CABLE AND WIRELESS (JAMAICA) LTD.
COMMENTS ON

UPDATE OF THE COST MODEL FOR FIXED TERMINATION RATES – DRAFT MODEL (Document No: 2020/TEL/019/CON.003)

27 January 2021

I. INTRODUCTION

Cable & Wireless (Jamaica) Ltd. ("**C&WJ**")welcomes the opportunity to respond to the Office of Utilities Regulation's ("**OUR**") Consultation Document, *Update of Cost Model for Fixed Termination Rates—Draft Model*, dated 9 December 2020.

We note that, while we have responded to each OUR's questions, our comments as provided are not exhaustive and our decision not to respond to any particular issue raised in the Consultation Document does not constitute agreement with the OUR's approach to the issue.

Please direct any questions you may have to Charles Douglas at charles.douglas@cwc.com.

II. C&WJ'S RESPONSE TO OUR QUESTION 1: "DO YOU AGREE THAT THE DEMAND PRESENTED ABOVE REASONABLY REPRESENTS THE JAMAICA FIXED MARKET? "

1. With respect to voice traffic, we believe that the projections generally appear reasonable. However, we believe that the outgoing voice traffic should exhibit roughly the same rate of decline as the other incoming voice traffic in the forecast period, i.e., more on the order of a 6%-7%. The OUR does not explain why incoming and outgoing traffic should exhibit such different growth rates. Thus, C&WJ believes the OUR should reduce adopted the incoming traffic growth (which would be more in line with C&WJ's data request submission; otherwise, it should explain why the outgoing and incoming traffic trends should be so divergent, and give parties the opportunity to comment on that explanation.

2. The Broadband and leased line traffic data look reasonable, and are consistent with previous trends used in the original model exercise.

III. C&WJ'S RESPONSE TO OUR QUESTION 2: "DO YOU AGREE THAT THE NUMBER OF ACCESS NODES IS REASONABLE AND ACCURATELY REPRESENT THE REALITIES OF THE JAMAICAN MARKET?"

3. C&WJ notes that it is objectively difficult to estimate the number of access nodes that are reasonable for the *hypothetical* model by examining the *current* deployment of nodes in Jamaica. As the OUR implies and was discussed in more detail in the previous proceeding in 2016, such a calculation is complicated by both by the existing overlap of some of the access network of C&WJ and Columbus Communications Jamaica Limited and the migration from legacy DSL and HFC technology to more advanced technological NGN approaches that reduce the number of subscribers per node.

4. In any case, it is certain that the number of nodes proposed is much too low, given the number of households in Jamaica and the population density. The total number of nodes that the OUR's model is generating is 461. Given the number of households in Jamaica is around 955,000, this implies a household to node ratio to 2,072.

5. Typically NGN design assumptions put one node will at maximum service around 500 subscribers (in a dense urban setting[1]). See, for example, https://www.commscope.com/globalassets/digizuite/1834-scte-future-directions-for-fiber-deep-hfc-deployments.pdf.

6. Furthermore, in the bottom-up LRIC models that use the same methodological approach as that employed by the OUR, the estimated node count per household is exaggeratedly higher, implying the node count is exaggeratedly low. In the table below, we present the node count from six

[1] In rural environments, it would be significantly less. Rates of take-up would also be important to estimating the average subscriber per nodes levels.

other models employing the same approach: the Norway model from 2010 and the five ECTEL models from 2017.

Table 1: Comparable Results for Models using OUR's approach to node calculation

Country	Regulator-Year	Access node estimate	Households	Households/ Access Node	Population density (km²)
Jamaica	OUR-2020	461	955,215	2,702	273.4
Norway	NPT-2010	3,948	2,220,854	563	13.4
Dominica	ECTEL-2017	91	26,443	291	95.2
Grenada	ECTEL-2017	93	37,608	404	331.8
St. Kitts & Nevis	ECTEL-2017	84	17,139	204	197.8
St. Lucia	ECTEL-2017	79	64,294	814	295.1
St. Vincent & the Grenadines	ECTEL-2017	48	36,486	760	280.7

Sources: Population and household data from www.worldometers.info; www.prb.org; unicef; World Bank; For Norway example, see NPT's fixed long-incremental cost model: Core Model v1.4, 27 January 2011. Analysys Mason. For ECTEL examples, see ECTEL's Fixed BU-LRIC model, 29 May 2017. Axon Partners Group.

7. The OUR model estimates 2,702 household per node, whereas even countries with similar or higher densities (Grenada, St. Lucia and St. Vincent & the Grenadines) exhibit a fraction of that amount.

8. It is not clear how the OUR arrived at its node count; however, given the significant underestimation of nodes, a different approach is clearly necessary. We suggest the following. A simple regression of the non-Jamaica data above suggest that over 99% of the variation in nodes can be explained by variation in the number of households. Further, household variable is 0.00177054. See table below. This suggests that Jamaica node count should be around 1,700.[2] The OUR should make reasonable adjustments to its assumptions or correct any errors to achieve a value closer to that magnitude.

Table 2: Regression results for Households on Node Count

Regression Statistics								
Multiple R	0.99976116		ANOVA					
R Square	0.99952238			*df*	*SS*	*MS*	*F*	*Significance F*
Adjusted R Square	0.99940297		Regression	1	12469668.2	12469668.2	8370.83612	8.5559E-08
Standard Error	38.596065		Residual	4	5958.62493	1489.65623		
Observations	6		Total	5	12475626.8			
	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	14.7839948	17.559495	0.84193735	0.44721666	-33.968979	63.5369687	-33.968979	63.5369687
Household Variable	0.00177054	1.9352E-05	91.4922736	8.5559E-08	0.00171681	0.00182427	0.00171681	0.00182427

9. We note that the calculation above assumes that the migration to NGN is complete.

10. With respect to the migration itself, the model currently assumes that the migration is completed, i.e., by year-end 2020. However, this is not the case.

11. We propose that it would be more realistic for the OUR bring forward its schedule two years, so that its migrated percentages for 2018 are applied to 2020, for 2019 are applied to 2021, etc. In this scenario, migration is

[2] 955,215 households x 0.00177054+14.78=1,706 nodes.

completed in 2023, this approach would reflect the reality that the migration as of 2021 is not yet finished.

IV. C&WJ'S RESPONSE TO OUR QUESTION 3: "DO YOU AGREE THAT THE UNITARY COSTS AND TRENDS USED FOR THE RESOURCES ARE ACCURATE FOR A TELECOMMUNICATIONS OPERATOR IN JAMAICA?"

12. We find that that the unitary costs that appear in the "additional inputs" workbook appear to be reasonable.

13. With respect to the costs trends, however, there is a bias with respect to cost when one compares the assumptions in the OUR's mobile cost model with that in its fixed cost model. In both models, similar types of capex that are associated with heavy components of land and labor are forecasted in both models to have a positive cost trend, and similar types of capex that are associated with heavy components of electronics and software to have a negative trend.

14. This is to be expected; however, almost systematically, both positive and negative cost trends are lower in the fixed cost model than in the mobile model. For example, site costs in the fixed cost model are forecast to increase by 3.7% per year, and billing platforms in the fixed model decrease by 8% per year. In the mobile model, these values are + 6% and - 3%, respectively. There is no logical reason why the cost trend for similar capex items should be different between the two models. As such it would appear that the OUR is taken an unjustifiably aggressive view on costs for the fixed model relative to those of the mobile model. We note that C&WJ data request submission had cost trends for similar capex items in the fixed model were close to those in the model.

15. As the mobile model has already be consulted upon, we propose that the OUR revise its costs trends for the fixed cost model to ensure that they are consistent with the assumptions used in the mobile cost model.

V. C&WJ'S RESPONSE TO OUR QUESTION 4: "DO YOU AGREE THAT THE RESOURCES OBTAINED ARE REASONABLE TO SATISFY DEMAND?"

16. Based on the description of the BULRIC model, we do not believe the certain of the main resources volumes covered in Table 4 are reasonable to satisfy modelled demand:

    i. As discussed above in our response to Question 2, we believe the ultimate number of NGN access nodes are significantly underestimated, which will impact the volume of MSAN chassis. Revising the derivation of NGN access nodes as we propose above should solve this problem.

    ii. As discussed above in our response to Question 2, we believe that as there are still legacy nodes in the network, the legacy nodes should not be zero, revising the migration schedule as we propose above should solve this problem.

    iii. Regarding fibre transmission, the approach to setting the number of nodes should have an impact on fiber kilometer values and other aspects of transmission network as well. The OUR should review these aspects of the model after revision of the node numbers.

VI. C&WJ'S RESPONSE TO OUR QUESTION 5: "DO YOU AGREE THAT THE COST STRUCTURE SHOWN [IN TABLE 5] IS REASONABLE FOR AN OPERATOR WITH THE DEMAND AND CHARACTERISTICS OF THE MODELLED OPERATOR?"

17. Given that we have identified areas in which the capex is underestimated, and generally the network opex is tied to capex in this model, we would expect that the share of Cost of Capital, depreciation and OpEx should be higher than is represented in table 5.

VII. C&WJ'S RESPONSE TO OUR QUESTION 7: "DO YOU WITH THE ROUTING FACTORS USED?"

18. We find that the routing factors appear to be reasonable.

VIII. C&WJ'S RESPONSE TO OUR QUESTION 8: "DO YOU AGREE THAT THE SERVICES' UNIT COSTS OBTAINED ARE REASONABLE?"

19. We do not find the services' unit costs reasonable. We cannot do so until the model is adjusted to reflect the reasonable modifications that we have present in our responses to the foregoing questions.

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