



Assessment of eir's 2015/16 USO funding application – Direct net cost 2015-2016

Further calculation adjustments to eir's Customer Model
(as amended by TERA)

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Glossary of Terms

2009 Copper Access Model (“2009 CAM”) refers to the previous iteration of the Copper Access Model, developed in 2009, which was used in eir’s USO Funding Applications in respect of the financial years 2010/11, 2011/12, 2012/13, 2013/14 and 2014/15.

2016 Copper Access Model (“2016 CAM”) means the model, as amended from time to time (subject to approval by ComReg), used by ComReg and eir. The model calculates costs based on both Top-Down HCA and BU-LRAIC+ costing methodologies. The operation and details of the Revised Copper Access Model are described in detail in Chapter 5 of ComReg Decision D03/16.

Bottom-Up Long-Run Average Incremental Cost plus” (“BU-LRAIC+”) approach means the methodology used to estimate the “LRAIC plus” of an efficient operator which is derived from an economic and/or engineering model of an efficient network. The LRAIC plus costs are the average efficiently incurred directly attributable variable and fixed costs, including an appropriate apportionment of joint and common costs.

“Calculation errors” refers to the errors identified by TERA following a review of eir’s Customer Model (as amended by TERA). These errors relate to the application of the 2016 CAM to eir’s Customer Model (as amended by TERA) in the Proposed ComReg Methodology. See sections 2, 3 and 4.

“Direct Net Cost” of USO is the avoidable costs attributable to the provision of the USO (both direct and indirect), minus revenues (both direct and indirect) attributable to the provision of the USO, before the deduction of intangible benefits which accrue to the USP by virtue of being the USP.

eir’s 2014 separated accounts (“eir’s separated accounts”) refers to eir’s Historical Cost Separated Accounts for the year 2014. eir Historical Cost Separated Accounts are published annually on 31 May, five months after the eir financial year-end date 31st December. The Historical Cost Separated Accounts comprise a set of market-based financial statements for the open eir and eir product portfolio and are published with related Primary Accounting Documentation.

eir’s Customer Model (as amended by TERA) means the Customer Model in eir’s 2015-2016 USO funding application which has been amended by TERA, due to eir’s incorrect use of both the 2009 and the 2016 CAMs in this funding application. eir’s Customer Model in its 2015-2016 USO funding application is amended through the use of the Proposed ComReg Methodology. The details of: eir’s incorrect use of both the 2009 CAM and the 2016 CAM in its 2015-016 USO funding application; and of the Proposed ComReg Methodology which amends eir’s Customer Model; are more particularly described in Chapter 2 of ComReg Consultation 21/17.

Further Calculations Adjustments refers to the corrections/changes made by TERA to (i) the 2016 CAM inputs to eir’s Customer Model (as amended by TERA), and (ii) Workbook A of the Customer Model (as amended by TERA)

L/N methodology L means the line length of the access line (i.e. the length between the MDF and the section where the access line is starting beyond 3km); and N means the number of lines sharing the same assets (i.e. for each line it is the number of access lines going through the section where the line is starting).



Proposed ComReg Methodology refers to the proposed methodology developed by TERA in December 2019 setting out the manner in which the 2016 CAM should be applied to the Customer Model of eir’s 2015-2016 USO funding application¹.

Total Calculated Net Cost means the final direct net cost figure allowable for an individual USO model, or the total calculated direct net cost, as the context requires.

USO Model refers to the USO direct net cost model underpinning eir’s USO funding applications to ComReg as a whole, including all calculations, data, spreadsheets, the model summary and the individual net cost models (Area, Customer, Payphone, Directories, and Disabled End Users’ Services). These individual direct net cost models may be referred to cumulatively as “USO models”.

Workbook A refers to the access part of the Customer Model as amended by TERA. This workbook sets out the outputs (i.e. distribution of lines per cost band, number of lines per MDF) that feed into the Workbook B.

Workbook B refers to the main part of the Customer Model. This workbook uses the outputs of the Workbook A to calculate the direct net cost of uneconomic customers in economic areas.

¹ Set out in ComReg letters to eir dated (1) 24th December 2019 and (2) 1st May 2020, at Annex 1 of ComReg Consultation 21/17.



1 Overview

1.1 Context

ComReg published its Consultation and Draft Decision on the Assessment of eir’s 2015-2016 Universal Service Fund Application in March 2021² (the “Consultation”). ComReg received a number of responses to the Consultation, including from eir, all of which ComReg has reviewed.

As part of the Consultation, ComReg formed the preliminary view that it was necessary to make a downward adjustment to eir’s calculation of the direct net cost due to the incorrect mixed use by eir of the 2009 Copper Access Model (the “2009 CAM”) and the 2016 Copper Access Model (the “2016 CAM”) in the Customer Model.

In its 2015-2016 funding application eir uses the 2009 CAM to calculate the level of cost avoidability of CAPEX within ‘isolated areas’ (based on the financial year 2013-2014). In the same funding application, eir also uses the 2016 CAM cost allocation assumptions (based on the financial year 2015-2016) to produce the cost avoidability inputs to: i) the border of the ‘housing area’; and ii) the split of costs (CAPEX) between ‘housing areas’ and ‘isolated areas’.

This mixed use of the 2009 and 2016 CAMs assumes that the geographical classification between “Urban” and “Rural” areas, used in the 2016 CAM, are substitutable with the geographic classification between “Housing” and “Isolated Houses/Hamlets” areas, used in the 2009 CAM. However, in reality, these CAM classifications are not substitutable. This mixed use of both CAMs therefore creates an inconsistency in the cost avoidability and cost allocation assumptions used in the USO models. This affects the accuracy of the net cost calculation in eir’s 2015-2016 USO funding application. Accordingly, ComReg’s preliminary view was that a downward adjustment of €5,681,354 to the Customer Model was required.

Having reviewed the responses to the Consultation, ComReg asked TERA to consider eir’s submissions and to review the Customer Model in light of those submissions. TERA also carried out a detailed review of all the calculations in the Customer Model.

This report is in response to ComReg’s request to conduct a review of eir’s submission to consultation on all calculations in eir’s USO Customer Model (as amended by TERA), including any corrections, and addresses the following:

- what further calculation adjustments are required to be made to eir’s USO customer model calculations (as initially amended by TERA) in the Proposed ComReg Methodology;
- the associated basis and rationale of the further calculation adjustments; and
- the individual and collective impact of the further calculation adjustments on the direct net cost calculation.

This report identified further calculation adjustments required in respect to the following three areas:

- The treatment of reusable assets and the impact on the calculation of “cost avoidability” curves within the 2016 CAM (section 2);
- Avoidable “Service specific costs” allocation key in Workbook A (section 3); and

² [ComReg-2117.pdf](#) Document No. 21/17.



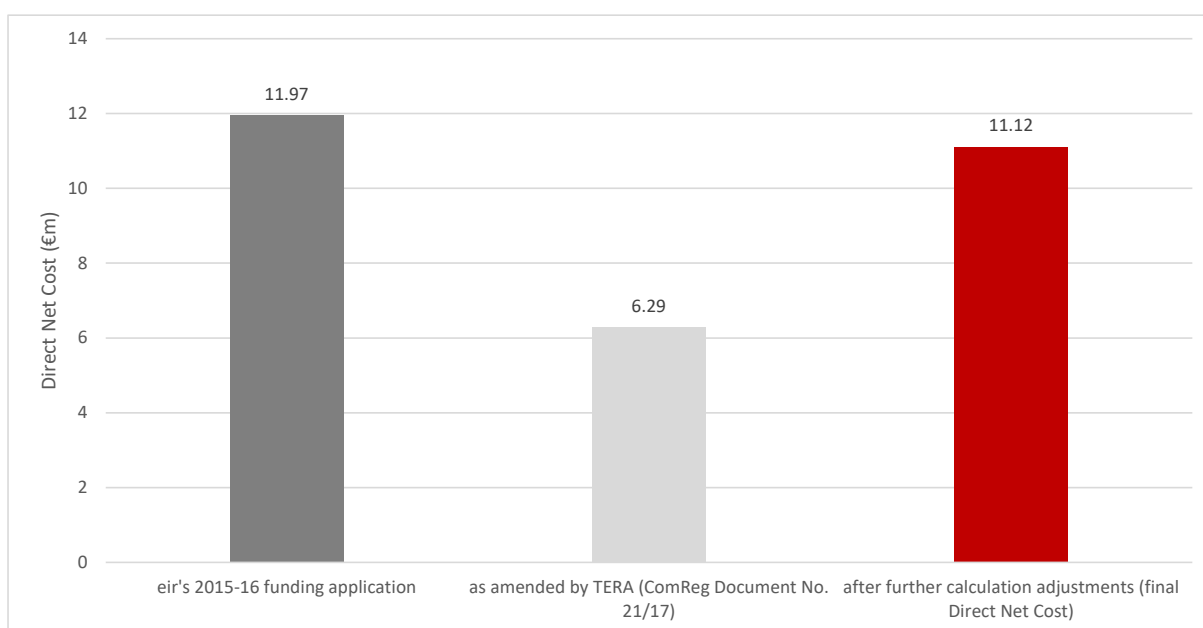
- Distance sensitive OPEX being adjusted twice for avoidability in Workbook A (section 4).

The further calculation adjustments identified in this report are confined to the manner in which the 2016 CAM is applied to derive the inputs to the Customer Model element of eir’s 2015-2016 USO funding application only. This report and TERA’s review are limited to the calculations within eir’s Customer Model (as amended by TERA) in the Proposed ComReg Methodology.

1.2 Summary

Following an analysis of respondents’ submissions to Consultation 21/17 and in particular, eir’s submissions regarding eir’s Customer Model (as amended by TERA) and the calculations within it, TERA now proposes a downward adjustment of **€852,422** to eir’s Customer Model as submitted in its 2015/16 funding application, leading to a direct net cost of €11,118,560³ (see Figure 1).

Figure 1: Direct Net Cost



The following paragraphs summarise how this revised downward adjustment was calculated.

TERA has carefully reviewed eir’s submissions to consultation in respect of the set of parameters used in the 2016 CAM (bottom-up vs top-down approach)⁴, and cost allocation between MDFs⁵.

TERA has now set the “*Activate the reutilisation of infrastructure*” parameter to “FALSE” (instead of “TRUE”) in the “Dashboard” sheet (cell G21) of the 2016 CAM and recalculated the cost curves accordingly. This further calculation adjustment results in an increase in the total direct net cost of

³ Compared to a Direct Net Cost of €6,289,628 as calculated in ComReg 21/17.

⁴ eir response to consultation and Draft Determination Assessment of eir’s 2015-2016 Universal Service Fund Application Assessment of the net cost and unfair burden for the period 2015-2016 (ComReg Document 21/17), paragraph 24 bullet point 2.

⁵ eir response to consultation and Draft Determination Assessment of eir’s 2015-2016 Universal Service Fund Application Assessment of the net cost and unfair burden for the period 2015-2016 (ComReg Document 21/17), paragraph 24 bullet point 3.



€3.99m, from the value previously calculated by TERA, and consulted on by ComReg in Consultation 21/17⁶.

TERA has carefully reviewed eir’s submission to consultation in respect of the allocation of the “Equi” cost category⁷.

TERA has now replaced the “Total” allocation key with the “Equi” key for several cost categories (see section 4 below - in the worksheet “TERA_C_AM”, line 7 of the workbook A of the eir Customer Model (as amended by TERA)). This correction results in a decrease in the total calculated direct net cost of €1.47m, from the value previously calculated by ComReg in Consultation 21/17⁸.

TERA has carefully reviewed eir’s submission to consultation in respect of the application of avoidability percentages⁹.

TERA has now applied the “Total” allocation key to the total distance sensitive OPEX cost base, instead of only the fully avoidable distance sensitive OPEX cost base (see section 4 below - in the worksheet “TERA_C_AM”, column Y of the workbook A) of eir’s customer model (as amended by TERA). This correction results in an increase in the total calculated net cost of 2.32 M€, from the value previously calculated by ComReg in Consultation 21/17.

2 2016 CAM and the treatment of reusable assets: impact on the calculation of “cost avoidability” curves

Context

The 2016 CAM was developed to assess for a hypothetical efficient operator, the cost of deploying a network with topology, coverage and demand characteristics similar to eir’s network, to inform the setting of cost-oriented prices for regulated wholesale access services¹⁰.

The 2016 CAM has the functionality to calculate two costing approaches (i) a “Bottom-Up Long-Run Average Incremental Cost plus” (BU-LRAIC+¹¹) approach (with assets valued at current costs), and (ii) a “Top-Down” (“TD”) approach (with assets valued at historical costs or HCA).

In addition, when using the BU-LRAIC+ approach for wholesale pricing purposes, the 2016 CAM has the option to value a proportion of CEI assets (reusable assets) at historic costs. The Regulated Asset

⁶ €6,289,628 as calculated in ComReg 21/17.

⁷ eir response to consultation and Draft Determination Assessment of eir’s 2015-2016 Universal Service Fund Application Assessment of the net cost and unfair burden for the period 2015-2016 (ComReg Document 21/17), paragraph 23 bullet point 1.

⁸ €6,289,628 as calculated in ComReg 21/17.

⁹ eir response to consultation and Draft Determination Assessment of eir’s 2015-2016 Universal Service Fund Application Assessment of the net cost and unfair burden for the period 2015-2016 (ComReg Document 21/17), paragraph 23 bullet point 2.

¹⁰ Consultation on current generation wholesale access services Document No. 15/67, 3 July 2015 ([ComReg1567.pdf](#)); Pricing of Eir’s Wholesale Fixed Access Services: Response to Consultation Document 15/67 and Final Decision, 18 May 2015, D03/16, Document No. 16/39, [ComReg 1639.pdf](#)

¹¹ “Bottom Up Long Run Average Incremental Cost plus” or “BU-LRAIC+” means the methodology used to estimate the “LRAIC plus” of an efficient operator which is derived from an economic and/or engineering model of an efficient network. The LRAIC plus costs are the average efficiently incurred directly attributable variable and fixed costs, including an appropriate apportionment of joint and common costs



base for duct and poles is then costed using TD for the proportion of Duct Pole that can be reused to deploy new cables and NU for the share than needs to be replaced/remediated.

The 2016 CAM “BU-LRAIC+” approach first calculates an inventory of assets that would be required to connect all premises within eir’s network coverage area, to the closest MDF. It then derives the cost of rolling out an equivalent network today (i.e., the current cost of deploying the inventory of assets that would be required to connect all premises within eir’s network coverage area). This “BU-LRAIC+” approach reflects the cost that a hypothetical efficient operator would incur today to deploy a network similar to eir’s network, absent any existing “own network”.

The 2016 CAM “Top Down” approach assumes that there are assets in the operator’s network which are reusable. These are valued using HCA (i.e., the majority of assets in the network). The remainder of the assets in the network are assumed to be non-reusable and are valued using CCA.

In reality, a hypothetical efficient operator setting up and installing its own network (absent any existing “own network”), would make a “build” or “buy” decision (i.e., it would compare the cost of reusing certain existing assets, against the cost of purchasing certain new assets, such as trenches, ducts and poles). The assets (trenches, ducts and poles) are partially depreciated within eir’s separated accounts. The BU-LRAIC+ approach, as used to derive the costs of wholesale services, also assumes that the hypothetical efficient operator would seek to re-use a number of eir’s existing network assets as the historical accounting cost of their re-use would be cheaper than the current cost of purchasing new assets.

When using the BU-LRAIC+ approach to calculate the USO Direct Net Cost (i.e. to derive the relationship between cost and customer volume) it is assumed that no assets are re-used.

► Costing Approach 1 -100% new “build” network

The current cost of a hypothetical efficient operator setting up and installing its own network (absent any existing “own network”) or all assets (i.e., 100% “new build” network).

► Costing Approach 2 – Predominantly new network (“build” decision), with exception of certain reusable assets (“buy” decision).

The current cost of a hypothetical efficient operator setting up and installing its own network (absent any existing “own network”) for the majority of assets (“build” decision), with the exception of certain reusable assets ((e.g., trenches, ducts and poles) “buy” decision).

The 2016 CAM estimates the Historical Accounting Cost (HCA cost) of reusable assets for 2015-2016 (the year of calculation), based on eir’s 2010 to 2014 separated accounts.

The selection of the relevant cost base (either Costing Approach 1 or Costing Approach 2) is made in the ‘Dashboard’ sheet of the 2016 CAM, by setting the parameter “*Activate the reutilisation of infrastructure*” (“the reuse option”) to either “TRUE” or “FALSE”. The default BU-LRAIC+ setting for the reuse option in the 2016 CAM (where its primary function is to set cost oriented pricing for regulated wholesale access services) is “TRUE”. When the reuse option is set in “TRUE”, the 2016 CAM will then calculate the HCA cost of each reusable asset category (duct and poles) for each MDF, based on eir’s most recent available accounts (in this case eir’s 2014 separated accounts).

TERA used the default setting for the reuse options by setting the reuse option to TRUE; thereby using costing approach 2 in the 2016 CAM, to derive the cost avoidability curves which form the inputs for the Customer Model element of eir’s 2015-2016 USO funding application.

TERA, in undertaking:



- (i) a review of eir’s submissions (to consultation 21/17) regarding the calculations (including amendments/corrections) in eir’s USO customer model (as amended by TERA), and
- (ii) a comprehensive end-to-end review of eir’s USO customer model calculations (as amended by TERA),

has identified errors in the calculation of cost avoidability curves relating to the use of cost base 2 and in particular, reusable assets:

- ▶ 1: the HCA cost base remains constant, regardless of the 2016 CAM’s coverage input;
- ▶ 2: the distribution of HCA costs over MDFs is constant, regardless of the 2016 CAM’s coverage input.

Calculation error 1: the HCA cost base remains constant

In simplified terms, the 2016 CAM uses the “HCA unit cost” of each asset (which is calculated by dividing eir’s account (Gross Book Values) by the calculated Bottom-Up inventory) to calculate the HCA cost of all network elements, for the relevant year of calculation (set in the parameters). This modelling approach is appropriate when modelling the total access network (100% of eir’s network coverage), since eir’s separated accounts reflect the costs of its total access network.

When the Proposed ComReg Methodology is used, the 2016 CAM applies a refined L/N methodology to rank lines by percentile from the most economic to the least economic, allocating a score to each section within an MDF based on line length (“L”) and the number of lines (“N”)¹². This is then used to calculate how many assets per percentile would have been avoided, had this percentile of lines not been deployed. However, when implementing the decremental L/N approach (i.e., reducing the network coverage on a decremental percentile basis (99% coverage, 98% coverage, and so on)), the HCA unit costs are calculated by dividing the same costs from eir’s accounts (the costs for 100% of eir’s network coverage) by a reduced inventory of assets. In other words, the cost base (costing approach 2) used to derive HCA unit costs does not reflect the footprint reduction.

Consequently, HCA unit costs increase when the footprint is reduced, and the total cost base for reusable assets remains relatively stable, despite the network coverage being reduced. A correct treatment of reusable assets should ensure that the HCA cost base used to derive HCA unit costs actually reflects the footprint reduction (i.e., as the footprint is reduced, the total cost base also reduces.). In order for the decremental L/N approach to accurately reflect the costs that would be avoided by the operator not serving a given percentile of lines, the cost base must reflect a consistent decrease in the quantum of network assets (i.e. assets for which deployment would have been avoided).

Avoidable cost curves are calculated by running the 2016 CAM for a series of coverage inputs, and by assessing the cost difference between two consecutive iterations of the 2016 CAM (e.g., the cost difference between 99% network coverage and 98% network coverage, and so on). Since the error above removes the sensitivity of the cost base to the coverage, the result of this error is to ignore any avoidable costs related to reusable assets.

Calculation error 2: cost curves are derived based on a fixed distribution of costs over MDFs

¹² For the length of an access line (“L”), the longer a line is, the more expensive it will be due to the additional civil work and cost of materials. For the number of lines (“N”), the more access lines that share the same overhead or underground path, the lower the cost per individual access line is, due to infrastructure being shared.



The 2016 CAM calculates the HCA costs per network component at the national level in the ‘*Network roll-out over time*’ sheet. It then uses the distribution of costs per MDF as per eir’s 2014 separated accounts to allocate these HCA costs between the MDFs.

When the 2016 CAM is used for the purpose of calculating cost curves to be used in the Customer Model, the 2016 CAM is populated with 100 different inventories corresponding to different coverage targets (from 1% to 100% of eir’s national coverage).

If the reuse option is activated (set on “TRUE”), for all reusable assets, every iteration of the 2016 CAM will rely on the same cost distribution per MDF (based on eir’s 2014 separated accounts).¹³

In other words, the total network cost is distributed equally across each MDF. This generates an error as the lines within a given percentile will be distributed across all MDFs in the same way as the national average, as reflected in eir’s 2014 separated accounts. Consequently, the incremental cost of serving one additional percentile of lines is distributed (for reusable assets) over all MDFs, even those which have no lines within this percentile.

This results in reusable assets’ costs being allocated to percentiles of all MDFs, even those percentiles which are within the 3km threshold¹⁴, and should not bear any avoidable cost.

Further calculation adjustment

TERA has corrected the two calculation errors described above by setting the “*Activate the reutilisation of infrastructure*” parameter to “FALSE” in the ‘Dashboard’ sheet (cell G21) of the 2016 CAM and recalculating the cost curves accordingly.

Impact of the further calculation adjustment

The correction of this calculation error leads to an increase in the total direct net cost of 3.99 M€, from the value previously calculated by ComReg in Consultation 21/17.

¹³ Accordingly, assets are valued on the basis of historic costs (net book value NBV), which means that some assets may be valued at zero, where they are fully depreciated, rather than being valued on a current cost basis (i.e., non-zero values).

¹⁴ In the Proposed ComReg Methodology, eir’s Customer Model (as amended by TERA) identifies “urban areas” using the “distance from the exchange” (boundary) methodology, where the boundary is defined as 3km from the exchange. This assumes that all costs within the 3km boundary are unavoidable.



3 Avoidable “Service specific costs” allocation key

Background

The eir Customer Model (as amended by TERA) identifies a number of cost categories and attributes an allocation key to each category to distribute avoidable costs over percentiles of lines. There are two main types of allocation keys:

- ▶ The cost curves derived from the 2016 CAM (the “Total” allocation key): these should apply to the total costs associated with each distance sensitive cost category, as these curves both isolate avoidable costs within the total costs, and distribute these avoidable costs over each percentile of lines.
- ▶ The “Equi” allocation key: this key distributes avoidable costs equally over each percentile of lines. It should apply only to the avoidable costs associated to non-distance sensitive cost categories.

Calculation error

In reviewing eir’s Customer Model (as amended by TERA), TERA identified that certain cost categories, identified as “Service specific CAPEX categories” were distributed over each percentile of lines using the “total” cost curve. These cost categories are: Other_NDist, Linecard, Pair_Gain, PSTN, DSL-R, SB-WLR, UMLP, Line Share, DSL-B, PP, Suppl., LL and provisioning.

These cost categories are identified as non-distance sensitive in the USO documentation¹⁵. TERA has examined these cost categories and verifies that they should be identified as non-distance sensitive. Accordingly, these costs should have been allocated using the “Equi” allocation key, instead of the “total” cost curve.

Further calculation adjustment

TERA has corrected this error by replacing the “Total” allocation key with the “Equi” key for these cost categories, in the worksheet “TERA_C_AM”, line 7 of the workbook A of eir’s Customer Model (as amended by TERA).

Impact of the further calculation adjustment

The correction of this calculation error leads to a decrease in the total calculated Direct Net Cost of 1.47 M€, from the value previously calculated by ComReg in Consultation 21/17.

This further calculation adjustment leads to a decrease in the Direct Net Cost. A change in the allocation key from “Total” to “Equi” for the service specific CAPEX categories results in costs being allocated equally across percentiles. Accordingly, less costs are allocated to lines located in the percentiles farthest from MDF (and therefore less economical), decreasing the probability of being uneconomic. This results in lower uneconomic lines and thus a decrease in the direct net cost.

¹⁵ eir, USO Model Documentation 2015/16



4 Distance sensitive OPEX are adjusted twice for avoidability

Background

All distance sensitive cost categories are distributed over each percentile of lines using one of the cost curves derived from the 2016 CAM.

As explained in the previous section, these cost curves not only distribute avoidable costs over each percentile of lines, but also isolate the avoidable costs from the total costs related to each cost category. These cost curves are built so that the sum of all values for all percentiles of lines equals the total percentage of avoidable costs at the MDF level.

Accordingly, these curves apply to the total costs included in the distance sensitive cost categories.

The “Distance sensitive OPEX” category includes all distance sensitive operational costs. This is distributed over each percentile of lines using the “Total” cost curve.

Calculation error

eir’s initial approach breaks down this cost category between fully avoidable costs, partially avoidable costs and fully unavoidable costs.

In the Proposed ComReg Methodology, the “Total” allocation key was applied to fully avoidable costs only. The “Total” allocation key reflects the avoidability of all network elements, as a percentage of the Total network CAPEX. The level of avoidable costs derived from the application of the “Total” cost curve will be lower than the actual level of avoidable costs, if some unavoidable costs are excluded from the cost base before applying the cost curve.

The “Total” allocation key should be applied to the total costs regardless of their avoidability and should not be limited to only the fully avoidable OPEX.

Further calculation adjustment

TERA has applied the cost curve to the total distance sensitive OPEX cost base, instead of the fully avoidable distance sensitive OPEX cost base. This change is implemented in the worksheet “TERA_C_AM”, column Y of the workbook A of the TERA adjusted customer model.

Impact of the correction

The correction of this calculation error leads to an increase in the total calculated net cost of 2.32 M€, from the value previously calculated by ComReg in Consultation 21/17.

5 Impact assessment summary

After implementing the adjustments listed in section 3, the revised direct net cost of eir’s Customer Model amounts to **11,118,560 €**.

Table 1 below shows the change in the Direct Net Cost of uneconomic customers in economic areas, from (i) eir’s 2015-2016 funding application; to (ii) the Direct Net Cost (as amended by TERA) and



consulted on by ComReg (ComReg Document No. 21/17); to (iii) the Direct Net Cost of uneconomic customers in economic areas, following the further calculation adjustments detailed in this report.

Table 1: change in Direct Net Cost – Customer Model

	Direct Net Cost - Customer Model (€m)	Adjustment to eir's 2015-16 funding application (€m)
Eir 2015-16 Funding Application	11.97	n/a
As consulted on by ComReg (Document No. 21/17)	6.29	-5.68
After further calculation adjustments	11.12	-0.85

Figure 2 below shows the impact of each further calculation adjustment and describes how the Direct Net Cost of uneconomic customers in economic areas has evolved starting from eir’s submission to the adjusted value:

Figure 2: Impact of further calculation adjustments on Direct Net Cost – Customer Model

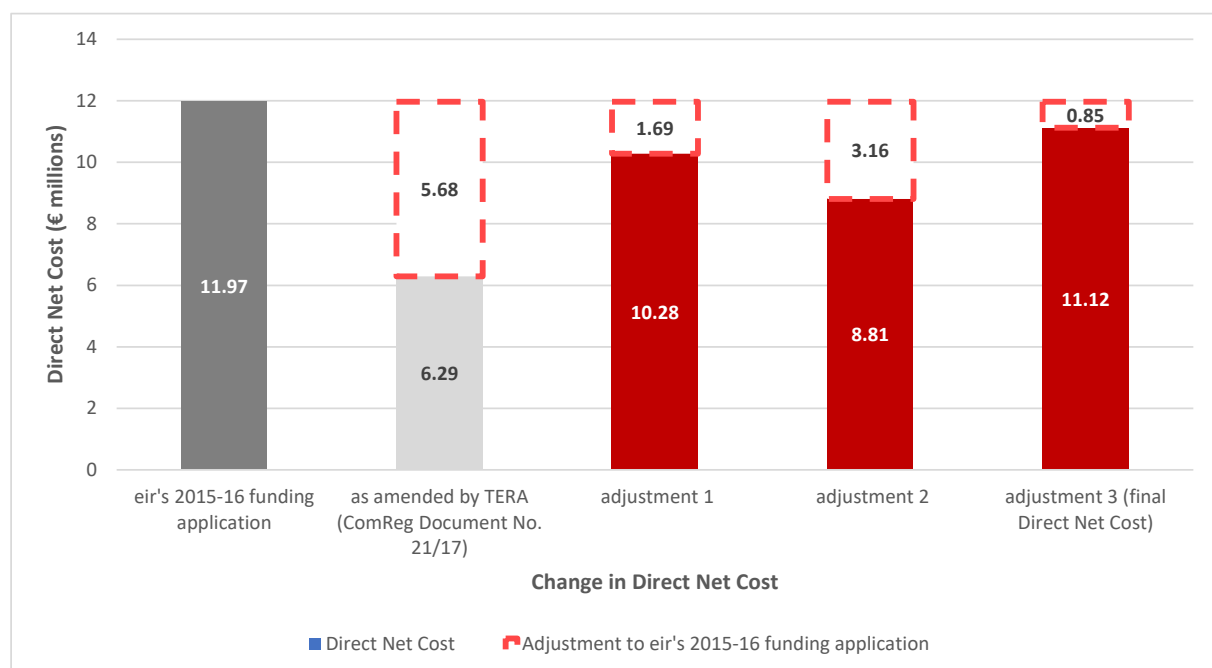


Table 2 below shows the change in the total Direct Net Cost from (i) eir’s 2015-2016 funding application; to (ii) the Direct Net Cost (as amended by TERA) and consulted on by ComReg (ComReg Document No. 21/17); to (iii) the total Direct Net Cost following the further calculation adjustments detailed in this report.



Table 2: change in Direct Net Cost – Total

	Direct Net Cost - Total (€m)	Adjustment to eir's 2015-16 funding application (€m)
Eir 2015-16 Funding Application	13.73	n/a
As consulted on by ComReg (Document No. 21/17)	7.45	-6.28
After further calculation adjustments	12.28	-1.45

Figure 3 below shows the impact of each further calculation adjustment and describes how the total Direct Net Cost has evolved starting from eir’s submission to the adjusted value:

Figure 3: Impact of further calculation adjustments on Direct Net Cost – Total

