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Our Ref: GRCR/GR/15.19

2 October 2012

Mr. David Archbold
Managing Director
Information and Communication Technology Authority
3rd floor Alissta Towers
P.O. Box 2502
Grand Cayman KY1-1104
Cayman Islands

Dear Mr. Archbold,

Re: FTR and Transit Rate Proceeding – CD2012-1

Pursuant to the Authority's procedures set out in the above noted Consultation Document, Cable and Wireless (Cayman Islands) Limited, trading as LIME ("LIME") is pleased to file its proposed fixed termination rates ("FTR") and transit rates.

In accordance with the directives of the Authority set out in CD2012-1, LIME notes these rates are derived from the Fixed FLLRIC model, in particular cells F44 and H44 in the attached confidential workbook "2012 10 02 CYM fixed – Conf.xlsx", in the worksheet "Fixed Service Costs". LIME notes that these rates differ slightly from the equivalent figures in the redacted version of the same workbook, but these differences are not material and are due to the redaction process. In contrast to the existing Standard Interconnection Offer rates structure of a call set-up charge, a call duration charge and an interconnect specific charge, LIME proposes the new rates be applied as a single per-minute charge.

- FTR: CI\$0.022 per minute
- Transit rate: CI\$0.0175 per minute.

In the following we describe the changes from the last version of the model submitted by LIME ("2012 02 07 CYM Fixed – Conf.xlsx"), that produce these values. The result of these changes was, generally, lower fixed termination and transit costs.

REDACTED

We note that in proposing these changes to the model we were cognizant that much time and effort has been devoted to producing the latest version of the model. The structure of the model and the costing methodology has been extensively reviewed and modified by the Authority and other interested parties. We therefore have made no significant changes to the structure of the model or the costing methodology. With a single exception to be discussed below, we have rather just updated inputs into the model to bring them up to date.

We have organized our discussion of the changes in the inputs on a worksheet-by-worksheet basis.

Proposed Changes to the fixed FLLRIC model

Technical Assumptions

No changes were made to assumptions in this worksheet as they are generally not time-sensitive and were approved by the Authority.

Cost Assumptions

No changes were made to the “General Assumptions” section of this worksheet as they have been approved by the Authority.

With respect to the “Duct Unit Costs” section, we have updated the capital costs. The costs of the ducts (equipment and installation labour) in cell C6:C78 and F6:F78 were introduced to the model in 2009. We have added a cost adjustment factor in E6 reflecting an annual cost increase of 2.5% a year for 3 years. This percentage is based on a benchmarking of duct costs found in other relatively recent fixed LRIC models. See Table 1 below.

No changes were made to the “Access Network Assumptions” section of this worksheet as it relates to the access network, and access assumptions are assumed to be unchanged for this proceeding.

The fibre costs of the “Transmission Direct Capex” section in cells C192:C205 and F192:F205 were introduced to the model in 2009. We have added a cost adjustment factor in J190 reflecting an annual cost decrease of 5% a year for 3 years. This percentage is based on a benchmarking of fibre costs found in other relatively recent fixed LRIC models. See Table 1 below.

The active transmission equipment costs of the “Transmission Equipment Direct Capex” in cells C211:C226 were introduced to the model in 2009. We have added a cost adjustment factor in K212 reflecting an annual cost decrease of 5% a year for 3 years. This percentage is based on a benchmarking of similar costs found in other relatively recent fixed LRIC models. See Table 1 below.

The network management, voicemail and MSE-related costs of the “NGN Direct Capex” in cells C238:C251 were introduced to the model in 2009. We have added a cost adjustment factor in K236 reflecting an annual cost decrease of 7.5% a year for 3 years. This percentage is based on a benchmarking of similar costs found in other relatively recent fixed LRIC models. See Table 1 below.

The MG-related costs of the “NGN Direct Capex” in cells B254:C269 and DSLAM costs were introduced to the model in 2009. We have added a cost adjustment factor in K254 reflecting an annual cost decrease of 5% a year for 3 years. This percentage is based on a benchmarking of similar costs found in other relatively recent fixed LRIC models. See Table 1 below.

The switch and router-related costs of the “Other” category in cells C285:C289 were introduced to the model in 2009. We have added a cost adjustment factor in K254 reflecting an annual cost decrease of 5% a year for 3 years. This percentage is based on a benchmarking of similar costs found in other relatively recent fixed LRIC models. See Table 1 below.

Table 1. Equipment price trends in recent fixed LRIC models, annual growth

	Denmark*	Sweden+	Netherlands§	Australia>	Proposed for Model
Duct/Trench	3%	2%	2%	3%	2.5%
Fibre	-5%	-5%	-9%	-4%	-5%
Active Transmission Equipment	0%	-5%	-5%	-7%	-5%
Gateway, call server	0%	-7.5%	-5% (service platforms)	-8% (service platforms)	-7.5%
MG/MSANs/DSLAMs	0%	-5%	0% (MSAN racks and cards), -8% (MSAN ports)	0%	-5%
Switch, Router	0% (routers), -7.5% (layer 2 switches)	-7.5%	-8%	0%	-7.5%
Submarine Cable	-8%	-4%	N.A.	N.A.	-6%

*NITA, Report on the LRAIC Model and User Guide, November 2009

+ PTS, Hybrid Model Documentation v7.0, September 2009

§ <https://www.opta.nl/nl/download/bijlage/?id=530>

> <http://www.accc.gov.au/content/index.phtml/itemId/889101>

Demand Assumptions

No changes made to this sheet as it relates to the access network, and access assumptions are assumed to be unchanged for this proceeding.

Asset Lives

No changes were made to input assumptions in this worksheet as they are generally not time-sensitive and were approved by the Authority.

Reval_Assets

No changes were made to the “General Assumptions” section of this worksheet as the input assumptions have been approved by the Authority.

FAC Inputs

Opex values have been adjusted downwards to reflect the fact that since 2006 operational efficiency has increased. In order to effect this, we compared the level of operational expenditure from the 2006/7 statutory accounts with that of 2011/12 (see in table below). The operational expenditure is 14.5% lower in 2011/12 than it was in 2006/7. See Table 2. We understand that this is only a rough estimate as it relates to overall LIME opex, not just its fixed network specifically. However, in the absence of a full-blown top-down cost allocation exercise, we believe it is not an unreasonable estimate. We therefore multiplied the value of in the “efficiency adjustor” by 85.5%.

Table 2. Operating Expenditures, C&W Cayman Islands, 2006/7 and 2011/12

	2006/7	2011/12	Change
Operating costs	###	###	
Salaries & wages	####	###	
Depreciation	###	###	
Amortization	###	###	
Head Office support costs	###	###	
Rental of facilities & other property	###	####	
Pension costs	###	###	
Other employee costs	###	###	
Total Operating Expenditures	###	###	-14.5%

Specifically, we have added the additional efficiency adjustment in cell F1 of the FAC Input sheet and adjusted all the formulae relating to the fixed network or overhead opex (C4 to C88 and C152 to C198) in column C to take this factor into account.

Overhead_exp

No changes were made to input assumptions in this worksheet as they are generally not time-sensitive and were approved by the Authority.

Expense Factors

No changes were made to input assumptions in this worksheet as they are generally not time-sensitive and were approved by the Authority.

Routing Factors Input

The routing factors were altered to reflect the fact that:

- 1) Some of the MSE costs are not voice-specific, but have IP functionality as well; and
- 2) The billing platform may arguably be used only once in the routing of domestic transit.

With respect to 1), we note that most of the value of the two MSE nodes are tied to the management of voice traffic; however, realigned the PP15K, PP8600 have IP functions. Therefore, we believe that Direct Connect and ADSL services should receive a routing factor for the Host Switch network element. In particular, as the call sensitive components of the Host Switch network element concern the call server and voice management, we believe that ADSL and Direct Connect service should receive a routing factor for the "PSTN Host Switch duration sensitive" element. There are two ways one could implement this in the model. One is to break out the components of the PSTN Host Switch duration sensitive element that are voice specific from those that are not. In the interest of time and simplicity we have instead taken the share of the capex of the PSTN Host Switch duration sensitive element, 25%, and used that for the routing factor for the ADSL and Direct Connect IP services.

Thus, to capture, IP's use of the non-voice specific equipment in the MSE we have replaced zero with .25 in cells F4, F5 and F8 in the "Routing Factors Input sheet".

Please note that this change also requires a change in the "NGN Cost" sheet described below.

With respect to 2), although we have elsewhere argued that the appropriate routing factor for the interconnect billing platform element for domestic transit is "2", we can accept that the billing platform may not only be utilized once per call minute for this service.

We therefore change the cell U13 in the in the "Routing Factors Input sheet" from "2" to "1".

List of Services

No changes made to this sheet as it relates to the structure of the model.

List of Network Elements

No changes made to this sheet as it relates to the structure of the model.

Access Dimensions

No changes made to this sheet as it relates to the access network, and access assumptions are assumed to be unchanged for this proceeding.

Core fibre Dimensions

No changes were made to this sheet as fibre lengths are assumed to remain unchanged.

MG Dimensions

No changes made to this sheet as the forecasted number of subscribers is still within the total subscriber number available at modeled sites.

Duct Dimensions

No changes were made to this sheet as we assume that duct lengths do not change.

Tx Equipment Dimensions

No changes were made to this sheet as the single input assumption continues to be valid.

Demand Calculations

No changes were made to this sheet as there are no input assumptions.

Access Calculations

No changes made to this sheet as it relates to the access network as access they are assumed to be unchanged for this proceeding.

Core Fibre Calculations

No changes were made to this sheet as there are no input assumptions.

Duct Calculations

No changes were made to this sheet as there are no substantive input assumptions.

MG Calculations

No changes were made to this sheet as there are no substantive input assumptions.

International Transmission TX Costs

The total cost of the submarine cable in cell C6 was approved by the Authority in 2009. We have added a cost adjustment factor in E6 reflecting an annual cost reduction of 6% a year for 3 years. This percentage is based on a benchmarking of submarine cable capital costs found in other relatively recent fixed LRIC models. See Table 1.

Access Costs

No changes made to this sheet as it relates to the access network as access they are assumed to be unchanged for this proceeding.

Core Fibre Costs

No changes were made to this sheet as there are no substantive input assumptions.

NGN Costs

As discussed under “the Routing Factor Input” sheet, we believe that it is appropriate to allocate some of the cost of the MSE node to the ADSL and Direct Connect services as they involve non-voice specific components. We have modified the model as follows to allow the model to allocate this cost appropriately. First, we note that the call sensitive/duration sensitive ratio found in cell C5 of the “NGN Costs” sheet relates only to the call server, the CS2K. Therefore, next, only the total cost of the CS2K is split between call-sensitive and minute-sensitive cost in the annualisation cells D35 and E35. All the rest of the MSE Costs are allocated to the minute-sensitive cost in E35.

The routing factors for ADSL and Direct Connect ensure that an appropriate portion of the minute sensitive cost is pick up by those services in “the Routing Factor Input” sheet. See discussion above.

Transmission Equipment Costs

No changes were made to this sheet as there are no input assumptions.

Other Costs

No changes were made to this sheet as there are no input assumptions.

Cost Summary & Mapping

No changes were made to input assumptions in this worksheet as they are generally not time-sensitive.

Scenario Output

No changes were made to this sheet as there are no input assumptions.

Scenario Volumes

No changes were made to this sheet as there are no input assumptions.

Fixed Network Costs

No changes were made to this sheet as there are no input assumptions.

Retail Costs

No changes were made to input assumptions in this worksheet as they are generally not time-sensitive.

Fixed Service Costs

The following changes were made in order to deliver the necessary per minute and per call values:

1. Formula in cell F51 and H51 are changed, respectively, from

=IF(F40=0,,F42/F40) to =IF(F38=0,,F49/F38)

and

=IF(H40=0,,H49/H40) to =IF(H38=0,,H49/H38)

Volume Input for TD

- ADSL Retail lines and 2M volumes were updated in cells Y2 and AA2 based on actual 2011/12 volumes
- ADSL Wholesale lines and 2M volumes update in cells Y3 and AA3 based on actual 2011/12 volumes
- Dial-up internet usage lines and 2M volume were updated in cells Y5 and AA5 based on actual 2011/12 volumes. Calls and Minutes were updated in X5 and Z5 based on an estimated usage-to-line ratio.
- Direct Connect lines and 2M volumes were updated in cells Y6 and AA6 based on actual 2011/12 volumes
- Domestic DQ Retail calls and minutes were updated in cells X7 and Z7 based on actual 2011/12 volumes

- Domestic DQ wholesale calls and minutes were updated in cells X8 and Z8 on the basis of a percentage of retail calls and minutes based on historic ratios.
- Domestic leased circuits retail lines and 2M volumes were updated in cells Y9 and AA9 based on actual 2011/12 volumes
- Domestic leased circuits wholesale lines and 2M volumes were updated in cells Y10 and AA10 based on actual 2011/12 volumes
- Domestic Transit calls and minutes were updated in cells X11 and Z11 based on actual 2011/12 volumes
- Emergency Services retail calls and minutes were updated in cells X12 and Z12 based on actual 2011/12 volumes
- Emergency Services wholesale calls and minutes were updated in cells X13 and Z13 based on actual 2011/12 volumes
- Fixed Calls to C&W Mobile calls and minutes were updated in cells X14 and Z14 based on actual 2011/12 volumes
- Fixed Calls to Other Mobile calls and minutes were updated in cells X15 and Z15 based on actual 2011/12 volumes
- Fixed International Incoming calls and minutes were updated in cells X16 and Z16 based on actual 2011/12 volumes
- Fixed International Outgoing calls and minutes were updated in cells X17 and Z17 based on actual 2011/12 volumes.
- Fixed Voicemail retail calls, lines and minutes were updated in cells X18, Y18, Z18 based on actual 2011/12 volumes
- MPLS IP-VPN QoS Retail lines and 2M volumes were updated in cells Y21 and AA21 based on actual 2011/12 volumes
- MPLS IP-VPN QoS Wholesale lines and 2M volumes were updated in cells Y22 and AA22 based on actual 2011/12 volumes
- International Leased Circuits Retail lines and 2M volumes were updated in cells Y23 and AA23 based on actual 2011/12 volumes
- International Leased Circuits Wholesale lines and 2M volumes were updated in cells Y24 and AA24 based on actual 2011/12 volumes
- International payphone calls and minutes were updated in cells X25 and Z25 based on actual 2011/12 volumes
- ISDN Access Retail calls and minutes were updated in cells X26 and Z26 based on actual 2011/12 volumes
- National payphone calls, lines and minutes were updated in cells X27, Y27, Z27 based on actual 2011/12 volumes
- Operator Assistance calls and minutes were updated in cells X28 and Z28 based on actual 2011/12 volumes.
- PSTN Access Bus lines were updated in cell Y29 based on actual 2011/12 volumes
- PSTN Access Res lines were updated in cell Y30 based on actual 2011/12 volumes
- Fixed Calls to OLO calls and minutes were updated in cells X31 and Z31 based on actual 2011/12 volumes
- PSTN call termination calls and minutes were updated in cells X32 and Z32 based on actual 2011/12 volumes
- National Call Retail calls and minutes were updated in cells X33 and Z33 based on actual 2011/12 volumes
- VOIP Minutes and subscribers were updated in cells Z37 and AB37 based on actual 2011/12 volumes.

Furthermore, selected growth factors were adjusted on the basis of the historic record of volumes and other considerations.

- ADSL Retail growth factors were changed in cells O2, P2 and Q2 based on the annual linear growth between 2008 and 2012.
- Dial up internet usage growth factors were changed in cells O5, P5 and Q5 to zero growth.
- Fixed Call to C&W Mobile growth factors were changed in cells N14 and P14 based on the annual linear growth between 2008 and 2012.
- International incoming growth factors were changed in cells N16 and P16 to zero growth reflecting the failure of projection to achieve positive growth in previous periods.
- International outgoing growth factors were changed in cells N16 and P16 to zero growth reflecting the failure of projection to achieve positive growth in previous periods.
- Fixed voicemail retail growth factors were changed in cells N16 and P16 to zero growth reflecting the failure of projection to achieve positive growth in previous periods.
- National call retail growth factors were changed in cells N14 and P14 based on the annual linear growth between 2008 and 2012.

Definitions

No changes were made to this sheet as there are no input assumptions.

Confidentiality Claim

Please note that some of the information in this submission, principally the highlighted information in the above table and some information in the attached Fixed FLLRIC models, is commercially sensitive information, and LIME requests that the Authority designate it as confidential pursuant to the *Information and Communications Technology Authority (Confidentiality) Regulations*. Disclosure of this information to the public would provide potential competitors with specific and direct information about LIME's revenues and costs, information which is consistently not disclosed to the public, and the disclosure of which could reasonably be expected to cause LIME financial harm. LIME notes that confidentiality of the FLLRIC models and disclosure of its information has been the subject of many proceedings before the Authority, and determined several times. There have been no material changes in circumstances since those determinations and therefore no reason to modify them.

A redacted version of this letter, with all confidential information replaced by "###", will be prepared for the public record. A redacted version of the Fixed FLLRIC model has also been prepared, in accordance with the Authority's ICT Decision 2010-2 directives, with only the specific cells identified by the Authority as confidential being redacted and highlighted in red, and the "dummy" numbers in them being within plus or minus 50% of the confidential value.

Please do not hesitate to contact the undersigned if you should have any questions.

Yours faithfully,
Cable and Wireless (Cayman Islands) Limited, trading as LIME

[signed]

Frans Vandendries
VP Legal and Regulatory Affairs

c.c. Anthony Ritch, General Manager, LIME
Rod Kirwan, Group General Counsel, LIME
CD2012-1 Distribution List

Encl.

REDACTED

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