



**PUBLIC UTILITIES  
COMMISSION  
BELIZE**

**CONSULTATIVE PAPER**

PROPOSED ALLOTMENT PLAN FOR  
SPECTRUM IN THE 3300 – 3800 MHz  
BAND

Issue Date: February 02, 2023

## Consultation Procedure

The PUC invites and welcomes written submissions and comments from interested parties in the subject matter for this Consultative Paper.

### Submission of Comments

The written submissions and comments should be submitted to the PUC before 4:30 PM, Friday, March 03, 2023, either:

- by hand to: Public Utilities Commission, 2<sup>nd</sup> Floor Marina Towers, Princess Margaret Drive, Belize City, Belize. **Re: *Proposed Allotment Plan for Spectrum in the 3300 – 3800 MHz Band***;
- by email to: [telecom@puc.bz](mailto:telecom@puc.bz);
- by mail to: P.O. Box 300, Belize City, Belize.

### Confidentiality

The PUC intends to publish the responses to this Consultative Paper on its website. If a commenting party's response contains any information that is confidential in nature, a clearly marked "Public Version," redacted to delete the confidential information, should be provided together with a complete version that is clearly marked as the "Confidential Version."

The "Confidential Version" should highlight the information that has been redacted. The PUC requires for the respondent to provide an explanation justifying the needs to submit a response in confidential basis. The PUC has the sole discretion to determine whether to publish any submission marked as confidential.

Redactions should be strictly limited to "confidential information," meaning a trade secret, information whose commercial value would be diminished or destroyed by public disclosure, information whose disclosure would have an adverse effect on the commercial interests of the commenting party, or information that is legally subject to confidential treatment.

# Consultative Paper – Proposed Allotment Plan for Spectrum in the 3300 – 3800 MHz Band

## 1. INTRODUCTION

It is anticipated that the mobile industry in Belize will embark on the fifth generation (5G) technology, which builds on the achievements of 4G while also creating new opportunities for innovation. 5G will usher in a new era that sees connectivity become increasingly fluid and flexible.

Operators will use a combination of different spectrum bands to deliver 5G services, and it will play a critical role in determining the speed and range of coverage. The combination of spectrum bands will span across Low Bands [ $< 1$  GHz], Mid Bands [1 GHz – 6 GHz], and High Bands [24 GHz – 40 GHz].

5G networks are intended to support faster mobile broadband speeds and lower latencies making new applications possible such as on-demand video. However, 5G will require wireless operators to have access to large amounts of spectrum to make these new services a reality.

The GSMA, a global trade organization that represents mobile operators, recommends that regulators and government agencies that control 5G spectrum allocation make 80-100 MHz of contiguous spectrum available per operator in prime Mid Band, and about 1 GHz of spectrum per operator available in millimeter wave bands.

This consultative paper focuses on the proposed allotment plan for Mid Band 5G spectrum in Belize.

## 2. BACKGROUND

### 2.1. Legislative Framework

The PUC, by virtue of the Belize Telecommunications Act, Chapter 229, Rev Edition 2020, is mandated to manage and administer the use of the radio frequency spectrum and also to regulate the use of new or convergent technologies as they arise.

### 2.2. Proposed Mid Band Range

Due to its propagation characteristics and the potential for large contiguous bandwidths, the 3.5 GHz [3.3 GHz – 3.8 GHz] band is an ideal frequency band for 5G

as it is able to provide both capacity (the amount of data traffic it can support) and coverage (the distance the radio signals travel). As such, the 3.5 GHz band is considered a core spectrum band for 5G deployment. Many national regulators globally have either assigned this spectrum for mobile or have started preparations to do so. This is also accompanied by a rapidly growing ecosystem of devices, setting the stage for successful rollouts.

The 3GPP provides the following definition:

NR Operating Band	Uplink (UL) operating band BS receive / UE transmit $F_{UL\_low} - F_{UL\_high}$	Uplink (UL) operating band BS transmit / UE receive $F_{DL\_low} - F_{DL\_high}$	Duplex Mode
n78	3300 MHz – 3800 MHz	3300 MHz – 3800 MHz	TDD

The PUC proposed to adopt band n78 for the deployment of 5G services in Belize.

*Requested responses for entries in Section 2.2*

*Q1 (a) – do you agree with the proposed frequency range for the deployment of 5G services in the Mid Band range?*

*Q1 (b) – are there any additional or alternate ranges that should be considered for the deployment of 5G services in the Mid Band range?*

### 2.3. Supported Channel Sizes and Proposed Allotment

3GPP Band n78 can support the following channel bandwidths:

SUPPORTED UE CHANNEL BANDWIDTH (MHz)												
NR Band n78	10	15	20	25	30	40	50	60	70	80	90	100

Thus, the PUC proposed to adopt the following allotment plan for Band n78:

3300	<-Start Range																->	3400	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3400	<-																->	3500	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3500	<-																->	3600	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3600	<-																->	3700	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3700	<-																End Range ->	3800	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

The frequency arrangement is a TDD arrangement, based on a block size of 5 MHz starting at the lower edge of 3300 MHz.

*Requested responses for entries in Section 2.3*

*Q2 (a) - are you in agreement with the 5 MHz allotment plan for Band n78?*

*Q3 (b) – are there any additional or alternate allotment plans that the PUC should take into consideration?*

### 3. CONCLUSION

This consultative document sets out in brief the proposed allotment plan for Band n78 for the deployment of 5G services.

The views of interested parties are hereby invited.