



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Information Notice

Operators correspondence on clarifications concerning cost models Access Network Model, Pole Access Model and Duct Access Model

Information Notice

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An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

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Additional Information

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1. On 9 September 2020 ComReg published Consultation Document 20/81¹ ('**Consultation 20/81**') regarding the pricing of Eircom's Civil Engineering Infrastructure² ('**CEI**'), including pricing proposals for CEI access by National Broadband Ireland ('**NBI**') for the purposes of the Irish Government's National Broadband Plan ('**NBP**'). The deadline for responses to this consultation was 18 November 2020³.
2. On 22 October 2020, ComReg published Consultation Document 20/101⁴ ('**Consultation 20/101**') on Eircom's regulated wholesale fixed access charges which included proposed revised FTTC prices and CG Bitstream prices following updates made to the NGA Cost model. Responses to this consultation are due on or before 5.30pm on 8 January 2021.⁵
3. ComReg has received from Sky and Vodafone a number of queries concerning the draft cost models underpinning these two consultations. The draft cost models have been made available to these operators (and more generally to any interested operator requesting access to these models and related documentation) in the terms described in these consultations⁶. In this regard, ComReg wishes also to clarify that the draft cost models made available to operators contain operator data which ComReg assessed to be confidential and, as a result, such data has been randomised. The randomisation of confidential data has been performed within a range of +/- 20% of the original value, e.g. if the confidential value is 10 units, the randomised value is within a range of 8 to 12 units.
4. ComReg further notes to all interested parties the approaching deadline for ComReg Consultation 20/101 (8 January 2021) and therefore it strongly encourages any further queries on any particular aspects of the draft cost models, where the documentation is found to be insufficient, to be submitted without delay or in any event by Friday 11 December 2020.
5. Sky's queries and ComReg's responses are included in Appendix 1.

¹ ComReg Document No 20/81, "Pricing of Eircom's Civil Engineering Infrastructure ('CEI'), CEI access in the context of the National Broadband Plan ('NBP')", dated 9 September 2020

² Access to Eircom's ducts and poles.

³ ComReg Information Notice 20/100. The original closing date of 4 November 2020 was extended to the 18 November 2020

⁴ ComReg Document No 20/101, "Regulated Wholesale Fixed Access Charges - Review of the Access Network Model (ANM) and Specification of the Price Control for Public Switched Telephone Network - Wholesale Line Rental (PSTN WLR): Consultation and Draft Decision", dated 22 October 2020

⁵ ComReg Information Notice 20/113. The original closing date of 4 December 2020 was extended to the 8 January 2021

⁶ See paragraph 364 of ComReg Document No 20/81 and paragraph 5.2 of ComReg Document No 20/101.

6. Vodafone's queries and ComReg's responses are included in Appendix 2.
7. While there is no obligation on ComReg to provide (or publish) this correspondence, ComReg is publishing this information in the interests of transparency to all relevant stakeholders.

Appendix 1: Sky's correspondence



Clarifications sought on ANM, PAM and DAM

We refer to ComReg's response to ALTO on 6 November, 2020 entitled "*ALTO request concerning Access Network Model*". We are disappointed that that ComReg has not seen fit to provide workshops as requested. Without prejudice to our views on that matter and indeed ComReg's failure to provide access to unredacted models generally subject to strict confidentiality requirements, we note ComReg suggestions that "*particular queries or clarifications*" in relation to the models could be sent to ComReg. As such Sky would submit the following queries:

1. At paragraph 4.32 of consultation 20/101 ComReg notes as follows:

"ComReg considers that applying either a LRAIC or a FAC approach to cost PSTN WLR is consistent with ensuring the appropriate cost recovery for Eircom as all relevant costs, including a reasonable attribution of common (shared) network costs and corporate overhead costs, are considered in the calculations. A LRAIC+ approach is generally used in a BU model while a FAC based approach is the preferred option when modelling TD costs."

We further note at paragraph 4.53 that ComReg indicate that the Regional Low Level FACO market straddles "all 3 footprints" i.e. Urban and Rural Commercial Areas and the NBP-IA. Consequently, it is our understanding, that when ComReg suggest a LRAIC+ approach to PSTN WLR pricing, what this effectively entails is the composition of a portion of common costs attributable to lines in the Urban and Rural Commercial footprints within the Regional Low Level FACO market and this composition is then spread across all lines in the Regional Low Level FACO market including those in the NBP-IA. However, no contribution to the common costs composition is derived from allocations associated with the NBP-IA area and in this respect the NBP-IA is contributing only to an allocation of common costs associated with the Commercial areas in the final PSTN WLR price through geographic averaging.

Please confirm that our understanding is correct in this regard or in the alternative clearly explain the source of the common costs spread across lines in the Regional Low Level FACO market that feeds into the prices outlined at Table 18.



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2. In the PAM and DAM models ComReg has outlined the scale of the mark-up associated with common costs e.g. common costs mark-up in the PAM is **18.9%** and so we trust this figure is deemed to be confidential. Can ComReg please advise as to the scale of the mark-up to PSTN WLR prices in Table 18 associated with common costs?
3. ComReg suggest at paragraph 4.52 that *“the exchanges that make up the Regional Low-Level FACO Market...accounts for less than 200,000 active PSTN WLR lines”*. Can ComReg please provide a breakdown from that 200,000 figures as to the portion of lines in the Commercial Areas and the NBP-IA.
4. With respect to the PAM Model, we note that when you select “yes” in the option to allocate common costs to the “Intervention Area” on the “Input_Parameters” sheet, the 18.9% mark-up is applied to the output prices for the Intervention Area on the “Output_Results” sheet. However, there is no corresponding reduction in the prices of the pole prices in the Commercial Areas. This does not make sense as such an approach would entail double recovery of common costs in the Commercial and NBP-IA footprints. Based on the modelled approach no assessment as to the sensitivity of pole prices in the Commercial Area to sharing of common costs with the NBI-IA can be made – such an assessment is critical to informing impact on end-users, promoting efficient infrastructure and the materiality of any potential discriminatory outcomes. Consequently, we request that ComReg provide updated Tables for Table 3 and Table 5 of consultation 20/81 that assumes common costs are allocated across both the Commercial Areas and the NBP-IA and whereby NBI makes a contribution to common costs across both areas in the same manner that would apply to all other operators.
5. Further to the previous question we would also ask that ComReg provide an updated Table 3 that assumes no distinction between NBI and Generic Access users i.e. both NBI and Generic Users are not treated any differently in terms of what they pay for pole access either in the Commercial or NBP-IA footprints. Sky consider that being able to compare the prices in both scenarios is fundamental to a proper Regulatory Impact Assessment and to inform the scale benefit that accrues to NBI versus the scenario whereby it is treated the same as other operators.
6. At paragraph 5.141 ComReg note *“the high incremental cost of providing service in the NBP-IA means there is insufficient margin from customer revenues in the NBP-IA to contribute the to the recovery of common corporate costs”*.
 - a. Can ComReg please specify what “services” and what price points (or range of price points) associated with those services were considered in reaching



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this conclusion given the purpose of the current revenue is to set new prices for all access services covered in consultation 20/101?

- b. What constraints on “customer revenues” is being assumed in reaching this conclusion e.g. in D11/18 it appears as though the then fixed PSTN WLR price was a constraint that informed ComReg’s view as to the service’s ability to make a contribution to common costs following that review but it is unclear what constraint/s applies in the context of the current review.
7. We note that ComReg’s proposed prices in Consultation 20/101 assumes a per line allocation of Repair & Maintenance costs. Given that ComReg has detailed information on R+M in all three footprints (Rural & Urban Commercial and NBP-IA) did ComReg assess an allocation of R+M costs caused by activity in each of the footprints and if so what is the approximate split of R+M costs across these 3 footprints.
 8. Has ComReg carried out an assessment of the level “common costs” at Eircom’s main infrastructure competitors i.e. SIRO, BT and Virgin given that it considers common cost to be fixed regardless of the scale and scope of the hypothetical operator being modelled in the ANM?
 9. We estimate that **123** Eircom exchanges provide neither FTTC or FTTH services. Can you advise as to the treatment of Network Rates for those 123 exchanges i.e. are Network Rates associated with these exchanges (including associated Pole Routes) part of the common cost pot spread across Commercial Areas or are they allocated to the NBP-IA?
 10. EVDSL v CVDSL
 - a. How does the ANM (geospatial) assign urban commercial (UC) area premises to FTTC cabinets compared to assigning premises with direct connections to the exchange?
 - b. How many UC premises are connected to FTTC cabinets compared to on direct connections to the exchange?
 - c. Does the ANM model an FTTC cabinet sitting at each exchange? If so, is this treated as a ‘normal FTTC’ cabinet? If so, does the model distinguish the number of FTTC cabinets?
 - d. How many VDSL connections are distributed across the UC area, and hence how many are VDSL connections via FTTC-VDSL, and how many are VDSL connections via eVDSL?

Sky, 25 November, 2020.



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Kevin Barrins
Sky Ireland

04 December 2020

Subject: Response to your letter of 25 November 2020 with request for clarifications on ANM, PAM and DAM

Dear Kevin,

We refer to your letter of 25 November 2020 with request for clarifications on the draft ANM, PAM and DAM. Please see below our response to your queries.

Best regards
Pedro Fontes

Query No.1

We confirm your understanding. A common cost per service line is derived and attributed only to lines in the Commercial Areas of the Regional Low Level FACO market. Therefore, the service costs derived in the ANM for PSTN WLR in the Regional Low Level FACO market will reflect an average of the costs of commercial lines with common costs and of the cost of lines in the Intervention Area (IA), which do not include common costs. We further refer you to paragraphs 5.31, 5.96 to 5.101 of the ANM Specification Document (*ANM - Specification Document_ComReg 20101.pdf*) and the worksheets 'Calc_Opex_Apportionment' (rows 79-82) in the Opex Module. We also wish to clarify that your description of the costing approach for PSTN WLR as being LRAIC+ could be more accurately described as a combination of Top Down Fully Allocated Costs (based on Eircom's HCAs for copper related assets) and BU-LRAIC+ (for the active equipment) as stated at paragraph 4.55 of the ANM Consultation (ComReg Document No. 20/101).

Query No.2

As outlined in our response to your query No. 1, when costing access line services such as PSTN WLR a mark-up approach is not used. Instead common costs are allocated on a per service line basis with all services in Commercial Areas making an equal contribution to common costs.

Query No.3

ComReg cannot provide the actual number of lines in the Commercial Areas and the IA as this information is not available as Eircode data on legacy services is incomplete. In the ANM actual volumes by exchange are attributed to the 3 footprints based on a bottom-up analysis of volumes as stated in paragraph 5.31 of the ANM Specification

Document. For a description of the derivation of the bottom-up volumes by footprint we refer you to Section 3 of the same document (from paragraph 3.57).

Query No.4

The common costs mark-up of 18.9% is a static input, calculated using the ANM Capex Module, which in the draft version of the PAM is not dynamically linked to the common costs parameter (*I.Par.6*)

As noted in our letter to ALTO of 6 November 2020, ComReg can only provide clarifications “where the documentation is found to be insufficient” to explain the models. Providing updated pricing tables with alternative pricing/costing methodologies is not within the stated scope of these clarifications.

However, with respect to the assessment of common costs, we refer you to paragraph 6.35 of the ANM Specification Document. The common costs mark-up used in the draft PAM was calculated by dividing the total common costs by the annualised capex in the Commercial Areas footprints as calculated in the ANM Capex module. The total common costs are shown in the worksheet “Output_Capex” (cell F45) in the Opex Module. The annualised capex by footprint is shown in “Calc_Network_Annual” (sum of cells H196- 380) in the Capex Module. Based on this, it can be determined a reasonable estimate for the reduction (circa -30%) in the common cost mark-up based on the sum of the capex in commercial footprints and IA. Based on this, an all network common cost mark-up would be circa 13%.

Query No.5

Please refer to our response to your query No 4. Sky should be able to undertake the relevant sensitivity analysis by revising the % mark-up for common costs when the draft PAM is run in the allocate common costs to the “Intervention Area” scenario.

Query No.6

WLR is assumed to be the main service that Eircom sell in the NBP IA. No particular price point was considered and this position in paragraph 5.141 of the ANM consultation is consequent to the principle outlined in ComReg D11/18 (see paragraph 6.226, footnote 161 “One consequence of this approach to common cost recovery is that it recognises that all services offered in the non-commercial area cannot be expected to make a contribution to Eircom’s common costs as these costs are already fully recovered from the services offered in the commercial area. As a result, the prices that Eircom might charge an NBP operator for access to poles and ducts in the Intervention Area do not need to include a common cost mark-up and so should be lower than the prices set by ComReg for duct and pole access under the 2016 Access Pricing Decision (D03/16), which did include such a mark-up”).

The constraint arises from the fact that in ComReg D03/16 the PSTN WLR price was set on the basis of a national average cost for all copper lines - consequently some WLR lines would have a cost above the national average, necessitating that the negative margins on such lines (when compared to the average cost that informs the price) be funded from the positive margins on others. The costliest lines are typically the longer, more isolated lines that are found in the IA.

Query No.7

ComReg has no detailed information on Repair and Maintenance for each of the three footprints and hence did not assess an allocation of these costs in each of the

footprints. We further refer you to paragraphs 5.121 to 5.128 of the ComReg 20/101 on the assessment of repair costs undertaken by ComReg, including the information used and the level of cost efficiencies considered.

Query No.8

No benchmarking was carried out. The ANM assumes a hypothetical operator of similar scale and scope as Eircom and no operator in Ireland has a similar footprint to Eircom or operates to the extent that Eircom does as a provider of network inputs. Also, not all of Eircom's common costs are included in the ANM, only those associated with a limited number of Network Elements, based on an analysis of Network Elements in Eircom's Separated Accounts, as outlined in paragraphs 5.129 and 5.138 of ComReg 20/101. Therefore, a significant proportion of Eircom's common costs is already assumed to be recovered from other parts of Eircom's business (retail, mobile and other wholesale areas).

Query No.9

The classification of Network Rates as a common network cost in the draft ANM means that the costs are allocated across all exchanges based on the relative share of active commercial lines in those exchanges. Consequently, the allocation to an exchange is dependent on whether it includes premises that are in the commercial area, and so almost all exchanges receive some allocation regardless of whether they provide FTTC or FTTH services. For further reference, see sheet "Calc_Opex_Apportionment" in the Opex Module, rows 70-73.

Query No.10

In the draft ANM all access copper lines are modelled as using a copper cabinet (see paragraphs 4.28 to 4.32 in the ANM Specification Document). The cost of a full copper loop (LLU) provides the basis for the ULMP service and the d-side sub-loop (from the cabinet to the DP) provides the basis for the SLU service. The LLU and SLU costs are used in the NGA model as cost inputs for exchange-based VDSL and for cabinet-based VDSL, respectively. The costs of the FTTC cabinets are calculated in the NGA model which assumes that all such FTTC cabinets are located beside a copper cabinet. If VDSL is provided from the exchange it is assumed to be eVDSL. The NGA model assumes that circa 20% of VDSL lines are eVDSL and the remainder are FTTC.

Appendix 2: Vodafone's Correspondence



Pedro Fontes
Wholesale Pricing
Commission for Communications Regulation

3 Dec 2020

Re ANM model.

Dear Pedro,

Please see below some questions on the ANM model that we would ask ComReg to address. Answers to these should help us to more accurately assess the impact of changing assumptions in the model, for example if we are arguing that an alternative approach is appropriate.

Regards

Eamon Farrell

Questions

- 1) The models contain a number of inputs described as “Input Parameter (for users to change at will)” (cells highlighted in yellow and surrounded by a solid black border).
 - i. Please provide an explanation of how these inputs in the models should be set in order to generate the prices set out in the Consultation Document.
 - ii. Note that this includes both dropdown boxes and numerical inputs where the user is able to enter any number.

We note that slide 15 of Cartesian’s ANM User Guide specifies some of these parameters (for example, the relevant costing methodology for different services), but not all (for example, see I.Par.10 – I.Par.17 in the Capex module).

Some inputs in the models have been anonymised (cells highlighted in orange and surrounded by a dashed red border).

- iii. Please explain how this anonymisation has been applied. In particular, are the numbers completely randomised within a large range, or “ballpark” numbers (e.g. only adjusted by small %s in order to preserve confidentiality)?

We note that this is important as it impacts users’ ability to assess the impact of different assumptions in the models.



Eamon Farrell
Vodafone Ireland

04 December 2020

Subject: Response to your letter of 3 December 2020 with request for clarifications on draft ANM

Dear Eamon,

We refer to your letter of 3 December 2020 with request for clarifications on the draft ANM. Please see below our response to your queries.

Best regards
Pedro Fontes

Query No.1
Items i. and ii.

In the 'Dashboard' worksheet of the ANM capex module input parameters include 'model scenario' parameters (*I.Par.1* to *I.Par.6*) and other parameters (*I.Par.7* to *I.Par.29*).

'model scenario' parameters are used in the ANM to calculate prices for each of the services based on the proposed pricing approaches and for each of the years in the ANM Consultation (ComReg Document No. 20/101). The relevant settings for the 'model scenario' parameters are listed in slide 15 of the ANM User Guide. For example, for PSTN WLR *i.Par.3* should be set to 'Top-down HCA', *i.Par.4* should be set to 'All' and the results read from *column O (cell O16)* in the 'Dashboard' worksheet, based on the proposed pricing approach that charges should be set in the Regional Low-Level FACO Market using a TD FAC approach using Eircom's HCAs for the copper loop component and a BU-LRAIC+ approach for the active equipment (paragraph 4.55 of ComReg 20/101). Similarly, for LLU and SLU *i.Par.3* should be set to "Bottom-up Tilted Annuity", *i.Par.4* should be set to 'urban commercial' and the results read from *column Q (cells Q13 and Q14)*, based on the proposed pricing approach (paragraph 6.49 of ComReg 20/101).

The other parameters (*I.Par.7* to *I.Par.29*) include cost data used to calculate service costs. Some of these parameters have been randomised (e.g. *I.Par.28*) and colour-coded in orange, following ComReg's assessment of data confidentiality. Where ComReg assessed that the data was not confidential, the values shown in the non-confidential draft ANM are same as the confidential draft ANM used to set the prices in the ANM Consultation. These parameters remain unchanged irrespective of the

selected 'model scenario' parameters. Users can however change these values to investigate sensitivities.

Item iii.

The randomisation of confidential data has been performed within a range of +/- 20% of the original value, e.g. if the confidential value is 10 units, the randomised value is within a range of 8 to 12 units.