An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Assessment of eir's 2015-2016 Universal Service Fund Application

Further consultation on the assessment of the net cost for the period 2015-2016

Consultation

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Additional information

All responses to this consultation should be clearly marked: "Reference: Submission re ComReg 23/11 as indicated above, and sent by post, facsimile, e-mail or online at www.comreg.ie (current consultations), to arrive on or before 5pm on 07 March 2023, to:
Retail Division Commission for Communications Regulation One Dockland Central, Guild Street, Dublin 1, Ireland, D01 E4X0 Ph.: +353-1-8049600 Fax: +353-1-804 9680 Email: retailconsult@comreg.ie Please note ComReg will publish all respondents' submissions with the Response to this Consultation, subject to the provisions of ComReg's guidelines on the treatment of confidential information – ComReg 05/24.

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Glossary of key terms (A to Z)[1]

"2009 Copper Access Model (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.

"***2015-2016 USO funding application***" is eir's USO funding application for the financial year 2015-2016 submitted to ComReg in March 2017.

"2016 Copper Access Model (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 more particularly described in Chapter 5 of ComReg Decision D03/16.

"***calculated direct 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.

"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.

"Customer Model" refers to one of the five models within the USO Model. It calculates the direct net cost of uneconomic customers in economic areas.

"***direct net cost"*** of USO is the difference between 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" means Eircom Limited.

"eir's Customer Model" means the Customer Model as submitted in the 2015-2016 USO funding application.

"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

[1] Other terms and abbreviations used in this report have the same meaning as those listed in the Glossary of D04/11.

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 calculation 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).

"***MDF area***" means a geographic area as described by the Market Distribution Frame map.

"***net cost"*** is calculated as the difference between the 'direct net cost' and the intangible benefits which accrue to the USP, by virtue of being the USP.

"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 application[2].

*"**TERA Report A**"* refers to the report prepared by TERA entitled ***"****Assessment of eir's USO funding application – direct net cost 2015-2016: further calculation adjustments to eir's Customer Model (as amended by TERA)*" and is included as **Annex 3** of this consultation.

"USO" means Universal Service Obligation(s). An undertaking that is designated as having a USO is obligated to provide a universal service.

*"**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".

[2] Set out in ComReg letters to eir dated (1) 24th December 2019 (Annex 1) and (2) 1st May 2020 (Annex 1).

"USP" means Universal Service Provider. An undertaking(s) designated as having Universal Service Obligations is the USP(s).

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1 Executive Summary

1 On 12 March 2021 the Commission for Communications Regulation ("ComReg") issued a consultation document titled *"Assessment of eir's 2015-2016 Universal Service Fund Application"*[3] ("Consultation 21/17"). The background to Consultation 21/17 is set out in full in that document.

2 In Consultation 21/17 ComReg formed the preliminary view that it was necessary to make a downward adjustment to eir's calculation of the total net cost of eir's Customer Model (i.e. uneconomic customers in economic areas). The total net cost of eir's Customer Model was adjusted downward from €11,970,982 to €6,289,628 (a downward adjustment of €5,681,354). This was reflected in eir's Customer Model (as amended by TERA).

3 In response to Consultation 21/17 ComReg received submissions from several undertakings.[4] Having reviewed the submissions to Consultation 21/17, ComReg asked its consultant TERA Consulants ("TERA") to review eir's Customer Model (as amended by TERA) in light of certain aspects of eir's submission, and carry out a detailed review of all the calculations in eir's Customer Model (as amended by TERA).

4 On 28 September 2022, ComReg received TERA Report A. In this report TERA proposed a downward adjustment of €852,422 to the direct net cost of eir's Customer Model, resulting in a calculated direct net cost of €11,118,560 (as compared to the figure of €11,970,982 claimed by eir in its 2015-2016 USO funding application, and the figure of €6,289,628 in eir's Customer Model (as amended by TERA) proposed in Consultation 21/17).

5 ComReg is of the preliminary view that TERA's proposal is appropriate and that further calculation adjustments are required to eir's Customer Model (as amended by TERA) to address certain calculation errors identified by TERA in its review of eir's Customer Model (as amended by TERA).

6 Therefore, ComReg has decided to consult further on its further calculation adjustments to eir's Customer Model (as amended by TERA) ("the Adjusted Customer Model"), specifically:

- the 2016 CAM inputs; and

[3] *"Assessment of eir's 2015-2016 Universal Service Fund Application Assessment of the net cost and unfair burden for the period 2015-2016",* Consultation and Draft Determination, ComReg 21/17, published 12/03/21.
[4] Association of Licensed Telecommunications Operators, BT Communications (Ireland) Limited, Eircom Limited, and Vodafone Ireland Limited.

- workbook A of eir’s Customer Model (as amended by TERA),

and the associated impact of the further calculation adjustments on the calculated direct net cost and the net cost.

7 The further calculation adjustments will have an impact on eir’s Customer Model (as amended by TERA). The impact is that the calculated direct net cost of the Adjusted Customer Model is €11,118,560 (as compared to the figure of €11,970,982 claimed by eir in its 2015-2016 USO funding application). ComReg is of the preliminary view that a downward adjustment of €852,422 to eir’s Customer Model (as submitted to ComReg) is required. This is set out further in Chapter 4.

8 The total net cost (after intangible benefits), following the further calculation adjustments, is calculated at €11,530,321 (as compared to the figure of €12,861,430 claimed by eir in its 2015-2016 USO funding application). ComReg is of the preliminary view that a downward adjustment of €1,573,157 to the total net cost of eir’s 2015-2016 USO funding application is required.

9 Figure 1 below summarises eir’s net cost estimate (including intangible benefits), the further calculation adjustments proposed by ComReg and its consultants to eir’s 2015-2016 USO funding application and ComReg’s preliminary view in relation to the positive net cost.

Figure 1: Direct net cost and net cost

USO Net Cost 2015-2016		2015-2016 eir's USO funding application	ComReg Adjustment €	2015-2016 ComReg's Preliminary View €
Direct net cost (a)	Uneconomic Areas	€444,959	0	€444,959
	Uneconomic Customers	**€11,970,982**	**(€852,422)**	**€11,118,560**
	Directories	€680,000	0	€680,000
	Public Payphones	€383,260	(€360,331)	€22,929
	Services for disabled end users	€16,336	0	€16,336
	Consultancy fees*	€239,380	(€239,380)	€0
	Direct net cost	**€13,734,917**	**(€1,452,133)**	**€12,282,784**
Intangible benefits (b)	Enhanced brand recognition	€739,171	0	€739,171
	Life-cycle	€15,885	(€15,885)	€0
	Ubiquity	€11,716	(€116)	€11,600
	Marketing	€106,715	(€105,023)	€1,692
	Total intangible benefits	**€873,487**	**-€121,024**	**€752,463**
Net cost (after intangible benefits)		**€12,861,430**	**(€1,573,157)**	**€11,530,321**

* ComReg is of the preliminary view that consultancy fees are not a part of the net cost having regard to D04/11 and the provisions of the Universal Service Directive and the Universal Service Regulations (as more fully set out in Section 6 of consultation 21/17).

10 In this further consultation ComReg is consulting on its preliminary view that these further calculation adjustments to eir's Customer Model (as amended by TERA) should be made. It is proposed that all other elements[5] of the USO Model, the direct net cost assessment and the intangible benefits as set out in Consultation 21/17 will remain unchanged.

[5] Area Model, Directories Model, Payphones Model, and Disabled End-Users' Services Model of the USO Model and the Intangible benefits assessment of enhanced brand recognition, life cycle benefits, ubiquity benefits and marketing benefits.

11 At Chapter 7 is a revised version of the draft determination consulted upon in Consultation 21/17 ("the Draft Determination"). This revised version of the Draft Determination shows the adjustments to the positive net cost (additions in red and underlined, deletions in red and strikethrough). The adjustments are: (i) "Uneconomic Customers" is adjusted from €6,289,628 to €11,118,560; (ii) "Direct net Cost" is adjusted from €7,453,853 to €12,282,784; and (iii) "Net cost (after intangible benefits) / Positive net cost" is adjusted from €6,701,390 to €11,530,321. For the avoidance of doubt, it is only these adjusted aspects of the Draft Determination that are being consulted on in this further consultation.

12 Furthermore, the revised version of the Draft Determination at Chapter 7 does not include a section 1.3 (which refers to the unfair burden). This reflects the fact that, in the forthcoming response to consultation ComReg proposes to make a determination solely in relation to the net cost calculation aspect of the USO funding at this time.

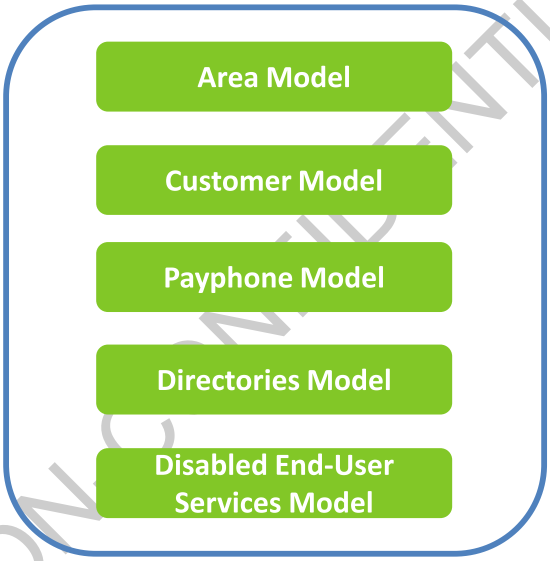
13 ComReg invites submissions to this further consultation from all stakeholders. Following receipt of submissions and consideration of these submissions, ComReg will publish a response to consultation and determination. This response to consultation and determination will address submissions to Consultation 21/17 and submissions to this further consultation.

2 Background

14 eir calculated the total direct net cost by using the following five USO Models, collectively referred to as eir's USO Model:

1. Area Model – uneconomic areas
2. Customer Model – uneconomic customers in economic areas
3. Payphone Model
4. Directories Model
5. Disabled End Users' Services Model

Figure 2: eir's USO Funding Model



15 In Consultation 21/17 ComReg reviewed all five models and indicated its preliminary view that adjustments were required to two of them; the Customer Model and the Payphone Model.

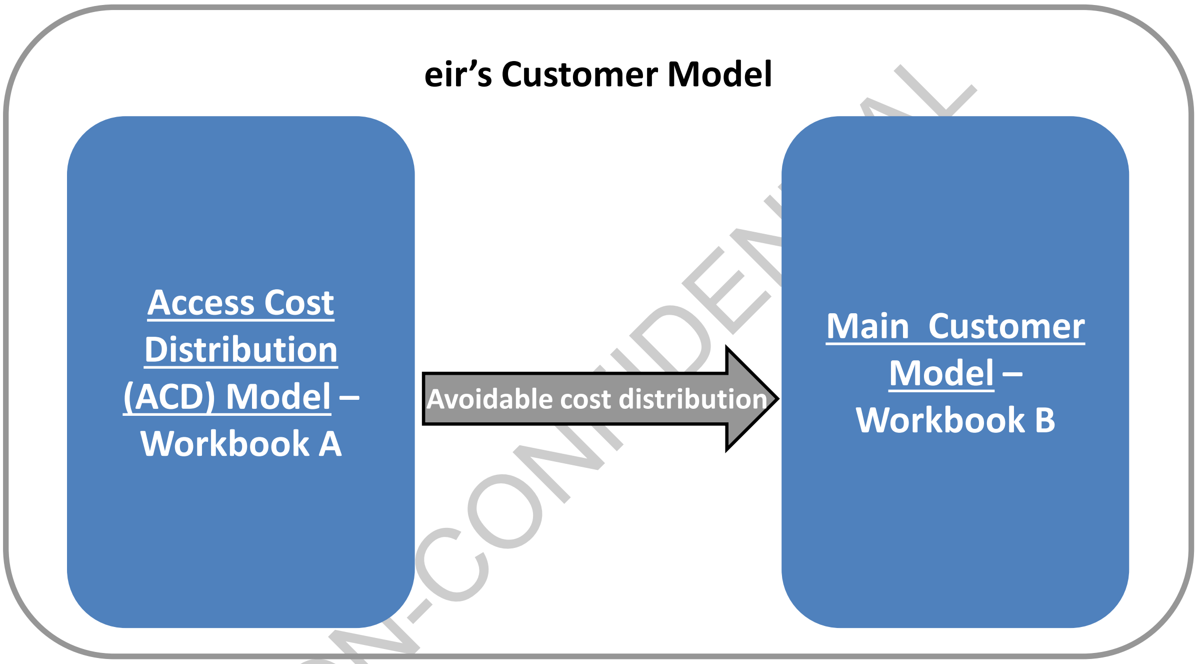
2.1 The Customer Model

16 The Customer Model calculates the direct net cost of uneconomic customers in economic areas, after the establishment of economic and uneconomic areas.

17 In accordance with Decision 14 of D04/11[6], eir used a probability-based approach to calculate the direct net cost of uneconomic customers in economic areas in its 2015-2016 USO funding application. This approach compares a distribution of net revenues[7] with a distribution of the avoided cost of access, by calculating the expected number of uneconomic lines in each economic MDF area, and the expected losses from each of these lines.

18 eir's Customer Model consists of two elements: (i) the Access Cost Distribution ("ACD") Model (Workbook A); and (ii) the main Customer Model (Workbook B), as shown in Figure 3.

Figure 3: ACD Model and Main Customer Model



19 The ACD Model (Workbook A) calculates an access cost distribution by line length (based on access costs inputs and demand) and converts this into an avoidable cost distribution using the cost curves generated by the 2016 CAM.

20 The main Customer Model (Workbook B) performs probability analysis (using the output from the ACD model (Workbook A)) to estimate the direct net cost of uneconomic customers in economic areas.

[6] "Report on Consultation and Decision on the costing of universal service obligations: Principles and Methodologies", Report on Consultation and Decision, published 31 May 2011 ("D04/11") see pg. 41
[7] Net revenues is equal to: the direct revenue from outgoing calls minus the cost of outgoing calls; plus the revenues from access services (including connection revenue); plus revenue from other services (including supplemental and indirect revenue); minus the cost of other services.

21 In the context of modelling the cost of the USO, eir uses the CAM, where there is an insufficient level of actual granular data available, to provide guidance on how cost are attributed.

2.2 Consultation 21/17

22 As set out in Consultation 21/17[8], eir's 2015-2016 USO funding application used both the 2009 and 2016 CAM to assess the cost avoidability and cost allocation assumptions used in the calculations of the Customer Model.

23 ComReg is of the view[9] that eir's mixed use of the 2016 CAM with elements of the 2009 CAM, in its 2015-2016 USO funding application, is incorrect.

24 As set out in Consultation 21/17,[10] ComReg instructed TERA to propose a methodology which enabled the sole use of the 2016 CAM (the "Proposed ComReg Methodology"), that should be applied to the calculation of cost avoidability in the Customer Model element of eir's 2015-2016[5] USO funding application.

25 The Proposed ComReg Methodology amended both the ACD Model (Workbook A) and the main Customer Model (Workbook B) to address eir's mixed use of the both the 2009 and 2016 CAMs within eir's Customer Model (i.e. the 2009 CAM based elements were removed from eir's Customer Model).

26 As set out in Consultation 21/17,[11] ComReg was of the preliminary view that a downward revision of €5,681,354 to the direct net cost in eir's Customer Model (i.e. uneconomic customers in economic areas) was warranted.

2.3 Submissions to Consultation 21/17

27 ComReg received four submissions to Consultation 21/17 (from ALTO, BT, eir and Vodafone).

[8] Paragraphs 26 – 33.
[9] In eir's 2014-2015 USO funding application eir used a mixture of the 2009 CAM and the 2016 CAM in its 2014-2015 USO Customer Model whereas in previous applications eir had used only the 2009 CAM. eir used the 2016 CAM to produce the cost avoidability inputs to (a) the border of the housing area and (b) the split of costs (CAPEX) between housing areas and isolated areas. eir used the 2009 CAM to calculate the level of avoidability of CAPEX within isolated areas maintained at the 2013-2014 financial year level. TERA reviewed the methodological approach adopted by eir and any potential impact of eir's use of the 2016 CAM on the cost avoidability inputs and noted in particular that eir's allocation of costs based on the "urban/rural" classifications in the 2016 CAM to the "housing/isolated areas" classifications in the 2009 CAM is incorrect, as these two classifications are not the same and are not directly substitutable. In the absence of eir providing its own calculation for this adjustment, the downward adjustment is based on TERA's calculation. ComReg is of the view that this is the most appropriate and proportionate way to mitigate any risk of overestimation of the 2014-2015 direct net cost due to eir's methodological approach.
[10] Paragraphs 147- 151.
[11] Paragraphs 12 and 152.

28 ALTO, BT and Vodafone's submissions did not specifically address elements of eir's Customer Model (as amended by TERA).

29 eir's submission to consultation extensively addressed eir's Customer Model (as amended by TERA).

30 This further consultation only relates to submissions to Consultation 21/17 which related to eir's Customer Model (as amended by TERA).

31 ComReg has published the submissions to Consultation 21/17, as part of this further consultation process (set out in Annex 2).

32 Having reviewed the submissions to Consultation 21/17, ComReg instructed its consultant TERA to:

- consider the direct net cost elements of the consultation submissions;
- conduct and end-to-end review of eir's Customer Model calculations (as amended by TERA) in light of the consultation submissions; and
- to review these against the direct net cost principles, methodologies, and calculations in D04/11.

2.4 TERA review

33 TERA produced TERA Report A (see Annex 3). TERA Report A does not address all submissions to Consultation 21/17 received which related to the direct net cost. It deals only with submissions that are relevant to the further calculation adjustments to eir's Customer Model (as amended by TERA).

34 Having considered TERA Report A, ComReg now proposes a downward adjustment of €852,422 to eir's Customer Model, resulting in a calculated direct net cost of €11,118,560, compared to €11,970,982 as submitted by eir in its 2015-2016 funding application. This is set out further in Chapter 4.

2.5 ComReg's engagement with eir

35 On 29 September 2022 ComReg wrote to eir informing it that, following the further calculation adjustments outlined in TERA Report A, ComReg was of the preliminary view that the calculated direct net cost of the eir's Customer Model (€11.97m) should be subject to a downward adjustment of €0.85m, amounting to a Direct Net Cost of the Customer Model for 2015/2016 of €11.12m (the "Amended Adjustment"). ComReg provided eir with supporting documents[12] which provided further details on the Amended Adjustment.

36 ComReg requested that eir revert with any comments on the Amended Adjustment no later than Thursday 10th November 2022. ComReg set out that:

- it would consider any comments received; and
- should eir choose not to provide a response to this letter, ComReg would proceed with the consultation process in respect of the 2015-2016 funding application.

37 On 10 November 2022 eir wrote to ComReg stating that it had reviewed the Amended Adjustment and had no comments on the Amended Adjustment.

[12] TERA Report A; updated model instructions; the excel part of the 2016 CAM; the updated cost curves and updated Workbooks A and B.

3 Adjusted Customer Model

38 ComReg, having engaged further with its consultant TERA, is now proposing a downward adjustment of €852,422 to eir's Customer Model, resulting in a calculated direct net cost €11,118,560, compared to €11,970,982 as submitted by eir its 2015-2016 funding application.

39 In the context of modelling the cost of the USO, eir uses the CAM, where there is an insufficient level of actual granular data available, to provide guidance on how costs are attributed.

40 TERA Report A sets out:

- the proposed calculation adjustments to eir's Customer Model (as amended by TERA);
- the basis and rationale for the further calculation adjustments;
- the individual and collective impact of the further calculation adjustments on the direct net cost calculation;

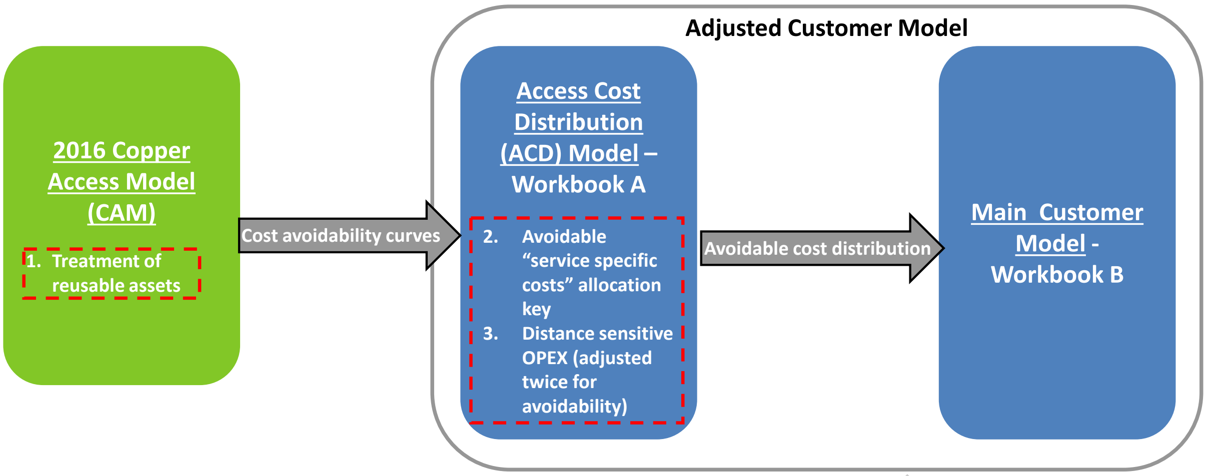
and that TERA considers that an adjustment to the net cost calculation in this regard is therefore warranted and necessary.

41 TERA Report A proposed further calculation adjustments to:

- the 2016 CAM inputs, specifically, the treatment of reusable assets and the associated impact on the calculation of "cost avoidability" curves; and
- the ACD Model (Workbook A) of eir's Customer Model (as amended by TERA), specifically:
  - the allocation key applied to avoidable "service specific costs"; and
  - the adjustment of distance sensitive OPEX for avoidability.

42 Figure 4 sets out the location within eir's Customer Model (as amended by TERA) of the further calculation adjustments made to: (i) the 2016 CAM inputs; and (ii) the ACD Model.

Figure 4: Location of further calculation adjustments in the Adjusted Customer Model



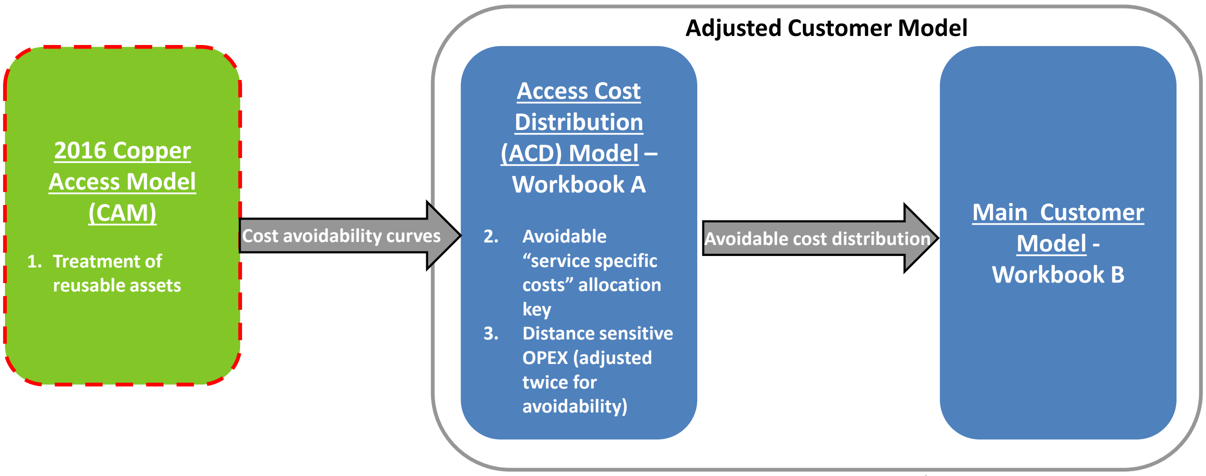
3.1 2016 CAM: treatment of reusable assets

43 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 services.

44 In the context of modelling the cost of the USO, eir uses the CAM, where there is an insufficient level of actual granular data available, to provide guidance on how costs are attributed.

45 The selection of parameters relating to the treatment of reusable assets is located in the 2016 CAM, which produces inputs to eir's Customer Model (as amended by TERA).

Figure 5: Location of further calculation adjustment – treatment of reusable assets



46 The 2016 CAM has the functionality to support both a:

- "Bottom-Up approach" i.e. Long-Run Average Incremental Costs plus ("BU-LRAIC+") approach (assets valued using current cost accounting (CCA)); and
- "Top-Down approach" i.e. assets valued using historical cost accounting ("HCA").

47 Initially, a Top-Down approach was used by TERA in eir's Customer Model (as amended by TERA). TERA identified two calculation errors relating to the use of a Top-Down approach. TERA has now used a Bottom-Up approach to correct these calculation errors.

48 The correction of these calculation errors leads to a decrease in the total calculated direct net cost of €1.47m.

49 Further details are set out in TERA Report A, section 2.

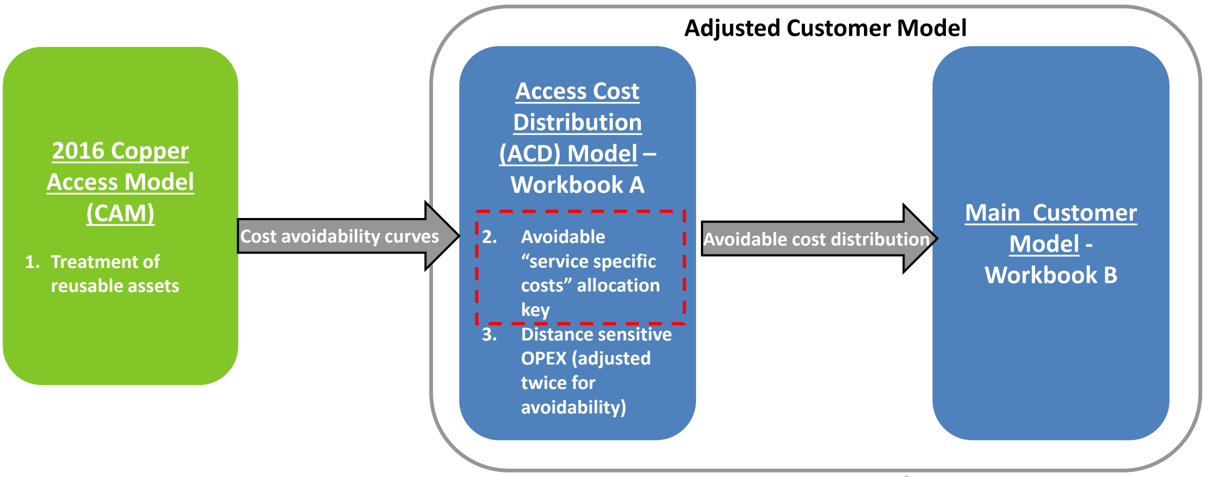
50 ComReg is of the preliminary view that this further calculation adjustment is required, resulting in an increase in the total calculated direct net cost of €3.99m from the value previously calculated by ComReg in Consultation 21/17.

3.2 Access Cost Distribution Model

3.2.1 Avoidable "service specific costs" allocation key

51 The adjustment to the allocation key applied to "service specific costs" is located in the ACD Model (Workbook A) of eir's Customer Model (as amended by TERA).

Figure 6: Location of further calculation adjustment – allocation key applied to “service specific costs”



52 The eir Customer Model (as amended by TERA) identifies a number of cost categories and assigns an allocation key to each category to enable avoidable costs to be distributed over percentiles of lines.

53 There are two main types of allocation keys:

- “Total” allocation key: distributes total costs associated with each distance sensitive category. It isolates avoidable costs within the total costs and then distributes these avoidable costs over each percentile of lines; and
- “Equi” allocation key: distributes avoidable costs equally over each percentile of lines.

54 TERA identified that the “Total” allocation key was used instead of the “Equi” allocation key for a subset of costs (i.e. Other_NDist, Linecard, Pair Gain, PSTN, DSL-R, SB-WLR, ULMP, Line Share, DSL-B, PP, LL and provisioning) within the “Service specific CAPEX categories”. The “Equi” cost allocation key should have been used to reflect the non-distance sensitive nature of these costs.

55 Accordingly, TERA has now replaced the “Total” allocation key with the “Equi” allocation key for this specific sub-set of costs within the “Service specific CAPEX categories”.

56 The correction of this calculation error leads to a decrease in the total calculated direct net cost of €1.47m.

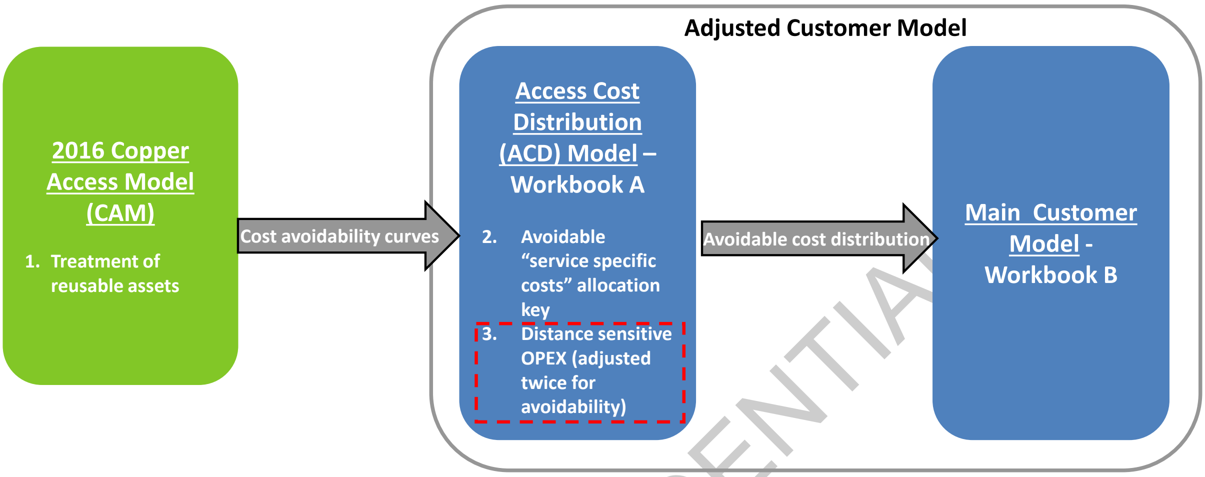
57 Further details are set out in TERA Report A, section 3.

58 ComReg is of the preliminary view that this calculation adjustment is required, resulting in a decrease in the total calculated direct net cost of €1.47m from the value previously calculated by ComReg in Consultation 21/17.

3.2.2 Distance sensitive OPEX

59 The application of allocation keys to costs, including Distance sensitive OPEX, is located in ACD Model (Workbook A) of eir's Customer Model (as amended by TERA).

Figure 7: Location of further calculation adjustment – adjusting distance sensitive OPEX for avoidability



60 eir's Customer Model breaks down the service specific cost category between: (i) fully avoidable costs; (ii) partially avoidable costs; and (iii) unavoidable costs.

61 In the Proposed ComReg Methodology, the "Total" allocation key was applied to <u>fully avoidable</u> OPEX costs only.

62 The "Total" allocation key should have been applied to the total costs for this category, regardless of their avoidability, and should not have been limited to only the fully avoidable OPEX.

63 Accordingly, TERA has now applied the "Total" allocation key to the total distance sensitive OPEX costs, i.e. to: (i) fully avoidable costs; (ii) partially avoidable costs; and (iii) unavoidable costs.

64 The correction of this calculation error leads to an increase in the total calculated direct net cost of €2.32m.

65 Further details are set out in TERA Report A, section 4.

66 ComReg is of the preliminary view that this calculation adjustment is required, resulting in an increase in the total calculated direct net cost of €2.32m from the value previously calculated by ComReg in Consultation 21/17.

Q. 1 Do you have any observations in relation to ComReg's proposed calculation adjustment to the Customer Model element of the direct net cost calculation?

4 eir's Customer Model (as amended by TERA) – eir's submission

67 In response to Consultation 21/17 only one respondent, eir, made submissions in respect of eir's Customer Model (as amended by TERA).

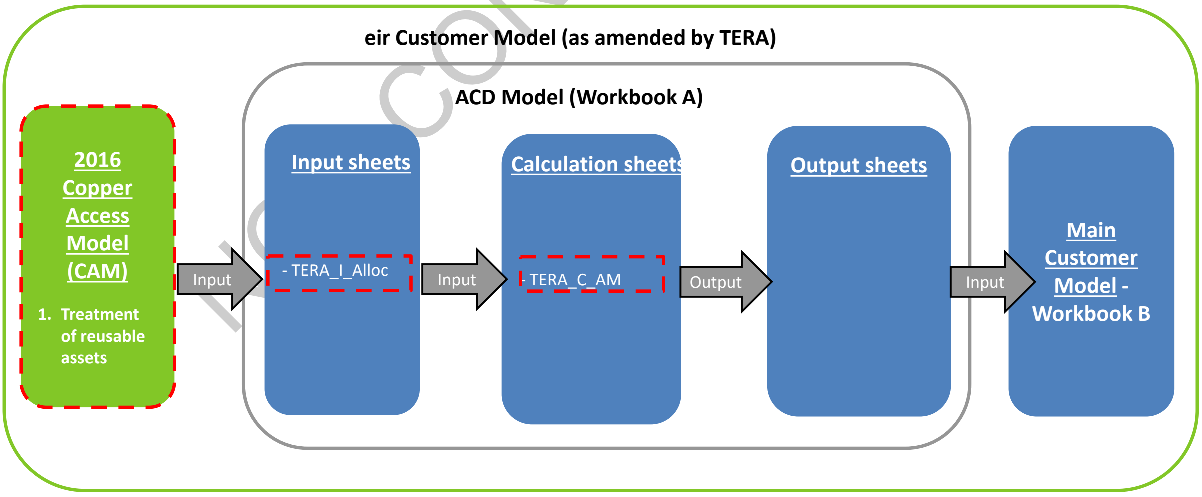
68 Those submissions made by eir which are not relevant to ComReg's proposed further calculation adjustments to eir's Customer Model (as amended by TERA) will be addressed by ComReg in its response to consultation document which will be published following consideration of submissions to this further consultation..

69 Accordingly, the focus of this further consultation is confined to ComReg's proposed further calculation adjustments to eir's Customer Model (as amended by TERA).

70 Those comments made by eir in its response to Consultation 21/17 which are relevant to ComReg's further calculation adjustments to eir's Customer Model (as amended by TERA) are responded to in this further consultation.

71 For ease of reference, Figure 8 sets out the areas of eir's Customer Model (as amended by TERA) which eir's submissions to consultation relate to.

Figure 8: relevant areas of eir's Customer Model (as amended by TERA)



72 eir state that: *"Our review of the TERA methodology to the access part of the Customer Model suggests that the implementation of the final distribution of lines per access cost bands is consistent with the input needed in the main Customer Model, subject to the following comments or caveats…"*[13].

[13] eir response to Consultation 21/17, page 9 paragraph 23, bullet point 1.

4.1 2016 CAM

eir submission to Consultation 21/17

73 In its response to Consultation 21/17 eir state that: *"…we attempted to reconstruct the inputs needed to the access part of the customer model, i.e. the 'TERA_I_Alloc' sheet. This requires setting up the 2016 CAM aspect of the model according to the methodology described by TERA, including use of a weighting between underground and overhead deployment, ranking according to the L/N methodology, implementation of the 3km boundary assumption and running the incremental and iterative aspects of Microsoft Access part of the CAM… The results produced by our reconstruction are close but not equal to the TERA model. During our reconstruction attempts we noted the following concerns/observations…*

- *The 2016 CAM can be set with different parameters, use of bottom-up or top-down, active vs total lines etc. TERA has not provided any justification for the parameters it has selected to develop the avoidability percentiles. We note in this regard that the year of calculation is set to 2016 which refers to the 2016/2017 financial year which is not consistent with the USO funding year of 2015/16.*
- *… several cost categories are used in the USO modelling 'Cable_OH, Cable_UG, Poles, Trenches, Total, Equi). In the 2016 CAM model each percentile is allocated according to each MDF's total cost (as of 2014, see the 'Network roll-out over time' sheet). This suggests that each percentile reflects the same cost ratios between MDF, i.e. the cost ratios in the sheet 'FAR depreciation' table 5 "Share by MDF based on 2014". It is unclear as to how a fixed ratio would affect results, but it is likely to result in distortions."*

ComReg's response

74 ComReg notes that the choice between a Bottom-Up or Top-Down approach does not affect the total level of cost relevant to the USO assessment. The level of cost of the USO is based on the costs in the USP's (eir's) separated accounts. The approach chosen only affects the profile of the cost curves which inform how the costs would be expected to change at different increments of network coverage.

75 TERA has identified errors in the calculation of cost avoidability curves relating to the use of cost base 2 (see TERA Report A, section 2) and in particular, reusable assets. The first error in this regard is that the HCA cost base remains constant, regardless of the 2016 CAM's coverage input.

76 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.

77 The second error regarding the calculation of cost avoidability curves is that, in using cost base 2, the distribution of HCA costs over MDFs is constant, regardless of the 2016 CAM's coverage input.

78 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

79 Initially, a Top-Down approach was used by TERA in eir's Customer Model (as amended by TERA). TERA identified two calculation errors relating to the use of a Top-Down approach. TERA has now used a Bottom-Up approach to correct these calculation errors.

80 Further details are set out in TERA Report A.

81 ComReg is of the preliminary view that a calculation adjustment is required, resulting in an increase in the total calculated direct net cost of €3.99m from the value previously calculated by ComReg in Consultation 21/17.

4.2 Customer Model - Access Cost Distribution Model (ACD – workbook A)

4.2.1 Avoidable service specific costs - 'Equi' cost category

eir submission to consultation

82 In its response to Consultation 21/17 eir state that: *"In the sheet 'TERA_C_AM', TERA summarise costs from the Area Model into several categories (Cable_OH, Cable_UG, Poles, Trenches, Total, Equi – range AK:AP). The cost of each category is used together with input sheet 'TERA_I_Alloc' in the sheet 'TERA_C_Cost_alloc' to estimate the costs per percentile per access category, i.e. the avoidable cost. The 'Equi' cost category is simply allocated equally to each percentile. TERA has provided no justification for this treatment of the cost. The approach to allocate equally to each category suggests that the number of lines is the same in each percentage group of all MDFs."*

83 eir then states: *"Nevertheless, the approach as currently implemented by TERA results in a cost distribution where there is always one cost band with a very high proportion of lines and that this cost band is where 1% of the assumed 'Equi' cost category falls within. If the 'Equi' cost category instead is allocated to the 'Total' category, i.e. treated in the same way as distance sensitive OPEX in the [Customer] Model, the net costs of uneconomic customers in economic areas increases by about €1.5 million"*[13].

ComReg's response

84 ComReg disagrees with eir's statement that the there is no justification for this treatment of "Equi" costs. "Equi" costs are non distance-sensitive costs and, accordingly, should be allocated equally across each percentile of lines.

85 ComReg is also of the view that the cost distribution in which there is a cost band with a high proportion of lines, but 1% of the 'Equi' costs, is to be expected as a consequence of: i) the "3km boundary"; and ii) the "Equi" cost allocation. The firsty percentiles of lines (those closest to the MDFs, which therefore have lower associated distance sensitive costs) will each bear 1% of total 'Equi' costs, despite having a high proportion of lines. This is due to the fact that 'Equi' cost are not distributed according to CAM-based cost curves, but instead, are non-distance sensitive and are therefore allocated equally across each percentile of lines.

86 In reviewing eir's Customer Model (as amended by TERA) ,TERA identified that the "Total" allocation key was used instead of the "Equi" allocation key for a subset of costs (i.e., Other_NDist, Linecard, Pair Gain, PSTN, DSL-R, SB-WLR, ULMP, Line Share, DSL-B, PP, LL and provisioning) within the "Service specific CAPEX categories". The "Equi" cost allocation key should have been used to reflect the non-distance sensitive nature of these costs.

87 Accordingly, TERA has now replaced the "Total" allocation key with the "Equi" allocation key for these specific sub-set of costs within the "Service specific CAPEX categories".

88 The correction of this calculation error leads to a decrease in the total calculated direct net cost of €1.47m.

89 Further details are set out in TERA Report A, section 3.

90 ComReg is of the preliminary view that this calculation adjustment is required, resulting in an decrease in the total calculated direct net cost of €1.47m from the value previously calculated by ComReg in Consultation 21/17.

4.2.2 Distance sensitive OPEX

eir submission to Consultation 21/17

91 In its submission to Consultation 21/17 eir state that: *"In the sheet "TERA_C_AM' TERA adjust the distance sensitive and non-distance sensitive OPEX costs from the Area Model with avoidability percentages from the 'I_Acc_Avoidability' sheet. These percentages have been estimated within the framework of the original eir approach. It is unclear as to whether they are appropriate for the TERA approach. For example, for the distance sensitive OPEX, TERA add these together with other cost categories (together termed 'Total') which are subsequently adjusted for availability in the 'TERA_C_Cost_alloc' sheet, in other words TERA has adjusted for advoidability twice".*

ComReg's response

92 In reviewing eir's Customer Model (as amended by TERA), TERA identified that the "Total" allocation key should have been applied to the total costs, regardless of their avoidability, and should not have been limited to only the fully avoidable OPEX.

93 Accordingly, TERA has now applied the "Total" allocation key to the total distance sensitive OPEX costs, i.e. to: (i) fully avoidable costs; (ii) partially avoidable costs; and (iii) unavoidable costs.

94 The correction of this calculation error leads to an increase in the total calculated direct net cost of €2.32m.

95 Further details are set out in TERA Report A, section 4.

96 ComReg is of the preliminary view that this calculation adjustment is required, resulting in an increase in the total calculated direct net cost of €2.32m from the value previously calculated by ComReg in Consultation 21/17.

5 Net Cost

97 Chapter 7 of Consultation 21/17 set out ComReg's preliminary views on the intangible benefits calculation of eir's 2015-2016 USO funding application.

98 The total direct net cost of the Adjusted Customer Model (i.e. uneconomic customers in economic areas) has been calculated at €11,118,560 (as compared to the figure of €11,970,982 claimed by eir in its 2015-2016 USO funding application as submitted to ComReg). ComReg is of the preliminary view is that a downward adjustment of €852,422 to eir's Customer Model (as amended by TERA) is required.

99 All other elements[14] of the direct net cost assessment, and the intangible benefits as set out in Consultation 21/17 remain unchanged.

100 The total net cost (after intangible benefits) has been calculated at €11,530,321 (as compared to the figure of €12,861,430 claimed by eir in its 2015-2016 USO funding application as submitted to ComReg). ComReg's preliminary view is that a downward adjustment of €1,573,157 to the net cost of eir's 2015-2016 USO funding application, as submitted to ComReg, is required.

Q. 2 Based on ComReg's assessment, detailed in chapters 3 and 4, do you have any observations on ComReg's preliminary view that the positive net cost for eir's 2015/16 Universal Service funding application is €11,530,321?

[14] Area Model, Directories Model, Payphones Model, and Disabled End-Users' Services Model of the USO Model and the Intangible benefits assessment of enhanced brand recognition, life cycle benefits, ubiquity benefits and marketing benefits.

6 Next steps and submitting comments

101 The timeframe for receipt of submissions to this further consultation document is 07 March 2023 during which time ComReg welcomes written responses on any of the issues raised in this further consultation document. It is requested that comments within submissions make reference to the relevant question numbers from this further consultation document.

102 To promote further openness and transparency, ComReg will publish all respondents' submissions to this further consultation document, subject to the provisions of ComReg's Guidelines on the Treatment of Confidential Information (ComReg 05/24) and its obligation under Regulation 15 of the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011.

103 Respondents are requested to clearly identify confidential material within their responses and place such material in a separate annex.

104 Respondents are also requested to provide any electronic submissions in an unprotected format to facilitate publication.

7 Draft determination

Statutory Powers

1.1 This Determination is hereby issued by the Commission for Communications Regulation ("ComReg"):

i. Pursuant to Regulation 11 of the European Communities (Electronic Communications Networks and Services) (Universal Service and end users' rights) Regulations 2011 ("the Regulations").

ii. Pursuant to the principles and methodologies set out in ComReg Document, D04/11 "Report on Consultation and Decision on the Costing of Universal Service Obligations Principles and Methodologies" dated 31 May 2011;

iii. Having regard to the submissions received and set out in ComReg Document No. 21/17s and No. XX/XX;

iv. Having regard to the analysis and reasoning set out in ComReg Document No. 21/17 and No. XX/XX;

v. Having regard to ComReg's functions and objectives under sections 10 and 12 respectively of the Communications Regulation Acts 2002 – 2011;

vi. Having, where relevant, complied with Policy Directions made by the Minister

Determination

1.2 Following the assessment of the funding application received from Eircom Limited ("eir") pursuant to Regulation 11(1) of the Regulations on 31 March 2017, in relation to the net cost of meeting its universal service obligations in the financial year 2015-2016, as accompanied by supporting information in compliance with Regulations 11(2) and 11(5) of the Regulations, ComReg has determined, in accordance with Regulations 11(3) and 11(4) of the Regulations, that there was a positive net cost comprised of the following figures:

USO Net Cost 2015-2016		*ComReg €*
Direct net cost (a)	Uneconomic Areas	€444,959
	Uneconomic Customers	~~€ 6,289,628~~ € 11,118,560
	Directories	€680,000
	Payphones	€22,929
	Services for Disabled End Users	€16,336
	Direct net cost	~~€ 7,453,853~~ €12,282,784
Intangible benefits (b)	Enhanced brand recognition	€739,171
	Life-cycle	€0
	Ubiquity	€11,600
	Marketing	€1,692
	Total intangible benefits	€752,463
Net cost (after intangible benefits) / Positive net cost		**~~€6,701,390~~ €11,530,321**

~~1.3 Pursuant to the calculation of the positive net cost, and in accordance with Regulation 11(3) and 11 (4) of the Regulations, ComReg has determined that for the financial year 2015-2016, the positive net cost of meeting the universal service obligation does not represent an unfair burden on eir.~~

1.4 [Note: insertions in red and underlined, and deletions in red and strikethrough]

1.5 [For the avoidance of doubt it is only these adjusted aspects of the Draft Determination that are being consulted on in this further consultation].

Annex 1 – Consultation questions

Section **Page**

Annex 2 - Submissions to Consultation 21/17

Annex 3 – TERA Report A: "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)"