equal to 99.9%
Data Service drop rate	Less than or equal to 1%

If you have any comments/suggestions/recommendations on the aforementioned proposed standards, kindly complete Appendix B.

PART 3: DEFINITIONS

“**Availability**” the percentage of the time that the service is available at any time;

“**Average Throughput**” the amount of information or material passed through or delivered in a specific period of time;

“**Broadband Internet Service**” the transmission of bandwidth data over a high-speed internet connection;

“**Call Connection Success Rate**” the fraction of attempts to place a telephone call resulting in a successful connection to the dialed number;

“**Call Set Up**” is the process of establishing a virtual circuit across a telecommunication network;

“**Customer Care Accessibility**” is the service provider ability to ensure all calls for assistance by customers are answered by a customer care personnel within a ten minutes timeframe.

“**Data**” is transmitted in a telecommunications circuit by means of an electrical signal;

“**Fixed Telephone Line**” the landline or fixed line telephone;

“**Jitter**” the variation in time delay between when a signal is transmitted and when it's received over a network connection;

“**Latency**” the amount of time it takes for a packet of data to be captured, transmitted, processed through multiple devices, then received at its destination and decoded;

“**Mobile Voice Service**” the ability to communicate through their mobile devices;

“**Narrowband Voice Access**” signals which occupy a narrow range of frequencies or possess a small fractional bandwidth such as audio;

“**Packet Loss Ratio**” the reliability of a communication network path is expressed by the packet loss rate. This metric is equal to the number of packets not received divided by the total number of packets sent;

“**Reported Fault**” the number of network faults that are reported and recorded;

“Service Coverage” the coverage of a radio station is the geographic area where the station can communicate;

“Signal Strength” the wireless signal power level received by the wireless client;

“Supply Time for Initial Connection” the duration from the instant of a valid service order received by a direct service provider to the instance of a working service made available for use;

“Unreported Fault” the number of unreported faults but which are recorded by the service provider.

APPENDIX A - EXISTING QUALITY OF SERVICE PARAMETERS

SCHEDULE 1

QUALITY OF SERVICE STANDARDS FOR FIXED PUBLIC TELECOMMUNICATIONS SERVICES

(1) Public Payphones

Quality of Services Parameters	Standard
% of coin and card operated public telephones in working order	98

(2) Residential Narrowband (voices) access

Quality of Services Parameters	Standard
Supply time for initial connection (urban)	5 days
Supply time for initial connection (rural)	14 days
% of unreported faults cleared within 2 hours	80
% of unreported faults cleared within 6 hours	90
% of unreported faults cleared within 12 hours	98
% of unreported faults cleared within 24 hours	100
% of reported faults cleared within 2 hours	75
% of reported faults cleared within 6 hours	85
% of reported faults cleared within 12 hours	98
% of reported faults cleared within 24 hours	100
% of calls to operation services answered within 10 seconds	95
% of calls to directory enquiry services answered within 10 seconds	95
Number of billing errors per 1000 bills	3
% of billing complaints resolved within 2 weeks	90
% of billing complaints resolved within 3 weeks	100

(3) Local and National Long Distance Calls for Residential Customers

Quality of Services Parameters	Standard
% of calls set up within 5 seconds	90
% of calls set up within 8 seconds	95
% of calls set up within 10 seconds	100
% of calls successfully completed during peak periods	98

(4) International Long Distance Calls for Residential Customers

Quality of Services Parameters	Standard
% of calls set up within 7 seconds	90
% of calls set up within 10 seconds	95
% of calls successfully completed during peak periods	95

(5) Narrow Band (Dial-Up) Internet Services for Residential Customers

Quality of Services Parameters	Standard
Supply time for initial connection (urban with fixed telephone line)	3 days
Supply time for initial connection (rural with fixed telephone line)	7 days
Supply time for initial connection (urban customer without fixed telephone line)	8 days
Supply time for initial connection (urban customer without fixed telephone line)	17 days
% of technical complaints resolved within 12 hours	80
% of technical complaints resolved within 24 hours	95
% of technical complaints resolved within 36 hours	99
Number of billing errors per 1000 bills	3
% of billing complaints resolved within 2 weeks	90
% of billing complaints resolved within 3 weeks	100

(6) Broadband Internet Services for Residential Customers

Quality of Services Parameters	Standard
Supply time for initial connection (urban)	6 days
Supply time for initial connection (rural)	20 days
% of technical complaints resolved within 12 hours	85
% of technical complaints resolved within 24 hours	95
% of technical complaints resolved within 36 hours	99
Number of billing errors per 1000 bills	3
% of billing complaints resolved within 2 weeks	90
% of billing complaints resolved within 3 weeks	100

SCHEDULE 2

QUALITY OF SERVICE STANDARDS FOR MOBILE PUBLIC TELECOMMUNICATIONS SERVICES

(1) Voice Services

Quality of Services Parameters	Standard
% of calls set up within 5 seconds	90
% of calls set up within 8 seconds	95
% of calls successfully completed during peak periods	95
% of dropped calls per 100 calls	2
% of calls to operator services answered within 10 seconds	95
% of calls to directory enquiry services answered within 10 seconds	95
Number of billing errors per 1000 bills	3
% of billing complaints resolved within 2 weeks	90
% of billing complaints resolved within 3 weeks	100

APPENDIX B
TELECOMMUNICATIONS QUALITY OF SERVICE STANDARDS
STAKEHOLDER RESPONSE DOCUMENT

Kindly use this form to complete all submissions.

Please utilize Times New Roman or Calibri font, font sized 12 with 1.5 line spacing.

To request a hard copy of the consultative document, kindly visit any of our offices at:

1. 106 New Garden Street, Queenstown, Georgetown; Telephone number 227-3534
2. Lot AV, Free Yard, Port Mourant, Corentyne, Berbice; Telephone number 336-6077
3. 97-98 Republic Avenue, McKenzie Linden; Telephone number 444-2045/444-2046
4. Lot 7E Henrietta Village, Essequibo Coast; Telephone number 624-6000

Alternatively, email us at pucommission@gmail.com or call 227-3534. You may WhatsApp us for further information at +592 623-3222.

The deadline for submissions is the 30th of June 2022.

All responses received on/by that date will be subject to the Commission's review.

B (1): PROPOSED QUALITY OF SERVICE STANDARDS TO BE INCLUDED IN SCHEDULE 1 (FIXED PUBLIC TELECOMMUNICATIONS SERVICES)

1.1 Schedule 1 (2) Residential narrowband (voice) access

Quality of Service Parameters	Existing Standards		PUC's Proposed Revision of Standards		Stakeholder Suggested Standards	Comments
	Duration (Hrs.)	Standard (%)	Duration (Hrs.)	Standard (%)		
% of unreported faults cleared within	2	80	24	80		
% of unreported faults cleared within	6	90	48	90		
% of unreported faults cleared within	12	98	96	98		
% of unreported faults cleared within	24	100	120	100		
% of reported faults cleared within	2	75	24	75		
% of reported faults cleared within	6	85	48	85		
% of reported faults cleared within	12	98	96	98		
% of reported faults cleared within	24	100	120	100		
Proposed Additional Standards					Stakeholder Suggested Standards	Comments
Reconnection of service within three hours after payment of overdue amounts.			90%			
Customer Care Accessibility			100%			

1.2 Schedule 1 (6) Broadband Internet services for residential customers

Quality of Service Parameters	PUC’s Proposed Standards	Stakeholder Suggested Standards	Comments
Availability	Greater than or equal to 99%		
Packet Loss	Less than 2%		
Packet Throughput	Greater than or equal to 90%		
Latency	Less than or equal to 70 milliseconds		
Jitter	Less than or equal to 30 milliseconds		
Signal strength	Greater than or equal to -85 decibels		
Reconnection of service within three hours after payment of overdue amounts.	90%		
Customer Care Accessibility	100%		
Data Service access time	Less than or equal to 5 seconds		

1.4 Schedule 1 (7) Fixed Wireless Broadband Internet services for residential customers

Quality of Service Parameters	PUC's Proposed Standards	Stakeholder Suggested Standards	Comments
Availability	Greater than or equal to 99%		
Packet Loss	Less than 2%		
Packet Throughput	Greater than or equal to 90%		
Latency	Less than or equal to 70 milliseconds		
Jitter	Less than or equal to 30 milliseconds		
Signal strength	Greater than or equal to -85 decibels		
Reconnection of service within three hours after payment of overdue amounts	90%		
Customer Care Accessibility	100%		
Data Service Availability	Greater than or equal to 96%		
Data Service access time	Less than or equal to 5 seconds		
Supply time for initial connection (urban)	6 days		
Supply time for initial connection (rural)	20 days		
% of technical complaints resolved within 12 hours	85		
% of technical complaints resolved within 24 hours	95		
% of technical complaints resolved within 36 hours	99		
Number of billing errors per 1000 bills	3		
% of billing complaints resolved within 2 weeks	90		
% of billing complaints resolved within 3 weeks	100		

B2: PROPOSED QUALITY OF SERVICE STANDARDS TO BE INCLUDED IN SCHEDULE 2 (MOBILE PUBLIC TELECOMMUNICATIONS SERVICES)

2.1 Schedule 2 (2) Mobile Broadband Internet Services

Quality of Service Parameters	PUC's Proposed Standards	Stakeholder Suggested Standards	Comments
Availability	Greater than or equal to 99%		
Packet Loss	Less than 2%		
Packet Throughput	Greater than 90%		
Latency	Less than or equal to 20 milliseconds		
Jitter	Less than 5 milliseconds		
Reconnection of service within three hours after payment of overdue amounts.	90%		
Customer Care Accessibility	100%		
Service Coverage	Greater than or equal to 75 decibel milliwatts (for indoors), Greater than or equal to 85 decibel milliwatts (for inside vehicle), Greater than or equal to 95 decibel milliwatts (for outdoors)		
Call connection success rate	Greater than 99%		
Data Service access time	Less than or equal to 5 seconds		
Data Access success rate	Greater than or equal to 99.9%		
Data Service drop rate	Less than or equal to 1%		

Additional information/comments may be added as a separate word document.

OPTIONAL

PUC thanks you for your participation and we look forward to further engaging with you in this exercise or other similar initiatives.

You may provide us with the required information herein for our records. This information is optional.

Title: Please tick the appropriate Mr. Ms. Mrs. Miss Dr.

Surname

Forename(s)

Age

Name of Organisation

Designation/Qualification(s)

Postal address

Email addresses

(1)
(2)
(3)

Date