



The Bahamas Telecommunications Company Limited

Response to:

**Consultation on:
Roadmap to enable 5G deployment in The
Bahamas**

**Consultation Document
ECS 73/2024
Issued: 22 August 2024**

Submitted to:

Utilities Regulation & Competition Authority (URCA)

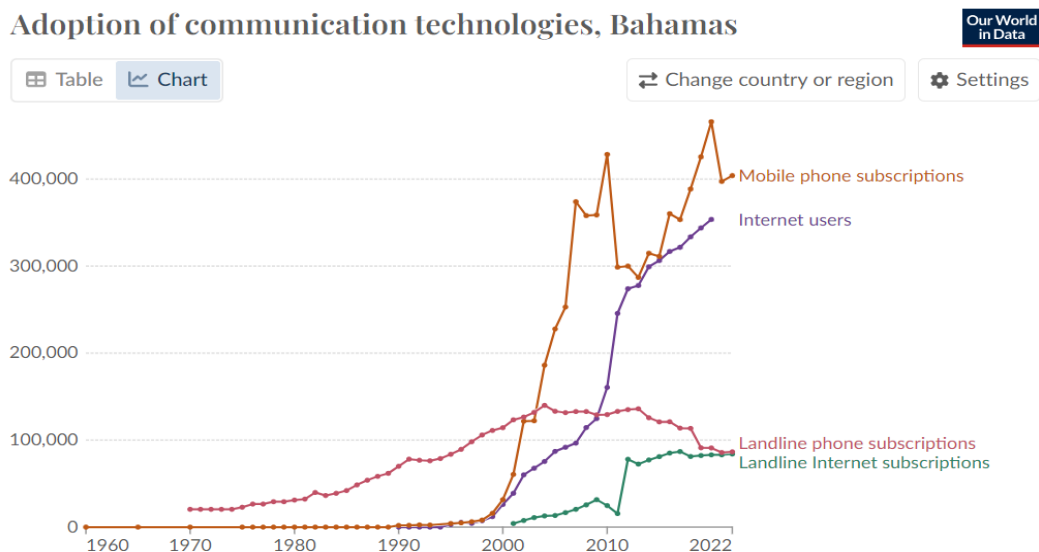
Legal and Government Affairs,
November 6, 2024

Introduction

The Bahamas Telecommunication Company (BTC) welcomes the opportunity to participate in the Utilities Regulation and Competition Authority (URCA) consultation, “Roadmap to enable 5G deployment in The Bahamas”. In what follows, BTC outlines its views, concerns and ultimately its requirements for 5G deployment in The Bahamas.

General Comments

BTC was the first mobile provider in The Bahamas offering 1G voice service in the latter half of the 1980s. Mobile data services entered the national conversation in the early 2000s with BTC’s introduction of GSM/GPRS. Since then, BTC has implemented a nationwide Long-Term Evolution (LTE) advanced mobile network that provides voice, data and SMS services in every major island and cay in the commonwealth. LTE or 4G as it is called was deployed by BTC in 2014. In BTC's view, 5G will be as transformative for the Bahamian society as was previous mobile technologies. BTC is cognizant of the importance of 5G for national economic development and notes the well-chronicled relationship between mobile usage and internet users as evidenced in the chart below¹.



Notwithstanding that 5G networks have been deployed in hundreds of countries around the world, cost is still a determining factor that must be considered in the overall assessment of a deployment strategy, especially in a country such as The Bahamas which is archipelagic and in the hurricane zone of the North Atlantic. Support structures and ancillary

¹ <https://ourworldindata.org/internet>

technologies required for 5G deployment must also be accounted for in the overall cost strategies especially in Small Island Developing States (SIDS) ².

BTC notes URCA's recognition that 5G is a non-trivial investment and commends the advocate mindset of the regulator in lobbying Government for greater incentives for Electronic Communication Sector (ECS) providers in the deployment of 5G, however there is still much to do about the cost of spectrum and its availability for mobile network operators (MNO).

Spectrum availability is paramount to the realization of true 5G services without which the promise of the transformative impact of 5G is lost. There is much concern about spectrum which is outlined later in our commentary. BTC looks forward to its concerns being addressed by URCA in a detailed manner and as necessary robust dialog on the matter.

Response to URCA's Questions

URCA Question 1: Do you have any comments on the key features and benefits of 5G technology? If so, please provide a detailed explanation of these observations, including supporting evidence where available.

BTC Response 1: BTC's view is that 5G is a transformative new technology which is designed from the ground up for enhanced mobile broadband. The key features of 5G such as faster speeds, greater capacity and lower latency from a performance aspect which greatly enhances users experience and the improved efficiency and versatility which is a benefit to Mobile Network Operators (MNOs) are only possible with the requisite quantity of spectrum allocation.

It is of paramount importance that spectrum allocations meet specification requirements (see below in Response 5 for BTC requirements) in low and mid-band spectrum blocks so that all technology goals are achievable and realized in the implementation of 5G in The Bahamas.

URCA Question 2: Do you have any other comments on the importance of 5G for The Bahamas? If so, please provide a detailed explanation of these observations, including supporting evidence where available.

BTC Response 2: BTC's view is in alignment with the views of the International Telecommunication Union (ITU) and the United Nations Development Program (UNDP) for SIDS that is 5G is a growth driver for national economic development in areas such as but not limited to transport, healthcare and tourism. While 5G offers promise of national

² <https://www.undp.org/sites/g/files/zskgke326/files/2024-04/undp-small-island-digital-states-how-digital-can-catalyse-sids-development-v2.pdf>

deployment in the future, the technology is best suited for high density areas. BTC is cognizant of the unique challenges that the family islands present and will employ the use of fit for purpose technology such as next generation fixed wireless access (ngFWA), Fiber to the Home (FTTH) and the ongoing 4G investment that will complement our rollout of 5G technology.

The use cases for enterprise customers are limited, however as 5G technology matures BTC expects enterprise solutions will become more evident. This general view is shared with industry stakeholders as communicated in URCA's Consultation Document [ECS 06/2023](#). Similar sentiments are echoed in Price Waterhouse Coopers' Strategy&, which states "...many companies and government entities believe that they can meet their requirements adequately with current technologies, such as 4G, Wi-Fi, fiber, and satellite broadband³."

BTC wishes to underscore its commitment to efficiently realizing these benefits nationally. Notwithstanding the challenges, BTC looks forward to working with URCA to ensure an environment which is conducive to 5G deployment in The Bahamas.

URCA Question 3: Do you have any comments on the likely challenges in deploying 5G in The Bahamas set out above? If so, please provide a detailed explanation of these observations, including supporting evidence where available.

BTC Response 3: BTC agrees with URCA's assessment that 5G is a non-trivial investment for ECS providers. As mentioned in the consultation document, the business case for 5G in The Bahamas is a major challenge given our geography and population distribution.

The recent Bahamas Census 2022 indicates that 75% of The Bahamas' 398,165 population resides in the capital New Providence with approximately 25% of the population on the family islands. The Bahamas' population distribution will require significant low and midband spectrum allocations for 5G deployment to balance the requirements for capacity and coverage that will service urban areas of New Providence, Grand Bahama and Abaco and the rural areas of the family islands. BTC encourages URCA to consider greater allocation of available low and midband spectrum to avoid what other nations have encountered and deemed, "spectrum crunch" a scenario where spectrum demands outstrips spectrum supply, resulting in congested networks. BTC details its recommended spectrum allocation in response to question 5 of the consultation document.

BTC has considered the investment incentives mentioned by URCA, however BTC is concerned about the uncertainty around incentive programs, specifically Communication

³ <https://www.strategyand.pwc.com/m1/en/strategic-foresight/sector-strategies/telecommunications/5g-value/how-telecom-operators-can-unlock-the-5g-value-for-businesses.pdf>

Fee Reduction. BTC's view is that certainty around these incentive programs would assist in the business case for 5G deployment in The Bahamas.

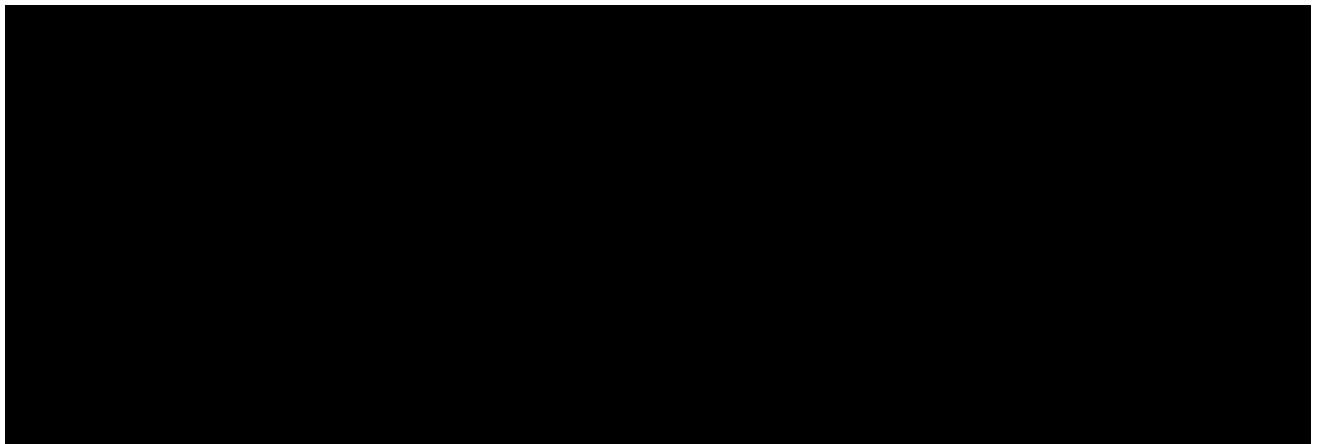
BTC recommends robust and continuing dialog on incentive programs for new technologies and technologies that support 5G deployment such as backhaul, subsea, microwave and terrestrial works required to realize 5G.

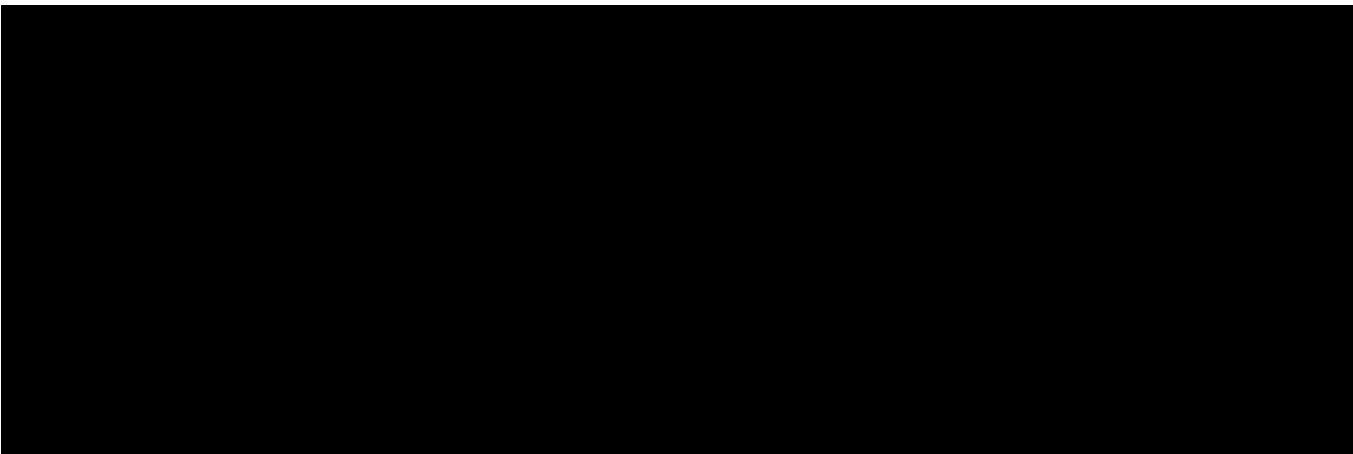
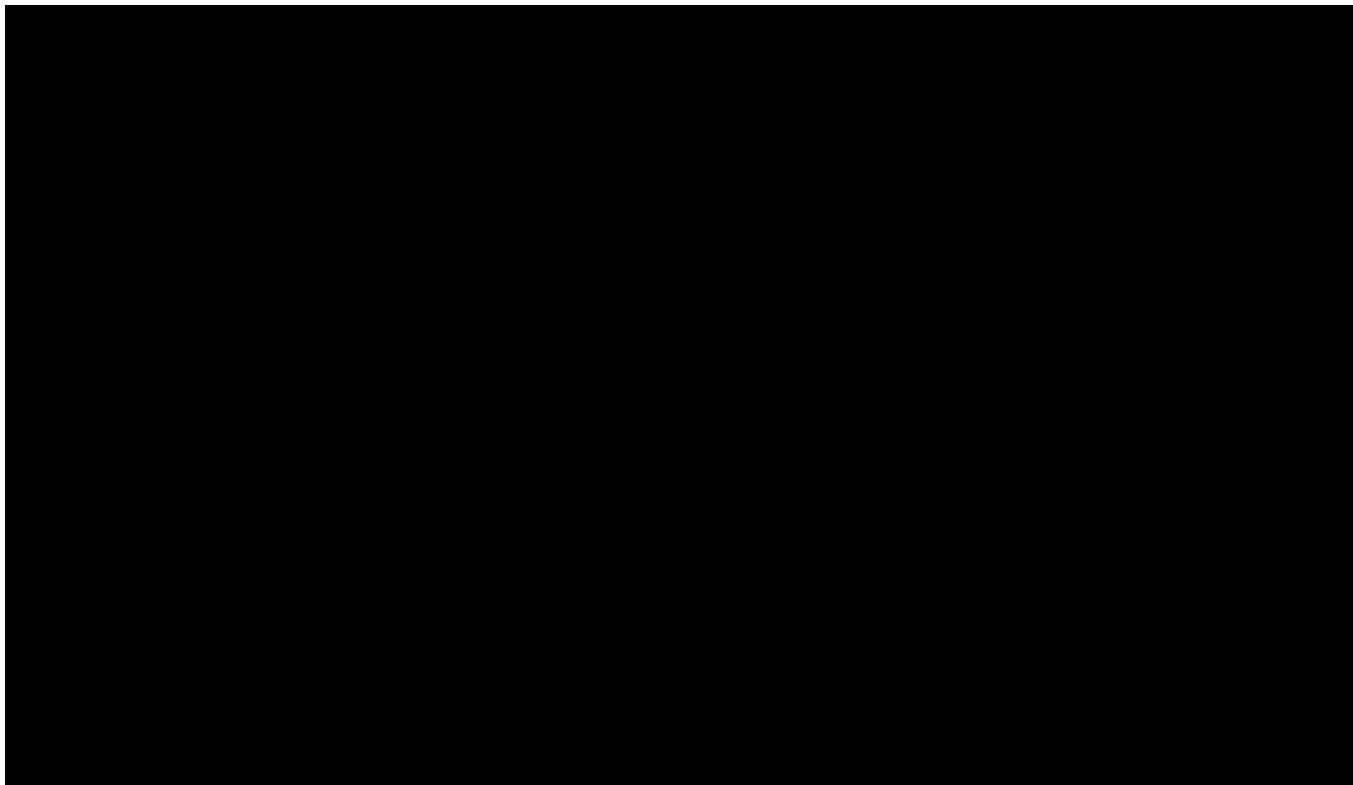
Further BTC is concerned and has expressed its concerns in many fora with URCA about reliability and quality of power from the various licensed power providers in The Bahamas. Notwithstanding this, BTC has continued to make investments in technology and strategies to mitigate loss in these circumstances. However, this expenditure impinges BTC's ability to further enhance and grow our network and perform efficiently and ultimately invest in new technologies.

URCA Question 4: Do you agree with URCA's assessment that low-band and mid-band spectrum is sufficient for an initial deployment of 5G? If not, please provide a detailed explanation why not and the issues/observations, including supporting evidence where available.

Do you see any need of high-band spectrum in the next few years in the Bahamas? If so, what type of use case?

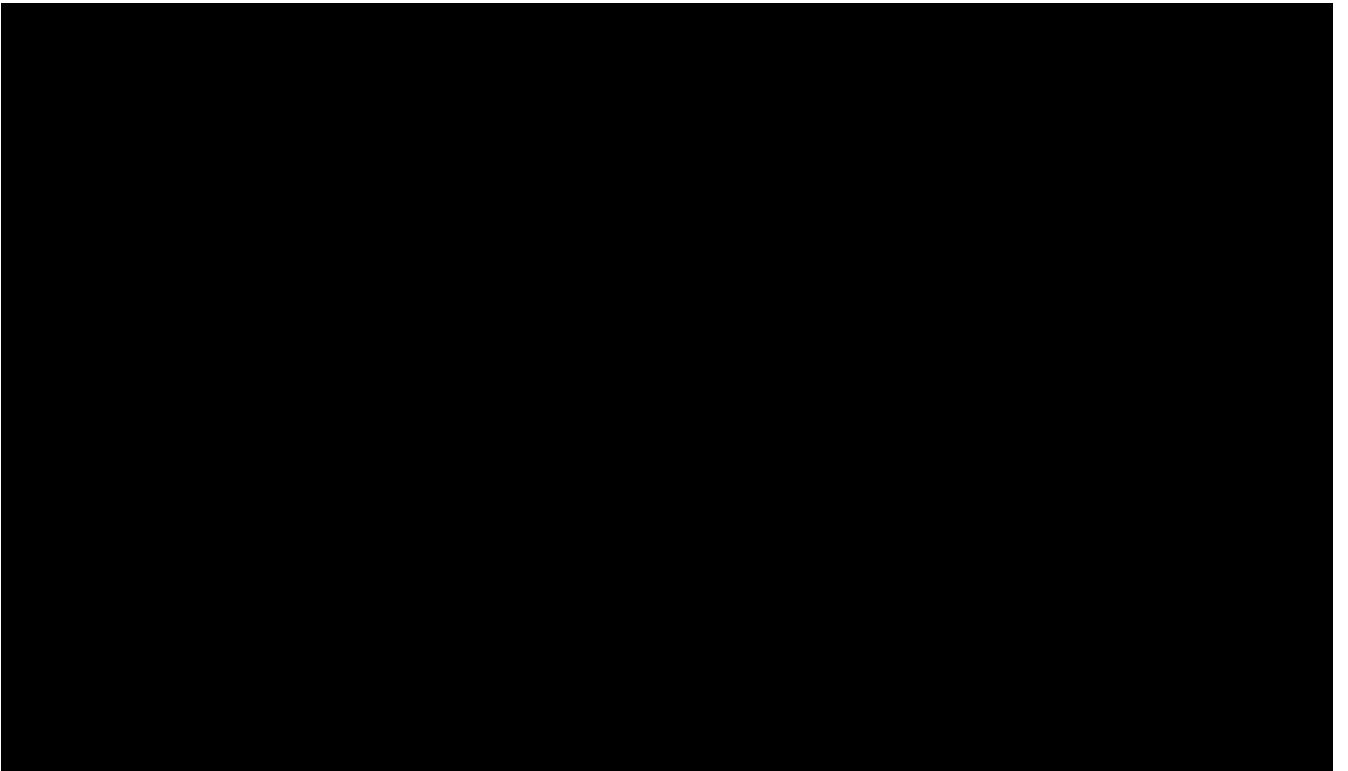
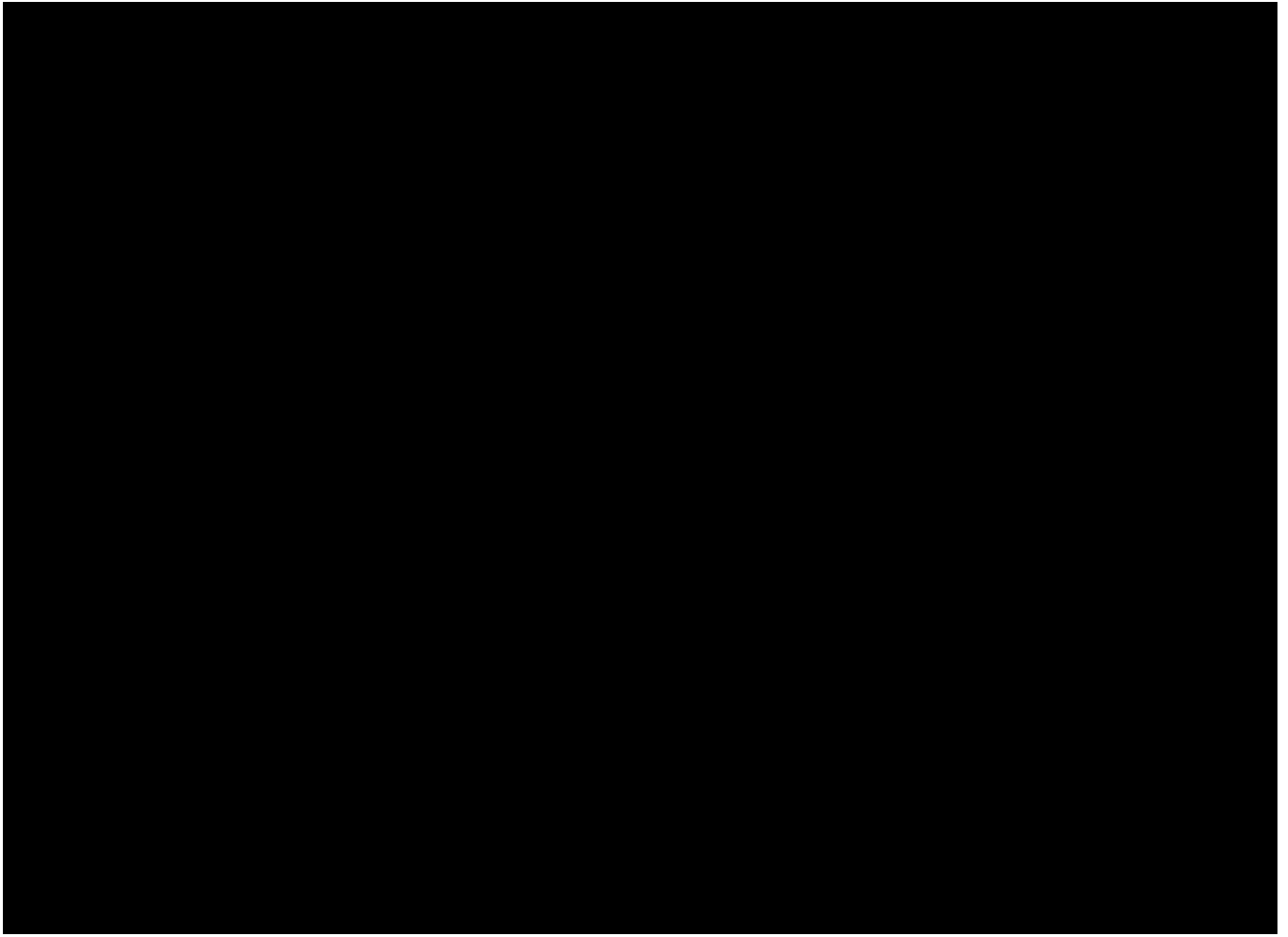
BTC Response 4:

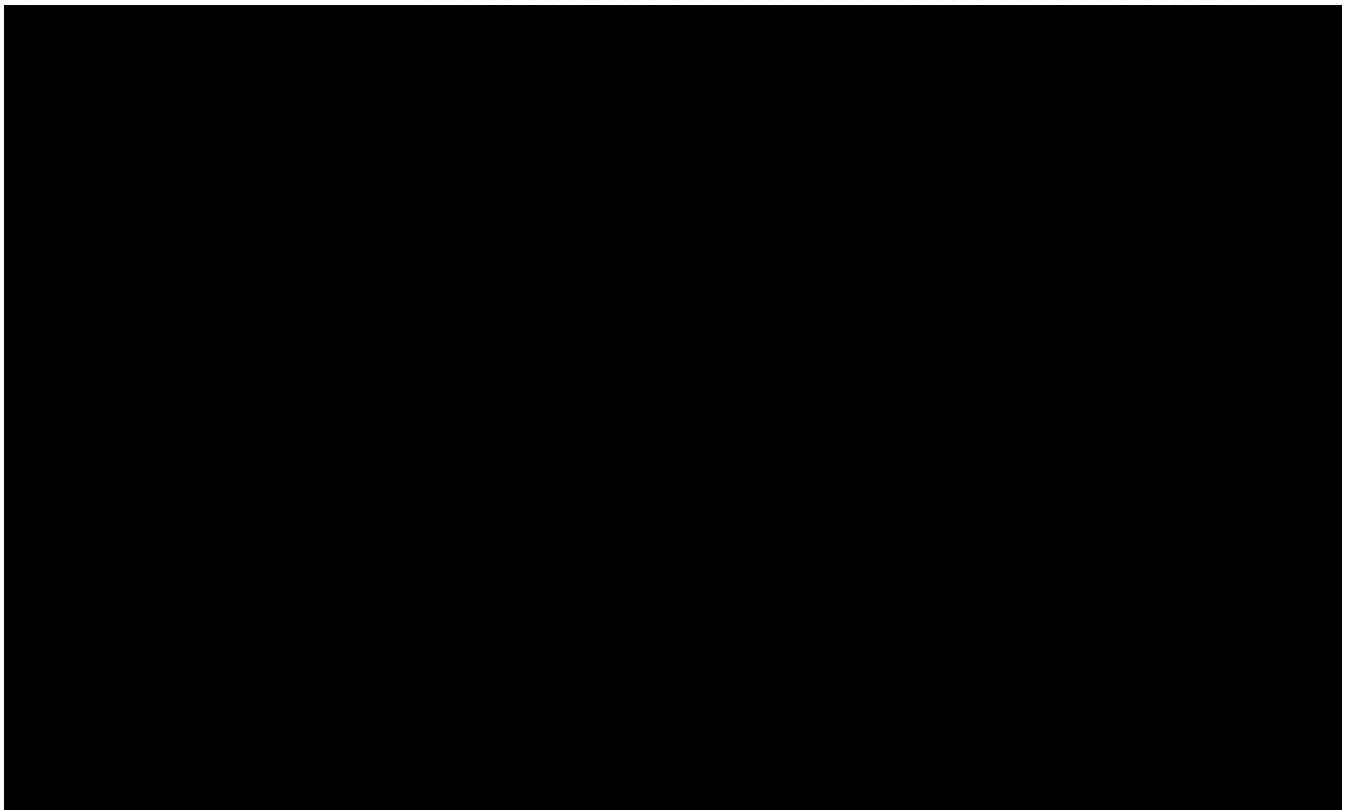
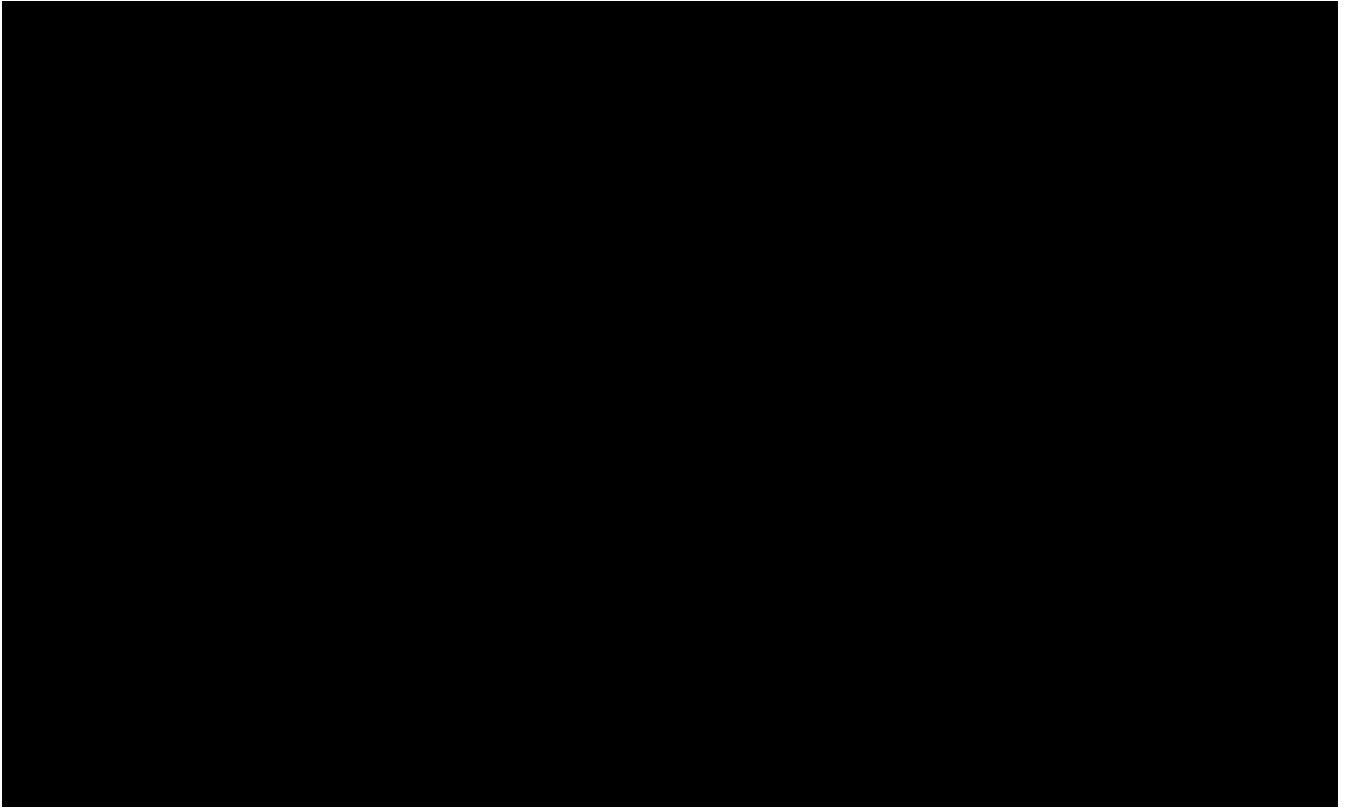




URCA Question 5(a): Do you have any preference for a specific low-band spectrum band and/or mid-band spectrum band to be assigned to you for the initial deployment of 5G and for carrier bandwidth? If so, please provide a detailed explanation of your preference(s) and the issues/observations, including supporting evidence where available.

BTC Response 5(a):





URCA Question 5 (b): Do you have any preference for a specific carrier bandwidth within the low-band spectrum band and/or mid-band spectrum band to be assigned to you for the initial deployment of 5G? If so, please provide a detailed explanation of your preference(s) and the issues/observations, including supporting evidence where available.

BTC RESPONSE 5 (b): [REDACTED]

URCA Question 5 (c): Do you agree with the release of mid-band spectrum in band 77/78 for the initial deployment of 5G? If not, please provide a detailed explanation why not and the issues/observations, including supporting evidence where available.

BTC RESPONSE 5 (c): [REDACTED]

[REDACTED]

URCA Question 5 (d): Do you see merits in refarming spectrum in band 77/78 to free up more of those bands for 5G? If not, please provide a detailed explanation why not and the issues/observations, including supporting evidence, where available.

BTC RESPONSE 5 (d): [REDACTED]

[REDACTED]

URCA Question 6: Do you have any comments on the technical considerations that need to be taken into account when determining the relevant spectrum blocks to be made available for 5G in The Bahamas and limitations of its usage? If so, please provide a detailed explanation of these issues/observations, including supporting evidence where available.

BTC Response 6:

BTC outlined its spectrum requirements in response to question 5 above.

URCA Question 7: Do you have any comments on the proposed spectrum award procedure for 5G spectrum? If so, please provide a detailed explanation of these observations, including supporting evidence where available.

BTC Response Question 7: BTC understands from the consultation document that URCA's foremost priority by way of the objective of The Government of The Bahamas (GOTB) is the efficient deployment of 5G in The Bahamas. Further URCA has been tasked with the release and administration of 5G spectrum. It is further noted that GOTB does not seek to maximize revenue from the exercise but instead the aim:-

1. to recover the costs associated with the assignment and award process
2. obtain commitments from Licensees to improve the quality of their services throughout The Bahamas to ensure everyone has access to reliable and fast internet, regardless of the specific technology used

BTC in principle understands the rationale behind the GOTB mandate and recognizes the potential for a favorable way forward for all stakeholders, however specific details on cost and commitments as described would need to be fully ventilated before further comments are made on the matter. BTC looks forward to clear guidelines and robust dialog on the matter with URCA.

It is noted that URCA's views on spectrum assignment is that it is likely to take the form of a managed assignment otherwise known as a "Beauty Contest" rather than an auction style assignment process. BTC in principle sees the potential for favorable outcomes for all stakeholders involved in the assignment process however without further details as to URCA's plans, BTC is unable to comment further. BTC looks forward to clear guidelines and robust dialog on the matter with URCA.

While BTC appreciates the methodical approach that URCA has taken with the 5G consultation process, which allows for maximum participation of stakeholders, BTC is keen on knowing URCA's timelines for the process to be concluded. [REDACTED]

[REDACTED] Certainty about URCA's upcoming milestones and scheduling plans would assist BTC/LLA with coalescing actionable plans for deployment.

URCA Question 8: Do you have any comments on the price and non-price considerations for the 5G spectrum award and licenses set out above? If so, please provide a detailed explanation of these observations, including supporting evidence where available.

BTC Response Question 8:

BTC acknowledges URCA's position on non-price terms, including license duration and the national scope of 5G spectrum, which aligns with URCA's previous stance on the issue. However, terms such as coverage obligations, minimum performance standards, and resilience and restoration requirements have the potential to become overly prescriptive and excessive for a technology as new as 5G, which is still in its early stages in The Bahamas. BTC strongly urges URCA to reconsider obligations that would impose an undue burden in the rollout of 5G and instead consider further incentives for providers. Any perceived regulatory risks are mitigated by the competition already in place and the potential entry of new participants in the electronic communications sector (ECS) such as the nascent space-based satellite industry.

BTC believes that the regulatory focus for 5G deployment should be on fostering an environment that encourages the success of this emerging technology. “To deliver affordable, high quality mobile broadband services, operators require fair access to sufficient radio spectrum. As a result, governments and regulators carefully manage mobile spectrum, which in turn supports a vibrant digital economy. Sometimes this includes charging a price for access to spectrum to encourage efficient use. However, evidence shows that when prices are too high, consumers can suffer from slower mobile data speeds, worse coverage and slower rollouts⁴.” – GSMA

This quote encapsulates the balance that URCA and industry providers must consider with spectrum pricing.

BTC acknowledges the importance of recovering the costs efficiently incurred in the distribution, management, and administration of 5G spectrum. However, BTC advocates for a balanced and efficient costing model as the preferred approach. BTC is encouraged by the GOTB's decision to prioritize enhanced mobile broadband services over revenue maximization in the allocation of spectrum, which aligns with this principle.

URCA Question 9: Do you have any comments on these non-spectrum related implementation considerations? If so, please provide a detailed explanation of these observations, including supporting evidence where available.

BTC Response Question 9: URCA has stated that ECS Licensees are responsible for ensuring access to a stable and reliable power supply. BTC believes a more balanced approach is necessary, considering that power providers in The Bahamas are also licensees under the Electricity Sector, which falls within URCA's oversight. While it is reasonable to

⁴ <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2021/05/Spectrum-Pricing-Positions.pdf>

expect backup power for minor disruptions, BTC maintains that prolonged and frequent outages and poor power quality are factors beyond its control.

BTC also underscores the importance of allowing and encouraging active and passive network sharing, in line with recent trends and precedents in the region, eg TIGO and Telefonica active sharing agreement in Colombia (more info at <https://www.millicom.com/media-center/blogs/tigo-and-movistar-sign-agreement-to-develop-a-shared-mobile-access-network-in-colombia>).

Conclusion

BTC appreciates the opportunity to participate in URCA's consultative process on 5G. BTC views 5G as a transformative technology that, like previous mobile innovations, will play a critical role in fostering inclusive and sustainable economic growth in The Bahamas. In BTC's view, the most significant factor for the successful deployment of 5G beyond the proper allocation of spectrum is the creation of an environment that encourages investment in new and emerging technologies like 5G. BTC looks forward to ongoing dialogue as we embark on the journey toward 5G deployment in The Bahamas.

Reservation of Rights

BTC reserves the right to comment further on all issues raised in the Consultation Document and states categorically that the decision not to respond to any issue in whole or in part does not necessarily indicate agreement in whole or in part with URCA's statements or proposals in the Consultation Document; nor does any position taken by BTC in its response mean a waiver of any of BTC's rights in any way. BTC expressly reserves all its rights.