Wholesale Fixed and Mobile Termination Rates for SMP Licensees

Response to Public Consultation and Final Determination

ECS 74/2019

Issued: 23 December 2019

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1 Introduction

In this document, the Utilities Regulation and Competition Authority ("URCA") issues its Final Determination on forward-looking, cost-oriented rates for wholesale fixed and mobile termination services in The Bahamas. Taking into account the time it will take to derive forward-looking cost-oriented rates, the elapsed time since the current rates were set, and the prevailing level of these rates, URCA has also assessed, and concluded on, the merits of setting interim termination rates, prior to moving to full cost orientation.

URCA issued the Preliminary Determination for this consultation on 12 September 2019. That document had the following core objectives:

- to set out the appropriate framework for setting forward-looking, cost-oriented termination rates in The Bahamas, taking into account both theoretical and practical considerations;
- to assess the merits of setting interim termination rates until the forward-looking, cost-oriented rates are available;
- to set forth the proposed interim termination rates, informed by a benchmarking exercise; and
- to invite comments from stakeholders on URCA's proposals.

The first round of responses to the consultation were due on 14 October 2019. The second round of responses were due on 28 October 2019.

In addition to seeking general comments and/or views to URCA's preliminary findings, URCA's consultation paper sought respondents' views on five questions:

Consultation Question 1: Do you agree with URCA's preliminary view that forward-looking, incremental cost is the appropriate basis for setting termination charges?

Consultation Question 2: Do you agree with URCA's preliminary view that developing Bahamas-specific BU LRIC models should be used as a base for setting forward-looking LRIC-based termination rates in The Bahamas?

Consultation Question 3: Do you agree with URCA's view that interim rates for intra-island fixed termination and mobile termination services should be set?

Consultation Question 4: Do you agree with URCA's proposed approach for setting interim fixed and mobile termination rates (including the proposed use of a glide path)?

Consultation Question 5: Do you agree with the proposed levels of interim termination rates?

Three parties submitted initial responses to the consultation, namely:

- Be Aliv Limited ("Aliv");
- Bahamas Telecommunications Company Limited ("BTC"); and
- Cable Bahamas Limited ("CBL").

BTC and CBL made additional submissions as part of the second round. These additional submissions commented on aspects of the initial consultation responses submitted by the other parties. Aliv also made a second-round submission but stated within it that it generally adopted the same positions as those within CBL's submission.

URCA thanks respondents for their written submissions and participation in the consultation process. The participation by all parties was useful and constructive.

URCA now sets out its reply to the comments it has received. In so doing, it expressly states that failure on its part to respond in this document to any issue raised by respondents does not necessarily signify agreement in whole or in part with the comment, that it has not considered the comment or that it considers the comment unimportant or without merit.

1.1 Background to this Consultation

URCA is the governing body of the regulatory regime for electronic communications in The Bahamas and was established under the Utilities Regulation and Competition Authority Act, 2009 ("URCA Act"). Pursuant to the Communications Act, 2009 ("Comms Act" or the "Act"), URCA is responsible for licensing undertakings that provide, operate or maintain an electronic communications network or provide an electronic communications service. The Comms Act also provides, in Section 5 of the Act, guidelines that URCA must follow for issuing regulatory and other measures (including Determinations). The Comms Act gives URCA wide-ranging powers which are to be exercised in full compliance with principles of good regulation.

URCA is required to introduce regulatory and other measures which are efficient and proportionate to its purpose and must introduce them in a manner that is transparent, fair and non-discriminatory. This means that where URCA believes that market forces alone are unlikely to achieve a policy objective within a reasonable timeframe, URCA may introduce regulatory requirements, having due regard to the costs and implications for affected parties.[1] However, as a general principle, market forces should be relied upon as much as possible and regulatory measures should be introduced by URCA only when necessary. In general, this means that more prescriptive regulatory measures are only imposed on operators who have a position in a market such that they can act to an appreciable extent

1 See Section 5(b)(i), 5(b)(ii) and 5(c) of the Comms Act.

independently of competitors, consumers and subscribers (i.e., a position of significant market power ("SMP")). To determine whether an operator holds such a position, URCA must undertake a review of the market.[2]

1.2 Wholesale termination regulation in The Bahamas

Wholesale termination is an essential service that all holders of Individual Operating Licences ("IOLs") providing voice or messaging services must purchase from each other in order to allow their customers to call (or message) customers on other public networks. Termination describes the service whereby one operator (the terminating party) accepts traffic that has originated on another network but which is destined for customers on its own network, and delivers that traffic to those customers. As such, all Licensees who operate their own network infrastructure to provide fixed or mobile voice and messaging services in The Bahamas also offer termination services to other Licensees. These are:

- BTC owning and operating fixed and cellular mobile networks;
- CBL/Systems Resource Group Limited ("SRG") owning and operating fixed networks;
- Aliv owning and operating a cellular mobile network; and
- IP Solutions International Limited ("iPSi") owning and operating a fixed network.

URCA (after consultations) determined that BTC, CBL/SRG, Aliv and iPSi have SMP in the termination of calls (and in the case of mobile, messages) on their respective networks. For this reason, the aforementioned Licensees have an obligation to offer termination services on transparent and non-discriminatory terms, priced in a way that reflects the efficiently-incurred costs of providing those services.[3] All SMP Licensees are obligated to publish the tariff and non-price terms and conditions for their termination services, with URCA setting the allowable rates for termination services.

Fixed and mobile termination rates in The Bahamas were last reviewed by URCA in 2012/14 and 2016, respectively. In particular:

- The current rates for (intra and inter-island) fixed call termination and inbound international mobile call termination were determined in 2012, based on a three-year glide path informed by benchmarks of cost-based termination rates from across the region and other small island

[2] See Sections 39(1) and 40(2) of the Comms Act.

[3] As detailed in ECS 11/2010 at https://www.urcabahamas.bs/wp-content/uploads/2017/02/ECS-11-2010-Final-Decision-Obligations-Imposed-on-Operators-with-Significant-Market-Power.pdf, ECS 13/2013 at https://www.urcabahamas.bs/wp-content/uploads/2017/02/ECS-13-2013-Final-Determination-and-Statement-of-Results-Significant-Market-Power-in-Call-Termination.pdf and ECS 33/2016 at https://www.urcabahamas.bs/wp-content/uploads/2017/11/Final-Determination-SMP-in-Call-Termination-on-NewCo-Cellular-Mobile-Network-.pdf

jurisdictions.[4] The resulting fixed termination rates were then also applied to iPSi[5] and SRG in 2014.[6] As such, the current fixed termination rates are symmetric.

- The current (domestic) mobile call and SMS termination rates for BTC were determined in 2016, taking into account costing data in BTC's (audited) separated accounts and benchmarks of LRIC based mobile termination rates in other regional and other small island jurisdictions.[7] During the same year, URCA set asymmetric interim mobile termination rates for Aliv, in recognition of its recent market entry at that time.[8] URCA notes that Aliv and BTC later negotiated a departure from these asymmetric termination rates, with mobile termination rates now being symmetric.

Table 1 Current Termination Rates in The Bahamas

Termination service	SMP Licensees	Service description	Current charge (BSD cents / minute)
Fixed Call Termination to Geographic Numbers	BTC, CBL/SRG, iPSi	Intra-island calls	0.75
		Inter-island calls	1.13
Fixed Call Termination to Non-Geographic Numbers	BTC, CBL/SRG, iPSi	Calls to non-geographic numbers (e.g., calls to ViBe numbers)	2.01
Call Termination to Mobile Numbers	BTC, Aliv	Domestic traffic	2.48
		Inbound International traffic	4.61
SMS Termination	BTC, Aliv	Domestic and International traffic	1.40

Source: Annex G (Price List) of the BTC Reference Access and Interconnection Offer ("RAIO") available at https://files.btcbahamas.com/2016/01/31/14870794_raio-revised-29jan16.pdf

When setting the interim mobile termination rates for Aliv in 2016, URCA stated that it would keep those rates under review as part of a wider review of wholesale termination rates for calls and Short Messaging Service ('SMS') in The Bahamas.[9]

On 29 August 2018, Aliv requested that URCA undertake a comprehensive review of the mobile call termination, fixed call termination, and SMS termination rates to ensure they reflect efficiently-incurred costs. CBL also expressed, in its response to URCA's draft 2019 Annual Plan, its position that URCA should review rates more generally.

4 See ECS 25/2012
5 iPSi is no longer active in the market but is included for completeness.
6 See ECS 12/2014
7 See ECS 19/2016
8 See ECS 33/2016
9 See ECS 33/2016

Noting these concerns and in line with its 2019 Draft Annual Plan,[10] URCA has begun the process of reviewing these termination rates with a view to ensure that these are reflective of the efficiently incurred cost of providing these services. The Preliminary Determination[11] set out URCA's preliminary views on (i) the appropriate framework for setting forward-looking, cost-oriented termination rates in The Bahamas; (ii) the merits of setting interim termination rates until the forward-looking, cost-oriented rates are available; (iii) accordingly, the proposed level of the interim termination rates.

URCA notes that the applicable rates for other regulated interconnection services listed in BTC's RAIO are not being reviewed at this time.

1.3 Procedure for Making a Determination

URCA has wide-ranging powers under the Comms Act, especially as it relates to SMP Licensees. URCA's power to price regulate wholesale termination services is derived from Sections 40 and 5(b) of the Comms Act, which allows URCA to introduce regulatory measures where in its view, "… *market forces are unlikely to achieve the electronic communications policy objectives within a reasonable timeframe"*. In these circumstances, "*URCA may impose specific conditions on Licensees determined to have SMP in the relevant market or relevant markets, including obligations relating to – (a) cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems.*"

In doing so, URCA must adhere to all relevant principles of the Comms Act, in particular:

- the objectives of the electronic communications sector policy as specified under Section 4 of the Comms Act; and
- guidelines for regulation and other measures as per Section 5(a), (b), (c) and (d) of the said Act.

The procedures for making a determination, as contained in the Comms Act at Section 99 (1) (a) and (b), collectively prescribe that if, on its own motion, URCA has reason to believe that a determination is necessary, it may make determinations relating to (amongst other things):

- any obligations on a Licensee regarding the terms or conditions of any licence, including obligations in licence conditions and regulations;
- any activity set out in the Comms Act; and
- where the Comms Act provides for URCA to "*determine*" or "*to make determinations*" as is the case under Section 39 (1).

[10] URCA's 2019 Draft Annual Plan can be found at: https://www.urcabahamas.bs/wp-content/uploads/2018/12/URCA-Draft-Annual-Plan-2019.pdf

[11] ECS 67/2019, available at: https://www.urcabahamas.bs/wp-content/uploads/2019/09/Preliminary-Determination-for-Wholesale-Fixed-and-MobileTermination-Rates-FINAL.pdf

Under Section 99(2) of the said Act, in making any determination, URCA has to have consulted persons with sufficient interest under Section 11 of the Comms Act and provided written reasons for its determination. Section 11(2) of the Comms Act prescribes that regulatory instruments referred to in section 13(2) of the Act such as regulations, shall be considered regulatory measures of public significance and under section 11(1), URCA shall afford persons with sufficient interest a reasonable opportunity to comment on URCA's proposals.

URCA considers the measures consequential to this consultation are likely to have a significant impact upon the activities carried on by licensees in The Bahamas. As such, the consultation provided an opportunity for members of the public, licensees and other interested parties to submit written comments to URCA.

1.4 Structure of the remainder of this document

The remainder of the document is structured the following way:

- Section 2 sets out URCA's Final Determination;
- Section 3 summarises the responses received to URCA's consultation questions and URCA's final decision on each, having taken into consideration the consultation responses; and
- Section 4 presents the conclusions and next steps.

Further details on the benchmarking analysis undertaken to inform the interim termination rates are then presented in an Annex.

2 URCA's Final Determination

WHEREAS,

(i) Sections 40 and 5(b) of the Communications Act 2009 ("Comms Act") empower URCA to introduce regulatory measures where in its view, "… *market forces are unlikely to achieve the electronic communications policy objectives within a reasonable timeframe"* and, in these circumstances, "*URCA may impose specific conditions on Licensees determined to have SMP in the relevant market or relevant markets, including obligations relating to – (a) cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems*";

(ii) Section 99(1)(a) and (b) of the Comms Act empowers URCA to make determinations in respect of any regulatory or other measures it proposes to introduce;

(iii) Pursuant to Section 5(a), (b), (c) and (d) of the Comms Act, containing guidelines that URCA must follow for issuing regulatory and other measures;

(iv) Having regards to the SMP findings of BTC, CBL/SRG, Aliv and iPSi in the termination of calls (and in the case of mobile, messages) on their respective networks, set out in ECS 11/2010,[12] ECS 13/2013[13] and ECS 33/2016,[14] as well as any resulting ex ante obligations on the SMP Licensees in these markets, set out in ECS 25/2012,[15] ECS 12/2014,[16] ECS 19/2016[17] and ECS 33/2016;[18] and

(v) URCA having reviewed all evidence and submissions made by BTC, CBL, and Aliv;

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12 https://www.urcabahamas.bs/wp-content/uploads/2017/02/ECS-11-2010-Final-Decision-Obligations-Imposed-on-Operators-with-Significant-Market-Power.pdf

13 https://www.urcabahamas.bs/wp-content/uploads/2017/02/ECS-13-2013-Final-Determination-and-Statement-of-Results-Significant-Market-Power-in-Call-Termination.pdf

14 https://www.urcabahamas.bs/wp-content/uploads/2017/11/Final-Determination-SMP-in-Call-Termination-on-NewCo-Cellular-Mobile-Network-.pdf

15 https://www.urcabahamas.bs/wp-content/uploads/2017/02/ECS-25-2012-Statement-of-Results-and-Final-Decision-BTC-RAIO-Charges.pdf

16 https://www.urcabahamas.bs/wp-content/uploads/2017/01/Statement-of-Results-to-Consultation-and-Final-Determination-Wholesale-Fixed-Call-Termination-Price-Control-for-SMP-Licensees.pdf

17 https://www.urcabahamas.bs/wp-content/uploads/2017/02/ECS-19-2016-Statement-of-Results-Final-Determination-on-RAIO.pdf

18 https://www.urcabahamas.bs/wp-content/uploads/2017/11/Final-Determination-SMP-in-Call-Termination-on-NewCo-Cellular-Mobile-Network-.pdf

NOW URCA HEREBY DETERMINES as follows:

1. **Determination on the appropriate approach to setting forward-looking termination rates**

   For the reasons explained in Section 3 below, URCA sets out below its findings from its review of the options for setting forward-looking termination rates in The Bahamas.[19]

   Having considered the consultation responses received on the proposed basis on which wholesale termination charges should be set, URCA concludes that forward-looking pure incremental cost (Pure LRIC) constitute the relevant basis for setting wholesale termination charges in The Bahamas.

   However, based on URCA's assessment of the available evidence, taking into account its regulatory objectives, and in line with the discussion set out in Section 3, URCA has determined that it is not yet in a position to give a definitive view on the appropriate approach for setting forward-looking wholesale charges. Given the significant time and financial implications of any decision for the stakeholders involved, URCA will make a decision on forward-looking rates at a later date and will publish its determination on the chosen methodology for setting forward-looking rates in a separate document.

   In doing so, URCA notes that the interim rates set out below are not affected by the choice of methodology for setting termination rates going forward and will be introduced without further delay.

2. **Determination on the level of interim termination rates**

   Given the time elapsed since termination rates in The Bahamas were last reviewed, and the likelihood that prevailing rates are unlikely to be representative of the current and forward-looking costs of providing termination services, URCA has determined interim rates that will apply to the relevant SMP Licensees for key termination services. These interim rates are presented in **Table 2** below.

Table 2: Interim Termination Rates (BSD cents/min,[20,21] % changes from current rate in brackets)

Service	SMP Licensees	Current	Year 1*	Year 2**	Year 3***
Fixed call termination (intra-island)	BTC, CBL/SRG, iPSi	0.75	0.41 *(-45%)*	0.24 *(-68%)*	0.07 *(-91%)*

[19] The applicable rates for other regulated interconnection services listed in BTC's RAIO are beyond the scope of this Determination.

[20] SMS termination rates are expressed per message.

[21] URCA notes that the glide paths discussed in Section 3.5 of this Determination describe the % of the movement towards interim rates (i.e., the reduction from current termination rates, relative to the difference between current and interim termination rates) that is implemented each year. The % changes in Table 2, above, represent the % changes in rates relative to the current level (i.e., not expressed relative to the gap between current and interim rates).

Fixed call termination (inter-island)	BTC, CBL/SRG, iPSi	1.13	0.62 *(-45%)*	0.36 *(-68%)*	0.11 *(-91%)*
Mobile call termination (domestic)	BTC, Aliv	2.48	1.57 *(-37%)*	1.12 *(-55%)*	0.66 *(-73%)*
SMS termination	BTC, Aliv	1.40	1.12 *(-20%)*	0.98 *(-30%)*	0.84 *(-40%)*
Inbound international mobile call termination	BTC, Aliv	4.61	2.92 *(-37%)*	2.08 *(-55%)*	1.23 *(-73%)*

*January 1, 2020 to December 31, 2020

** January 1, 2021 to December 31, 2021

*** January 1, 2022 to December 31, 2022

3. Implementation of Interim Termination Rates

All SMP Licensees shall implement the interim rates above. The "Year 1" interim termination rates will come into force on 1 January 2020.

The interim rates shall apply until URCA has published a Final Determination setting out the level of forward-looking, cost-oriented termination rates in The Bahamas.

Until further notice from URCA, no change shall be made to the regulated rates for any other interconnection services referenced in this Final Determination (i.e., calls to non-geographic numbers) for which interim rates are not presented in **Table 2** above.

BTC is required to amend its RAIO to reflect the "Year 1" interim rates for the relevant termination services and publish same on its website no later than 15 January 2020.

CBL, Aliv and iPSi are required to amend their terms and conditions to reflect the "Year 1" interim rates for the relevant termination services and publish same on their respective websites no later than 15 January 2020.

Further, the parties are directed to amend all Interconnection Agreements to reflect the interim rates and submit copies to URCA no later than 15 January 2020.

3 Responses to Consultation Questions

In this Section, URCA summarises and responds to the comments received during the public consultation process, focusing on the comments made on the issues under consultation.

In order that this document provides a useful and succinct assessment of the parties' views provided throughout the consultation process, URCA discusses in this Section first-round responses and only those second-round responses which provide further material for discussion. For example, critical reviews of other parties' submissions which are backed by arguments or evidence, or the expression of further opinions or facts not already submitted as part of a first-round response. Where the parties have simply restated their arguments from their first-round response, or dismissed the arguments of others without any reasoning, URCA has not, for each consultation question, provided a lengthy summary of those statements along with the reasons they do not merit further discussion.

3.1 General Comments

None of the parties submitted any general comments which were not also covered in response to the specific consultation covered in the remainder of this document. URCA therefore addresses the parties' comments in the context of the specific consultation questions to which they relate.

3.2 Forward Looking Incremental Cost

Consultation Question – Forward Looking Incremental Cost

Q1. Do you agree with URCA's preliminary view that forward-looking, incremental cost is the appropriate basis for setting termination charges?

All three parties provided comments on this consultation question as part of their first-round responses and BTC and CBL also commented on it as part their second-round responses.

Comments received

Aliv's comments

Aliv agreed with URCA's preliminary view that forward-looking incremental cost is the appropriate basis for setting termination charges, in particular noting that it has expressed its support of the Pure LRIC concept, for the setting of interconnection rates, in previous consultations.

BTC's comments

As part of its first-round response, BTC agreed with URCA's preliminary view on forward-looking incremental costs as an appropriate basis for setting termination charges.

BTC stated that while it has no definitive position on which LRIC concept it supports in the absence of a detailed discussion of the overall methodology, it expresses a preliminary preference for a LRIC+ approach, citing the Comms Act's guidance on cost recovery and questioning the appropriateness of some of the sample jurisdictions which have adopted Pure LRIC.

CBL's comments

CBL also agreed with URCA's preliminary view on forward-looking incremental costs as the appropriate basis, as well as URCA's preliminary view that a Pure LRIC approach to setting termination rates is preferable to a LRIC+ approach.

URCA's responses to comments received and final determination

URCA notes all the respondents' agreement with URCA's preliminary views on forward-looking incremental costs as the appropriate basis for setting termination charges. Furthermore, it notes Aliv and CBL's agreement with URCA's preliminary view that the Pure LRIC standard is the most appropriate measure of incremental cost in this context.

URCA notes that BTC has provided two main arguments in favour of LRIC+ rather than Pure LRIC, and addresses each of these in turn.

BTC's first argument is that some of the regions in which rates are more commonly regulated at Pure LRIC, such as European countries, are not comparable to The Bahamas, noting that the majority of Caribbean countries in the sample with regulated termination rates use LRIC+ as the relevant cost measure. URCA notes that countries outside a specific geographic region are not necessarily less relevant comparators, and that the adoption of an approach in particular jurisdictions does not mean that the chosen concept is unequivocally better than another, or necessarily the most appropriate approach for all countries within a given region. Indeed, URCA notes that the EC Recommendation on Pure LRIC as the most appropriate cost standard for setting wholesale termination charges is based on principles of regulatory best practice which are not region-specific but rather aim to achieve desirable market outcomes.[22] Furthermore, URCA draws BTC's attention to the fact that Pure LRIC does not differ significantly across jurisdictions. Therefore, differences in topography and other country-specific characteristics are largely irrelevant for the purposes of assessing the relevance of precedent on Pure LRIC-based rates.

BTC's second argument references the Comms Act, suggesting that its provisions for cost recovery necessitate the use of LRIC+ for the setting of termination charges since the Act does not refer specifically to the recovery, in some cases, of a subset of all the costs which are potentially related to the provision of a service. However, URCA dismisses this argument on the basis that the Comms Act refers to a general regulatory principle. It is not intended to – and cannot – provide specific guidance on the cost standards to be used in each and every possible situation in which cost-based charges may be set. The Act does not specify that cost-based termination charges should necessarily include all costs which

[22] https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF

could be considered as related to a service, i.e., including an allocation of fixed and common costs (LRIC+).

URCA's Final Determination – Forward Looking Incremental Cost

Having considered the consultation responses received on the proposed basis on which wholesale termination charges should be set, URCA concludes that its preliminary findings remain valid. In particular, forward-looking incremental cost is the relevant basis for setting wholesale termination charges in The Bahamas.

3.3 Bottom Up (BU) LRIC Model

Consultation Question – BU LRIC Model

Q2. Do you agree with URCA's preliminary view that developing Bahamas-specific BU LRIC models should be used as a base for setting forward-looking LRIC-based termination rates in The Bahamas?

All three parties provided comments on this consultation question as part of their first-round responses and BTC and CBL also commented on it as part of their second-round responses.

Comments received

Aliv's comments

As part of its first round response, Aliv disagreed with URCA's preliminary view on developing Bahamas-specific BU LRIC models for setting mobile and fixed termination rates, explaining its view that more frequent revision of rates, facilitated by rate-setting methods which are less time-consuming (for example, based on benchmarking), has a greater impact on the level of termination rates than country specificity (i.e., the development of Bahamas-specific BU LRIC models). Aliv suggested that a benchmarking exercise can also be adapted to cover other wholesale services which use the core network (an additional capability which URCA only considered to be relevant for the BU LRIC approach). Indeed, Aliv stated that it prefers the benchmarking approach for calculating termination rates.

BTC's comments

As part of its first-round response, BTC agreed with URCA's preliminary view regarding the development of a Bahamas-specific BU LRIC model.

BTC also provided its view that a LRIC approach *"would have the added benefit of eliminating further reliance"*[23] on the historical accounting cost separation approach to setting wholesale rates.

BTC noted that the Preliminary Determination contains no discussion of the methodological specifics in relation to a bottom-up LRIC model to be adopted by URCA, nor any indication of the associated development and implementation timelines. BTC was also of the view that a LRIC costing exercise should begin immediately and could be completed within 12 months.

As part of its second-round response, BTC commented that CBL, in its first-round response, had provided a lack of detail regarding the sample of jurisdictions used to produce its analysis of termination rates. BTC also criticised CBL and Aliv's support for a benchmarking approach, asserting that they had previously supported a BU LRIC approach.

<u>CBL's comments</u>

As part of its first-round response, CBL disagreed with URCA's preliminary view regarding the development of Bahamas-specific BU LRIC models for setting mobile and fixed termination rates. In particular, CBL suggested that Bahamas-specific BU LRIC models would be unnecessary *"given the relatively low rates and the small service volumes"*[24] in The Bahamas. CBL also provided an analysis of potential ranges of termination rates across a sample of jurisdictions. Similar to Aliv, CBL stated that it would prefer the benchmarking approach for calculating termination rates.

As part of its second-round response, CBL expanded on this view, stating that URCA's benchmarking exercises have *"acceptable margins of error"*,[25] and suggested that LRIC models can be more prone to errors as a result of their significant complexity.

URCA's responses to comments received and final determination

URCA notes the concerns of Aliv and CBL, specifically their views that Bahamas-specific BU LRIC models would be disproportionate, in terms of the time and resource requirements to both URCA and the industry in developing such models, for the purposes of calculating wholesale termination costs alone. However, as recognised by URCA in the Preliminary Determination, developing Bahamas-specific BU LRIC models are in particular merited if these are then used to inform cost-oriented charges of a range of wholesale services, beyond wholesale termination services. This is to ensure that the time and resources involved in developing these tools is justified.

In relation to Aliv's suggestion that, similar to BU LRIC models, a benchmarking approach may be adopted to inform the cost of a wider range of services other than wholesale termination, URCA notes that although this may be the case for a narrow, specific range of services, this would need to be assessed on a case-by-case basis and a BU LRIC approach provides greater flexibility for doing so. A BU

23 Page 6 of BTC's first round response to ECS 67/2019.
24 Page 3 of CBL's first round response to ECS 67/2019.
25 Page 2 of CBL's second round response to ECS 67/2019.

LRIC approach would also allow the costing of a wider range of wholesale services. Such an approach would allow URCA to take into account the local operating environment in The Bahamas when determining cost-based rates, which means that a BU LRIC approach may be more likely to lead to more accurate results than a benchmarking one. However, as recognised by Aliv and CBL, this may be a less material consideration when setting termination rates based on Pure LRIC due to a limited variation in these cost estimates across jurisdictions.

URCA notes that in the case of BTC's stated support for a LRIC approach, BTC has expressed a view that this would result in a reduced reliance by URCA on its Accounting Separation (AS) information going forward. URCA considers it important to clarify that transitioning to LRIC-based wholesale termination rates (and possible other wholesale charges) would not result in a removal of SMP Licensees' AS obligations. In general, AS provides information not only on unit costs for retail and wholesale services (which can inform price regulation of these services), but also financial information (i.e., profit and loss statements and balance sheets) for individual retail and wholesale business units of each SMP licensee (e.g., retail fixed telephony, wholesale fixed access networks, etc.). The AS requirement to provide business unit specific financial statements or retail service unit cost information would not be impacted by a transition to LRIC-based wholesale charges.

Furthermore, URCA agrees with BTC's observation that CBL's analysis of the merits of a benchmarking approach, based on a sample of countries, is not sufficiently transparent to be assessed in any detail. URCA nevertheless has taken CBL's broader arguments into consideration.

In response to BTC's assertion that Aliv and CBL's position had departed from previous support for a BU LRIC model, URCA notes that this seems to be a misunderstanding on BTC's part. URCA understands that Aliv and CBL have previously expressed support for rates based on LRIC, but that this relates to the LRIC concept more generally (including benchmarking approaches based on BU LRIC) rather than Bahamas-specific BU LRIC models specifically.

In summary, the respondents have provided conflicting views on the pivotal issue of the appropriate methodology for setting forward-looking, cost-based wholesale termination rates. In particular, URCA notes that the parties' views, expressed in their consultation responses, are likely to reflect differing understandings of the relative advantages of the two approaches. For example, the potential misplaced understanding on the implications of this decision for its AS obligations going forward and a lack of clarity from CBL and Aliv regarding the range of additional uses that mobile and fixed BU LRIC models might have, relative to a benchmarking approach.

Given this, URCA sees merits in taking a more holistic approach to determining the basis for forward-looking cost-based rates. For example, one of the key benefits of developing BU LRIC models is that they may be used to inform the costs of other regulated wholesale services. URCA sees that there may be several scenarios in which a BU LRIC model could be applicable for several other wholesale services - both in terms of the interconnection rates in BTC's current reference offer and potential additional wholesale services which may be subject to ex ante regulation going forward.

URCA is therefore of the view that it is not yet in a position to give a definitive view on the appropriate approach for setting forward-looking wholesale charges. Given the significant time and financial implications of any decision for the stakeholders involved, URCA will make a decision on forward-looking rates at a later date and publish this in a separate document. In doing so, URCA notes that the interim rates set in this Final Determination are not affected by the choice of methodology for setting termination rates going forward and will be introduced without further delay.

URCA's Final Determination – BU LRIC Model

Having considered the consultation responses received on the most appropriate approach for setting wholesale termination charges, URCA concludes that no final decision on the matter will be made in this document. URCA will publish its determination on the chosen methodology for setting forward-looking rates separately.

3.4 Need for Interim Rates

Consultation Question – Interim Rates

Q3. Do you agree with URCA's view that interim rates for intra-island fixed termination and mobile termination services should be set?

All three parties provided comments on this consultation question as part of their first-round responses and BTC and CBL also commented on it as part of their second-round responses.

Comments received

Aliv's comments

As part of its first-round response, Aliv agreed with URCA's preliminary view on the need to set interim rates, stating that *"current rates are out of date"*[26].

However, Aliv disagreed with the suggested approach of retaining current *inter*-island fixed termination rates during the interim period as it stated these are based on information that is equally as outdated as that used for intra-island fixed termination rates. In particular, it argued that the intra-island level of termination costs is common to inter-island termination costs, with the latter additionally including the cost of subsea cable capacity. As such, Aliv argued that the existence of interim rates for intra-island termination suggested there was also a need to introduce interim *inter*-island rates.

[26] Page 4 of Aliv's first round response to ECS 67/2019.

BTC's comments

As part of its first-round response, BTC disagreed with URCA's preliminary view on the need to set interim termination rates. Instead, BTC stated that *"URCA should be moving forward immediately"*[27] to introduce new termination rates, without the need for any interim rates. Nevertheless, BTC agreed that, if URCA were to introduce interim termination rates, benchmarking would be an appropriate approach.

As stated in its response to Question 2 above, BTC has also questioned URCA's position that the development of BU LRIC models would take a significant length of time, stating that there is no reason why a process of setting rates using a BU LRIC model could not be *"completed within a year"*[28].

As part of its second-round response, BTC disagreed with Aliv's suggestion regarding the *level* of the inter-island rates (discussed in response to Question 4), but did not detail any specific objections to the *rationale* proposed by Aliv.

CBL's comments

As part of its first-round response, CBL agreed with URCA's preliminary view on the need to set interim termination rates, stating that *"interim rates are more reflective of cost than current rates"*[29].

As part of its second-round response, CBL stated that interim rates would not be necessary in the event that a benchmarking approach is adopted to set forward-looking rates.

URCA's responses to comments received and final determination

URCA notes Aliv and CBL's agreement with URCA's proposal that there is an overall need to introduce interim termination rates while the process for establishing forward-looking, cost-based termination rates is ongoing, and further acknowledges CBL's suggestion that such interim rates may not be appropriate if forward-looking rates were to be set based on a benchmarking approach, which has already been conducted for the purpose of proposing interim termination rates. However, in the absence, at this time, of a decision on the appropriate methodology for setting forward-looking rates, URCA considers that interim rates will indeed be necessary.

URCA also acknowledges BTC's concern that the revision of termination rates has already taken some time and that the introduction of interim rates may be seen to be extending the time elapsed between the introduction of updated, forward-looking, incremental cost-based rates. URCA notes, however, that the purpose of interim rates (including the glide-path) is to ensure termination rates move from their current levels towards levels which are more reflective of Pure LRIC levels of these services, rather than retaining high rates until forward-looking cost-based rates have been finalised. URCA also takes this opportunity to reiterate that the interim rates would only apply until forward-looking termination rates are available. Therefore, the introduction of interim rates neither implies nor facilitates any delay to the

[27] Page 14 of BTC's first round response to ECS 67/2019.
[28] Page 14 of BTC's first round response to ECS 67/2019.
[29] Page 5 of CBL's first round response to ECS 67/2019.

introduction of forward-looking, cost-based rates, but rather expedites the process of moving towards cost-reflective termination rates.

In relation to Aliv's concerns around the asymmetric approach to revising fixed termination rates during the interim period (i.e., introducing interim rates for intra-island services only), URCA agrees that there are merits in setting interim rates for inter-island fixed call termination services. As such, URCA has developed interim rates for inter-island fixed call termination services in Section 3.6 below.

URCA's Final Determination – Need for Interim Rates

Having considered the consultation responses received on the need for setting interim termination rates, URCA concludes that interim rates for fixed termination (both intra-island and inter-island) and mobile termination (both domestic and inbound international) should be set.

3.5 Approach to Interim Rates

Consultation Question – Approach to Interim Rates

Q4. Do you agree with URCA's proposed approach for interim fixed and mobile termination rates (including the proposed used of a glide path)?

All three parties provided comments on this consultation question as part of their first-round responses and BTC and CBL also commented on it as part their second-round responses.

Comments received

Aliv's comments

In its first round response, Aliv agreed with URCA's preliminary view on setting interim rates through the use of a Pure LRIC model. Aliv disagreed, however, with URCA's preliminary view of a three-year glide path, stating that the proposed path was *"unnecessarily long"*[30], and that *"the current review process is more than a year late"*[31]. Aliv did not, however, submit a proposal for a revised glide path or any evidence to support a shorter glide path.

As discussed in relation to Question 3 above, Aliv also disagreed with URCA's preliminary view that interim rates should not be set for inter-island fixed call termination services. Aliv further suggested that intra and inter-island fixed termination rates should be set at parity, as it estimated the cost difference

[30] Page 4 of Aliv's first round response to ECS 67/2019.
[31] Page 5 of Aliv's first round response to ECS 67/2019.

(attributable to subsea cable costs) as being close to zero. Aliv's argument was that, given a small share of voice traffic in the total traffic transmitted via a subsea cable (as a result of significant dedication of capacity to data traffic), the cost of carrying domestic voice calls would be close to zero.

BTC's comments

As part of its first-round response, BTC criticised the benchmarking exercise conducted in the Preliminary Determination, with BTC suggesting that the sample should only include Caribbean jurisdictions. BTC supported this viewpoint by referring to a benchmarking exercise that was conducted by the regulatory authority for the Turks and Caicos Islands, in which only Caribbean jurisdictions were included.

BTC also disagreed with the benchmarking sample containing only jurisdictions which had implemented termination rates based on a Pure LRIC approach. BTC suggested that jurisdictions using a LRIC+ approach for setting termination rates should also be included, with the alternative benchmarking exercise taking *"the average of all LRIC rates"*[32]. BTC further disagrees with the inclusion of the SMS termination rates from the BEREC study in the benchmarking analysis, on the basis of BTC's understanding that URCA has included unregulated rates within its benchmarking sample.

BTC agreed with URCA's preliminary view on a three-year glide path, suggesting that this would allow operators to adjust to the new termination rates.

BTC further agreed with the principle of maintaining a differential between domestic and inbound international mobile termination rates. However, BTC disagreed with the preliminary view that the differential should be reduced in proportion to domestic mobile termination rates. Instead, BTC suggested that the absolute differential should be retained. BTC did not, however, provide any explanation or supporting evidence for its proposed approach, except to point out that URCA had not explicitly conducted any benchmarking of the differential for inbound international mobile termination rates.

As part of its second-round response, BTC disputed Aliv's suggestion that intra-island and inter-island fixed call termination rates should be equal and dismissed Aliv's proposal as a *"guestimate"*[33]. URCA notes that, in doing so, BTC did not provide solid evidence in disputing this proposal. Notably, BTC does not argue with the principle that the Pure LRIC of inter-island termination may not be materially higher than those for intra-island termination.

CBL's comments

As part of its first-round response, CBL agreed with URCA's preliminary view on the setting of interim rates for fixed and mobile termination services through the average of Pure LRIC rates from a benchmarking sample. However, CBL disagreed with the glide path, suggesting current rates are out of

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32 Page 8 of BTC's first round response to ECS 67/2019.
33 Page 5 of BTC's second round response to ECS 67/2019.

date, and so operators in The Bahamas should expect lower termination rates and have *"planned for its impact"*[34]. Instead, CBL suggested that the glide path should not last longer than a year.

As part of its second-round response, CBL disagreed with BTC's criticism of the benchmarking sample, with CBL stating that mobile termination costs, for example, are similar in Spain and Jamaica. CBL also disagreed with BTC's alternative rate proposals, which are based on a Caribbean-only sample. CBL stated that BTC's alternative proposals *"lead to a substantial and unnecessary delay in implementing cost-based rates"*[35]. It is not clear exactly what CBL was referring to in its mention of a delay, but URCA understands this to relate to BTC's support of URCA's preliminary support for a linear three-year glide path.

URCA's responses to comments received and final determination

URCA notes Aliv and CBL's broad agreement with URCA's proposed approach to setting interim termination rates, in particular that such rates should be set based on Pure LRIC termination rates applicable across the sample of comparator countries set out in the Preliminary Determination.

In response to Aliv's proposal for intra-/inter-island termination rate parity, URCA considers it necessary to conduct a more detailed assessment of the incremental cost of the inter-island component to validate Aliv's specific proposal. This would be conducted as part of URCA's derivation of forward-looking, cost-based termination rates. However, URCA considers that some reduction in the differential between intra- and inter-island fixed termination rates is appropriate, as explained in relation to Question 5 below.

In response to BTC's view that the differential between domestic and inbound international mobile termination rates should not be reduced, URCA considers that this would be inappropriate. These rates are currently set based on historic, fully allocated costs ("FAC"). URCA has already benchmarked the cost of domestic termination, which is a component of inbound international termination services, and found that these costs (based on Pure LRIC) are significantly lower than the current domestic mobile termination rates.

In order to set fully cost-reflective charges, URCA would require information on the level of the incremental costs relating to the international element of the mobile termination service. URCA is aware that this will be lower than the historic FAC previously used to set these rates and, in the absence of further information, considers it reasonable to reduce this element by the same proportion as the reduction in the domestic portion of the mobile termination cost. In other words, URCA has determined that it is appropriate to reduce inbound international mobile call termination rates in proportion to the reduction in domestic mobile call termination rates. The resulting, new inbound international mobile termination rates are presented in Section 2. URCA notes that this approach is consistent with the methodology used to set inter-island fixed call termination rates, where there was an absence of cost

[34] Page 5 of CBL's first round response to ECS 67/2019.
[35] Page 4 of CBL's second round response to ECS 67/2019.

information relating to one element of the service (subsea cable capacity) but cost information was available relating to the intra-island portion of the service.

In responses to BTC's concerns relating to the countries included in the benchmarking sample, URCA refers BTC to the Preliminary Determination, in particular Table 4, which provides URCA's rationale for the inclusion of the chosen jurisdictions in the benchmarking sample. URCA also reiterates that any significant differences in the incremental costs of providing wholesale termination services, between Caribbean countries and other regions, are minimal when Pure LRIC is used as the cost standard. This was also supported by Aliv and CBL's submissions. As such, URCA maintains the view that its proposed benchmarking sample is appropriate.

URCA notes that CBL and Aliv both believe that shorter glide paths, if any at all, should apply for all termination rates, whereas BTC is in agreement with URCA's proposal for a 3-year glide path. URCA acknowledges that a glide path would be necessary in order to allow operators to adjust to the changes in regulated rates, and to allow time for the development of BU LRIC models, if URCA decides these are appropriate. But URCA also understands concerns by Aliv and CBL that termination rates should more rapidly be adjusted to be more cost-reflective. As a result, URCA has determined that the retention of a 3-year glide path, but with sharper initial reductions, are appropriate across all termination services. In particular, URCA has modified the glide path such that the gap between the prevailing rates, which apply before this Determination comes into force, and interim rates is closed by 50%, 75%, and 100% in years 1, 2, and 3, respectively. For example, the termination rates which apply in year 1 are halfway between the current rates and the "Year 3" interim rates.

<u>URCA's Final Determination – Approach to Interim Rates</u>

Having considered the consultation responses received on the most appropriate approach to setting interim termination rates, URCA determines that:

i. Interim rates for all termination services in the scope of this review shall be determined based on a benchmarking sample of Pure LRIC rates;

ii. The benchmarking exercise shall be based on the jurisdictions considered for the Preliminary Determination;

iii. Inter-island fixed call termination rates shall be reduced in proportion to the reduction in intra-island fixed call termination rates;

iv. Inbound international mobile call termination rates shall be reduced in proportion to the reduction in domestic mobile call termination rates; and

v. Glide paths with a length of three years shall apply to all termination services in the scope of this review, with URCA having revised the glide path to allow for an expedited transition to Pure LRIC levels.

3.6 Interim Termination Rate Levels

Consultation Question – Interim Termination Rate Levels

Q5. Do you agree with the proposed levels of interim termination rates?

All three parties provided comments on this consultation question as part of their first-round responses and BTC and CBL also commented on it as part their second-round responses.

Comments received

Aliv's comments

As part of its first-round response, Aliv *"directionally agreed"*[36] with URCA's preliminary view on the level of the interim termination rates. However, Aliv noted that the termination rates reported for some of the countries covered in sample had been updated in a more recent BEREC document[37] and stated that the affected rates should be updated accordingly.

BTC's comments

As part of its first-round response, BTC proposed alternative values for the interim termination rates based on an alternative methodology. For all fixed and domestic mobile call termination rates, this alternative methodology was based on narrowing the sample to Caribbean countries only, and including rates based on LRIC+ rather than Pure LRIC alone. For SMS termination rates, BTC made an assertion, in light of what it perceived to be limited evidence, that regulated SMS and international inbound mobile termination rates should decrease in proportion to domestic mobile call termination rates.

CBL's comments

As part of its first-round response, CBL stated that URCA's preliminary view on the level of the interim termination rates was *"acceptable"*[38]. However, CBL suggested that the preliminary interim rates should be updated following the publication of BEREC's latest termination rate review across Europe.

URCA's responses to comments received and final determination

36 Page 6 of Aliv's first round response to ECS 67/2019.
37 https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8701-berec-report-on-termination-rates-at-the-european-level
38 Page 6 of CBL's first round response to ECS 67/2019.

URCA notes Aliv and CBL's observation that an updated BEREC document has been published since URCA's analysis for the Preliminary Determination was prepared. URCA has updated its benchmarking analysis to reflect the updated termination rates reported in that document. URCA cautions that BEREC's updated report does not include SMS termination rates, so these remain unchanged relative to the Preliminary Determination.

URCA notes that the impact on the interim rates, compared to those set out in the Preliminary Determination, are minor as (i) very few of the rates covered in URCA's benchmarking sample have changed in the 6-month period between the studies (with some minor changes as a result of exchange rate fluctuations), and (ii) the average of all BEREC countries being only one component of the overall country average used to inform URCA's interim rates (with those in the other countries not having changed). URCA's revised benchmarking analysis is presented in the Annex.

Finally, URCA confirms that it does not accept BTC's proposed alternative rates, following URCA's assessment of BTC's criticisms of the approach originally employed by URCA in the Preliminary Determination. URCA's main objections to BTC's alternative analysis are that (i) it only considers Caribbean jurisdictions, contrary to URCA's explanation of why additional jurisdictions outside the region should be considered; and (ii) it considers rates based on LRIC+, again contrary to URCA's position on the advantages of Pure LRIC.

URCA's Final Determination – BU LRIC Model

Having considered the consultation responses received on the proposed levels of the wholesale termination charges, URCA has updated its benchmarking analysis to take into account the latest publication by BEREC, but there is no need for any further adjustments to the overall approach set out in its Preliminary Determination.

4 Conclusions and Next Steps

This Final Determination sets out: (i) URCA's position on the appropriate framework for setting forward-looking, cost-oriented termination rates in The Bahamas; (ii) confirming the merits of setting interim rates for fixed and mobile termination services until the forward-looking, cost-oriented rates are available; and (iii) presenting the determined level of the interim termination rates.

All SMP Licensees (BTC, CBL/SRG, Aliv and iPSi) are required to implement the interim termination rates set out in

Table 3 and in accordance with the glide paths presented, until further notice from URCA. No change shall be made to the regulated rates for any other interconnection service referenced in this Final Determination for which interim rates are not presented in the table below until further notice from URCA.

URCA will communicate its final position on the appropriate approach for setting forward-looking wholesale charges (including the merits of developing Bahamas-specific BU LRIC models) separately.

Table 3: Interim Termination Rates (BSD cents/min,[39,40] % changes from current rate in brackets)

Service	SMP Licensees	Current	Year 1	Year 2	Year 3
Fixed call termination (intra-island)	BTC, CBL/SRG, iPSi	0.75	0.41 *(-45%)*	0.24 *(-68%)*	0.07 *(-91%)*
Fixed call termination (inter-island)	BTC, CBL/SRG, iPSi	1.13	0.62 *(-45%)*	0.36 *(-68%)*	0.11 *(-91%)*
Mobile call termination (domestic)	BTC, Aliv	2.48	1.57 *(-37%)*	1.12 *(-55%)*	0.66 *(-73%)*
SMS termination	BTC, Aliv	1.40	1.12 *(-20%)*	0.98 *(-30%)*	0.84 *(-40%)*
Inbound international mobile call termination	BTC, Aliv	4.61	2.92 *(-37%)*	2.08 *(-55%)*	1.23 *(-73%)*

39 SMS termination rates are expressed per message.

40 URCA notes that the glide paths discussed in Section 3.5 of this Determination describe the % of the movement towards interim rates (i.e., the reduction from current termination rates, relative to the difference between current and interim termination rates) that is implemented each year. The % changes in Table 3, above, represent the % changes in rates relative to the current level (i.e., not expressed relative to the gap between current and interim rates).

5 Annex: Benchmarking Methodology

This Annex describes the source of the benchmarking data used to set the interim termination rates presented in Section 2 of this Final Determination and notes any adjustments that have been made to those rates relative to the Preliminary Determination. The methodology used to set these rates is identical to that used in the Preliminary Determination. URCA notes, however, that BEREC has published an updated report on the levels of FTRs and MTRs (SMS termination rates are not included) in Europe and so any rates informed by this source (including the BEREC sample and any countries individually reported) have been updated to reflect this.[41] Furthermore, URCA has updated rates to reflect the most recent exchange rates.

A1.1 Data collection and adjustment approach

URCA has, where available, collected data on the following rates across the sample jurisdictions:

- Fixed call termination rates;
- Mobile call termination rates; and
- SMS termination rates.

Where possible, this information was sourced from publicly available regulatory decisions. Other sources, where regulatory decisions were unavailable, included news items on regulatory authorities' websites as well as third-party news and data services such as Telegeography.

Where glide paths were in place, the end-point of the glide path was used in URCA's benchmarking since it represents the rate which the regulatory authority deems to be the relevant cost-oriented rate. The glide paths are typically designed to soften the regulatory impact and therefore partially reflect the rates in place before the rates were reviewed.

Published rates were typically expressed in local currencies in the source documents, but some had already been converted to US dollars (for example, if published as part of a benchmarking study). URCA notes that the exchange rate between US dollars and Bahamian dollars is fixed at parity, so the timing of such conversions does not affect the results. URCA has converted all rates to Bahamian dollars using the average exchange rate over the three-month period to 1st December 2019.[42]

41 https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8701-berec-report-on-termination-rates-at-the-european-level

42 Source: www.xe.com

A1.2 Summary of data sources

The table below sets out all the sources used by URCA to obtain rates for the jurisdictions in the benchmarking sample.

Table 4 Source of benchmarking data (rates converted into Bahamian dollars, BSD)

Jurisdiction	FTR (BSD cents/min)	MTR (BSD cents/min)	SMS TR (BSD cents/SMS)	Source(s)	Notes
Dominica (ECTEL)	0.38	0.71	0.05	**All TRs:** https://www.ectel.int/wp-content/uploads/2018/09/PUBLIC_Determination_Interconnection_rates_2018-1.pdf	See pages 43-46
Grenada (ECTEL)	0.22	0.68	0.03		
St Kitts & Nevis (ECTEL)	0.28	0.56	0.02		
St Lucia (ECTEL)	0.20	0.56	0.02		
St Vincent (ECTEL)	0.31	0.87	0.04		
French Caribbean	0.09	0.75	1.10	**MTRs and FTRs**: https://en.arcep.fr/news/press-releases/p/n/arcep-publishes-for-consultation-its-draft-analysis-of-fixed-and-mobile-call-termination-markets-fro.html **SMS TRs**: https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8306-termination-rates-at-european-level-july-2018	See Table 9 in the BEREC document for SMS TRs
Cayman Islands	1.05	3.41[43]	-	**MTRs**: https://tatt.org.tt/DesktopModules/Bring2mind/DMX/Download.aspx?Command=Core_Download&EntryId=906&PortalId=0&TabId=222 **FTRs**: https://www.ofreg.ky/ict/upimages/publicrecord/ICT_Decision_2015_1	MTRs: Extracted from a study by TATT, the regulator in Trinidad and Tobago. See page 24. FTRs: See page 29

[43] URCA has amended this rate from the Preliminary Determination, where URCA applied an exchange rate conversion to a rate which was already expressed in US Dollars.

Barbados	0.55	2.75	-	**MTRs and FTRs**: https://www.ftc.gov.bb/library/2015-04-01_commission_decision_lric.pdf	See page 5
Jamaica	0.07	0.81	-	**MTRs**: https://www.our.org.jm/ourweb/sites/default/files/documents/sector_documents/cost_model_for_mobile_termination_rates_-_determination_notice_may_2013.pdf **FTRs**: https://www.our.org.jm/ourweb/sites/default/files/documents/sector_documents/determination_notice_-_cost_model_for_fixed_termination_rates_-_public_version.pdf	MTRs: See page 46 FTRs: See page 53. The rate used is the average of local and national call rates (9.39 and 9.58 JMD cents per minute, respectively).
Bahrain	0.27	0.64	-	**MTRs and FTRs**: http://www.tra.org.bh/media/document/MCD%2009%2015%20067%20RO%20Orders%20on%20Batelco%20Viva%20and%20Zain%20setting%20the%20regulated%20call%20termination%20rates%20PV.pdf	See page 3
Malta	0.05	0.45	2.39	**MTRs and FTRs:** https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8701-berec-report-on-termination-rates-at-the-european-level **SMS TRs**: https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8306-termination-rates-at-european-level-july-2018	FTRs: See Table 2 (Annex 1) MTRs: See Table 7 (Annex 6) SMS TRs: See Table 9

Cyprus	0.05	0.53[44]	-	**FTRs**: See BEREC source above	As above Note MTRs for Cyprus were excluded in the Preliminary Determination as the rates reported by BEREC were based on benchmarking. These rates are now cost-based according to BEREC's updated report and have therefore now been included.
UK Channel Islands	0.54	0.63	-	**MTRs and FTRs**: Telegeography	CICRA's proposed MTRs were withdrawn due to procedural issues. However, these proposed rates are used in the analysis as the issue was not conceptual.
BEREC sample	0.10	0.78	3.11	**All TRs**: See BEREC source above	Only rates based on Pure LRIC rates are considered for the BEREC sample

Note: A dash (" – ") denotes that rates are unavailable or not regulated. The BEREC sample excludes Malta, Cyprus, and France, which are included separately in the sample (France has the same rate as the French Caribbean). The rates for a small number of countries reported in the BEREC report were overridden with updated figures sourced from Telegeography.

[44] URCA notes that the value of 0.48 eurocents, from Figure 2 of the source document, is the correct value, rather than the value of 0.0048 eurocents from Table 7.