



Commission for
Communications Regulation

Eircom's Wholesale Access Services:

Further specification and amendment of price control obligations in Market 4 and Market 5 and further specification of price control obligation in Market 2

Consultation and Draft Decision

Reference: ComReg 15/67

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An Coimisiún um Rialáil Cumarsáide

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All responses to this consultation should be clearly marked: -
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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 in ComReg Document No 05/24.

Redacted Information

Please note that this is a non-confidential version of the consultation and draft decision. Certain information within the consultation has been redacted for reasons of confidentiality and commercial sensitivity, with such redactions indicated by the symbol ✂.

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Chapter 1

1 Introduction

- 1.1 This consultation and draft decision (**'Draft Decision'**) considers four matters. Firstly, it considers the further specification of the existing price control obligation of cost orientation for the following wholesale access services provided by Eircom Limited (**'Eircom'**) on its wholesale access network:
- Local Loop Unbundling (**'LLU'**);
 - Sub Loop Unbundling (**'SLU'**);
 - Line share (**'Line Share'**);
 - Standalone Broadband (**'SABB'**);
 - Civil engineering infrastructure (**'CEI'**) namely duct and pole access; and
 - Dark fibre.
- 1.2 Secondly, the Draft Decision proposes to amend the existing price control obligation for Single Billing-Wholesale Line Rental (**'SB-WLR'**) from a retail minus to a cost orientation price control.
- 1.3 Thirdly, the Draft Decision determines the cost-oriented rental charges for LLU, SLU, SB-WLR, Line Share, SABB, duct and pole access and dark fibre.
- 1.4 Lastly, the Draft Decision further specifies the margin squeeze obligation proposed in the 2014 FACO Consultation Document¹. This Draft Decision proposes to further specify this obligation by imposing a margin squeeze between retail line rental² and SB-WLR. In addition, we propose to further specify the margin squeeze obligation such that an appropriate economic space is maintained between the price of POTS³ based virtual unbundled access (**'VUA'**) against the price for standalone VUA / next generation access (**'NGA'**) Bitstream (including a contribution towards managed voice over broadband⁴ (**'Managed VoB'**) costs). This is discussed in Chapter 10.

¹ ComReg Document No 14/26: Market Review: Wholesale Fixed Voice Call Origination and Transit Markets, dated 4 April 2014.

² Retail line rental includes standalone lower level voice access (**'LLVA'**), Bundled LLVA and higher level voice access (**'HLVA'**) as discussed in Chapter 10.

³ Plain Old Telephony Service (**'POTS'**).

⁴ Managed VOB means managed voice over broadband provided by a fixed service provider either directly using its own network, or indirectly by renting the access path from a third party.

- 1.5 The main charges for ancillary services (e.g., connections, disconnections etc.) associated with SB-WLR (as set out in the Eircom reference interconnect offer ('**RIO**') price list on the Eircom wholesale website) and the wholesale access network (as set out in the Eircom access reference offer ('**ARO**') price list on the Eircom wholesale website) have also been reviewed as part of this Draft Decision.
- 1.6 The wholesale access services of LLU, SLU, Line Share, SABB, SB-WLR, CEI and dark fibre are referred to collectively as the '**Wholesale Access Services**' throughout the Draft Decision.
- 1.7 The wholesale markets relevant in the context of the Draft Decision are set out below:
- The Wholesale Physical Network Infrastructure Access ('**WPNIA**') market (also referred to as '**Market 4**' in the 2007 European Commission Markets Recommendation⁵ ('**2007 Commission Recommendation**')), as set out in ComReg Decision D05/10⁶ ('**WPNIA Market Decision**');
 - The Wholesale Broadband Access ('**WBA**') market (also referred to as '**Market 5**' in the 2007 Commission Recommendation), as set out in ComReg Decision D06/11⁷ ('**WBA Market Decision**');
 - The Wholesale Fixed Voice Call Origination and Transit Markets ('**FACO**') (also referred to as '**Market 2**' in the 2007 Commission Recommendation). It should be noted that ComReg has recently carried out an updated market analysis in relation to FACO and published a consultation paper ComReg Document 14/26 ('**2014 FACO Consultation Document**') in which it has proposed that Eircom should continue to be designated with SMP in the market. This has been recently notified⁸ to the European Commission and ComReg intends to shortly publish a final decision in respect to FACO. For the purposes of this Draft Decision, without prejudice to a final decision, we have assumed that the obligation on Eircom to provide SB-WLR should now be imposed in Market 2 rather than Market 1 where it currently resides — as proposed by the 2014 FACO Consultation Document.

⁵ Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services. The Commission issued a new recommendation on 9 October 2014 on relevant product and service markets (2014/710/EU) ('**2014 Markets Recommendation**').

⁶ ComReg Document No 10/39: 'Market Review: Wholesale (Physical) Network Infrastructure Access (Market 4) – Further Response to ComReg Document No. 08/104, Response to ComReg Document No. 09/42 and Decision', dated 20 May 2010.

⁷ ComReg Document No 11/49: Market Review: Wholesale Broadband Access, dated 8 July 2011.

⁸ European Commission notification reference number IE/2015/1746.

1.8 Figure 1 summarises the associated wholesale market related to each of the Wholesale Access Services. The current price control measure in place for each of the Wholesale Access Services is also detailed including the associated pricing decisions and the current costing methodology in place.

Figure 1: Overview of current pricing decisions for Wholesale Services

Access Service	Market	Current price control	Relevant Pricing Decision	Current methodology
LLU / SLU	Market 4	Cost orientation	ComReg Decision D01/10 ⁹ & ComReg Document No 13/01 ¹⁰	Bottom up long run average incremental costs plus an apportionment of joint and common costs ('BU-LRAIC+')
Line Share	Market 4	Cost orientation	ComReg Decision D04/09 ¹¹	Incremental costs
SB-WLR ¹²	Market 1	Retail minus	ComReg Decision D07/61 ¹³ & ComReg Document No 08/19 ¹⁴	Retail price minus at least 14%

⁹ ComReg Document No 10/10: Response to Consultation Documents No. 09/39 and 09/62 - Local Loop Unbundling ("LLU") and Sub Loop Unbundling ("SLU") Maximum Monthly Rental Charges ('**LLU Pricing Decision**').

¹⁰ Information Notice 13/01: Price Reductions to Local Loop Unbundling (LLU) and Sub Loop Unbundling (SLU).

¹¹ ComReg Document No 09/66: Response to Consultation and Decision - Rental Price for Shared Access to the Unbundled Local Loop ('**Line Share Decision**').

¹² The 2014 FACO Consultation Document proposes that an obligation on Eircom to provide WLR should now be imposed in Market 2 rather than Market 1 where it currently resides. The 2014 FACO Consultation proposes to retain the retail-minus price control, having noted that this will be further considered in a separate consultation — referred to in that consultation as the "Separate Access Network Pricing Consultation". This Draft Decision is that "Separate Access Network Pricing Consultation".

¹³ ComReg Decision No D07/61: Decision Notice and Decision Instrument - Designation of SMP and SMP Obligations - Market Analysis: Retail Fixed Narrowband Access Markets ('**SB-WLR Retail Minus Decision**').

¹⁴ ComReg Information Notice No. 08/19: Single Billing Wholesale Line Rental - Directions to Eircom regarding retail minus %.

SABB	Market 5	Cost orientation Outside of the larger exchange area ¹⁵ ('LEA'). In LEA Eircom must comply with retail margin squeeze obligation and WBA price floor. Also national cost orientation obligation on WBA market.	ComReg Decision D11/14 ¹⁶ ComReg Decision D06/12 ¹⁷	Cost orientation Outside the LEA ¹⁸ to be specified in this Draft Decision.
CEI	Market 4	Cost orientation	ComReg Decision D03/13 ¹⁹	BU-LRAIC+
Dark Fibre	Market 4	Cost orientation	ComReg Decision D03/13	BU-LRAIC+

1.9 ComReg has considered the views of its expert consultants TERA ('TERA') in arriving at the Draft Decisions set out in this paper.²⁰

1.10 This document is structured as follows:

- Chapter 2: provides an executive summary of the main points of the consultation and ComReg's overall objectives.
- Chapter 3: provides a background on the Wholesale Access Services under review, the related market analysis relevant to the Wholesale Access Services and the identified competition problems associated with the relevant markets.
- Chapter 4: sets out the proposed price control obligations as well as the proposed costing methodologies for determining the relevant costs for each of the Wholesale Access Services.

¹⁵ "LEA" is defined at subsection 6.2.1 in Chapter 6.

¹⁶ ComReg Document No 14/73R: 'Wholesale Broadband Access: Price Control obligation in relation to current generation Bitstream ('WBA Pricing Decision').

¹⁷ ComReg Document No 12/32: Wholesale Broadband Access: Further specification to the price control obligation and an amendment to the transparency obligation; dated 5 April 2012 ('WBA Price Floors Decision').

¹⁸ "Outside the LEA" is defined at subsection 6.2.2 in Chapter 6.

¹⁹ ComReg Decision No D03/13, ComReg Document No 13/11: Remedies in Next Generation Access Markets; dated 31 January 2013 ('NGA Decision').

²⁰ For information purposes only, their report ('TERA Report') is published at Annex 7. TERA's views expressed are not necessarily the views of ComReg.

- Chapter 5: sets out the proposed cost model for determining the appropriate costs for LLU, SLU, SB-WLR, SABB, CEI and dark fibre.
- Chapter 6: sets out the proposed pricing approach for LLU, SLU and SB-WLR.
- Chapter 7: sets out the proposed pricing approach for SABB.
- Chapter 8: sets out the proposed pricing approach for CEI and dark fibre.
- Chapter 9: sets out the proposed pricing approach for Line Share.
- Chapter 10: sets out the proposed retail margin squeeze test for line rental and the wholesale margin squeeze test for POTS based VUA.
- Chapter 11: sets out the review of ancillary charges.
- Chapter 12: sets out other proposed regulatory measures.
- Chapter 13: sets out a summary of the proposed charges for LLU, SLU, Line Share, SB-WLR, SABB, CEI and dark fibre.
- Chapter 14: sets out an analysis of the likely effect of the proposed changes to the price control obligation, the costing/pricing methodologies and the margin squeeze obligations.
- Chapter 15: sets out the timelines for consultation response and how confidential information should be dealt with.

Chapter 2

2 Executive Summary

- 2.1 ComReg is the regulator for the electronic communications sector in Ireland.
- 2.2 Our regulatory objectives in line with Section 12 of the Communications Regulations Act 2002²¹ (**‘the Communications Regulations Act’**) are to promote competition, to contribute to the development of the internal market and to promote the interests of users within the community. In the context of this document the following objectives²² are also relevant:
- Incentivise efficient network investment by Eircom and other operators, as appropriate;
 - Ensure Eircom recovers its actual efficient investment together with an appropriate rate of return;
 - Ensure that Eircom cannot price excessively; and
 - Ensure Eircom cannot predatory price or foreclose other operators from the market.
- 2.3 The European Commission in the 2007 Commission Recommendation recommended a number of markets as being susceptible to *ex ante* regulation. These markets have been reviewed in an Irish context and obligations were imposed where operators were designated with significant market power (**‘SMP’**).
- 2.4 Eircom has been designated as having SMP in the following markets²³:
- Market 4 (WPNIA market);
 - Market 5 (WBA market); and
 - Market 2 (FACO market) (it is proposed in the 2014 FACO Consultation Document that Eircom should continue to be designated with SMP in Market 2²⁴).
- 2.5 As a result of these designations a number of obligations were imposed on Eircom in each of the wholesale markets, including the obligation of a price

²¹ Communications Regulation Act 2002 (No. 20 of 2002), as amended by the Communications Regulation (Amendment) Act 2007 (No. 22 of 2007), the Communications Regulation (Premium Rate Services and Electronic Communications Infrastructure) Act 2010 (No. 2 of 2010) and the Communications Regulation (Postal Services) Act 2011 (No. 21 of 2011).

²² In line with Regulation 13 of the Access Regulations - S.I. No 334 of 2011 European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011.

²³ S.I. No 333 of 2011 European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011.

²⁴ See paragraph 1.7 in Chapter 1. Please note that the draft measures concerning the FACO market have been notified to the European Commission, reference number IE/2015/1746.

control and the obligation not to cause a margin squeeze. Please refer to Figure 1 in Chapter 1 for the details of the price control obligations currently in place with regard to the Market 4, Market 5 and Market 2 access services under review.

- 2.6 In setting the wholesale access prices ComReg must take utmost account of the recent European Commission Recommendation in 2013²⁵ on non-discrimination and costing methodologies (the ‘**2013 Recommendation**’). The 2013 Recommendation, among other things, looks at the way copper and NGA wholesale access prices should be set and where cost orientation is appropriate. It is important to note that this document looks at current generation wholesale access services only.
- 2.7 As set out in Figure 2 we are maintaining the obligation of cost orientation for the wholesale access services in Market 4 and Market 5. In this document we are further specifying what we mean by cost orientation. For SB-WLR in Market 2 we are proposing to change the retail minus price control to a cost orientation price control.

Figure 2: Overview of current and proposed price controls for Wholesale Access Services

Wholesale access product	Current price control	Proposed price control
LLU	Cost orientation	Cost orientation
SLU	Cost orientation	Cost orientation
Line Share	Cost orientation	Cost orientation
SB-WLR	Retail minus	Cost orientation
SABB	Cost orientation	Cost orientation
Duct and pole access	Cost orientation	Cost orientation
Dark fibre	Cost orientation	Cost orientation

- 2.8 Having regard to ComReg’s regulatory objectives (at paragraph 2.2) and in light of the 2013 Recommendation (paragraph 2.6) we consider that the proposed wholesale access prices achieve the appropriate balance between ensuring on the one hand that Eircom can recover costs that are efficiently incurred (including an appropriate return on invested capital), while on the other hand the

²⁵ Commission Recommendation dated 11 September 2013 on ‘Consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment’.

appropriate investment signals are provided to the market place — in terms of efficient market entry and sufficient incentives to invest especially in the relevant areas of the country.

- 2.9 In this regard, we have used in some instances the bottom-up long run average incremental cost plus an apportionment for joint and common costs ('**BU-LRAIC+**') pricing approach and in other cases we have used the top down historic cost accounting ('**TD HCA**') approach.
- 2.10 The BU-LRAIC+ methodology is based on current costs which values the operator's assets at the current market value and allows for changes in asset prices. By linking the value of the assets to newly deployed network it promotes efficient investment incentives and ensures that the Incumbent (Eircom) recovers its future costs thereby encouraging investment. A potential entrant is charged an access price in principle similar to what it might pay to build its own network, and thus has a finely balanced 'build-or-buy' decision.²⁶ In the context of this review the BU-LRAIC+ approach has also been generally applied to those assets that cannot be reused for the provision of NGA services in line with the 2013 Recommendation.²⁷
- 2.11 The TD HCA methodology means the Incumbent's (Eircom's) accounting data. TD HCA in the context of this document means Eircom's actual accounting data for 2014 adjusted for efficiencies as well as the forecast for future expenditure over the price control period similarly adjusted for efficiencies.²⁸ The accounting net book value of each asset is taken as the basis for capital costs and this value is depreciated over the remaining lifetime of each asset. Operating expenditure is also estimated from historic accounting information and common cost items are allocated to different services using allocation keys. An uplift to allow for the rate of return²⁹ is added to the Eircom costs. In the context of this review Eircom's TD data has also been generally applied to those assets that can be reused for the provision of NGA services e.g. poles and ducts, in line with the 2013 Recommendation.³⁰
- 2.12 We consider that it is important to achieve an appropriate balance between setting the necessary investment signals in the relevant areas (i.e., urban areas³¹) while at the same time ensuring that Eircom does not over / under recover its actual efficient costs nationally. If the access price is too high in areas where infrastructure investment is also unlikely to develop (as the deployment cost for each line is high i.e., in rural areas³²), this would not be desirable due to

²⁶ Please refer to Chapter 4.

²⁷ Please refer to Chapter 4 and Chapter 5.

²⁸ *ibid.*

²⁹ *ibid.*

³⁰ *ibid.*

³¹ Referred to in this document as the Larger Exchange Area ('**LEA**').

³² Referred to in this document as '**Outside the LEA**'.

the detrimental long-term impact on consumers arising from a lack of competition, as competition from operators acting as resellers may also be dampened. On the other hand the access price should not be too low, especially in urban areas, as it could deter investments in the long term.

- 2.13 An additional consideration in this document is whether the wholesale access services under review should be priced based on national costs or on geographic de-averaged costs. We have also considered the risk that geographically de-averaged prices could lead to a digital divide if the prices of access services prove prohibitively high in rural areas which may be to the detriment of consumers. This is discussed in Chapter 6.
- 2.14 In the proceeding paragraphs we have summarised the proposed approach to setting the wholesale access prices for LLU, SLU, Line Share, SB-WLR, SABB Outside the LEA, duct access, pole access and dark fibre.

Local loop unbundling ('LLU'):

- 2.15 The proposed national LLU monthly rental price is a maximum of €10.19 (or €11.15 including fault repair costs).
- 2.16 The monthly national rental price is based on a BU-LRAIC+ model for the LEA areas. In line with the EC Recommendation, we have applied a BU-LRAIC+ approach to those assets that cannot be reused for NGA services and Eircom's TD data is applied to those assets that can be reused for NGA services (e.g., ducts and poles).
- 2.17 We consider that this monthly LLU price should send the appropriate 'build or buy' signals. Our approach relies on the assumption that only lines in urban areas are likely to be unbundled. Given the high cost of lines in rural areas, an LLU price based on national costs could raise the LLU price to a non-competitive level — in particular in those areas where LLU may be viable (i.e., in urban areas) — and is considered not to be appropriate given the 'build-or-buy' signals are not relevant for private operators in rural areas.
- 2.18 For further details please refer to Chapter 6.

Sub Loop Unbundling ('SLU'):

- 2.19 The proposed national SLU monthly rental price is a maximum of €5.88 (including fault repair costs).
- 2.20 The monthly national rental price is based on a national BU-LRAIC+ model. In line with the EC Recommendation, the BU-LRAIC+ costs are applied to those assets that cannot be reused for NGA services and Eircom's TD data is applied to those assets that can be reused for NGA services (e.g., ducts and poles).

- 2.21 In addition, the SLU costs are adjusted to reflect the fact that lines greater than 1km are unlikely to be technically capable of supporting the required standard of broadband services. Therefore, the cost of SLU lines longer than 1km are excluded from the SLU price calculation.
- 2.22 We consider that this monthly SLU price should send the appropriate 'build or buy' signals. Our approach relies on the assumption that there could be a demand for SLU lines nationally — including in the less economic exchanges (i.e., in rural areas). The demand for SLU may emerge in rural areas where private operators may require SLU to deliver broadband services as part of the national broadband plan ('**NBP**'). In addition, a national SLU price is appropriate given that SLU is a direct input into Eircom's regulated VUA price (which is relevant for urban areas).
- 2.23 For further details please refer to Chapter 6.

Line Share:

- 2.24 The proposed maximum monthly rental price for Line Share is €0.77.
- 2.25 The monthly national rental price is based on the incremental costs relevant to the ongoing day to day running of the Line Share service.
- 2.26 For further details please refer to Chapter 9.

Single Billing – Wholesale Line Rental ('SB-WLR'):

- 2.27 The proposed SB-WLR monthly price is €16.72 (including fault repair and provisioning costs).
- 2.28 This SB-WLR monthly price is based on Eircom's TD costs and adjusted for efficiencies associated with the provision of SB-WLR nationally.
- 2.29 This monthly rate achieves a balance of allowing Eircom to recover its national efficiency incurred costs while at the same time ensuring that there are appropriate investment incentives in urban areas.³³
- 2.30 For further detail please refer to Chapter 6.

³³ This balance is achieved by the fact that the SB-WLR price is always the higher of either: Eircom's TD costs adjusted for efficiencies for providing SB-WLR nationally; or, a combination of the BU-LRAIC+ costs and TD costs for provision of SB-WLR in the LEA, as described in Chapter 6 (subsection 6.6).

Standalone Broadband:

- 2.31 For SABB Outside the LEA³⁴ we propose a maximum monthly rental of €22.16 (including fault repair and provisioning costs).
- 2.32 This maximum monthly price, Outside the LEA, is based on Eircom's TD costs (adjusted for efficiencies) associated with the provision of SABB Outside the LEA.
- 2.33 We consider that this monthly SABB price Outside the LEA should ensure that there is no over or under recovery of costs by Eircom. The build or buy signals are less relevant in this area given the objective is not to stimulate alternative operator investment where it is clear no commercial operator might invest. In addition, the BU-LRAIC+ approach could lead to over-recovery of costs and could give rise to significant increases in prices Outside the LEA.
- 2.34 For further details please refer to Chapter 7.

Margin squeeze tests

- 2.35 In addition to the proposals set out above we are also proposing to include two margin squeeze tests in Market 2.
- 2.36 The first test between retail line rental and wholesale line rental (or SB-WLR) should ensure a sufficient margin between the retail line rental services and wholesale line rental so that another authorised operator ('**OAO**') can replicate Eircom's retail prices either on a standalone basis or in a bundle.
- 2.37 The second test is to ensure sufficient economic space between the price for POTS based VUA and the price for standalone VUA / NGA Bitstream (including a contribution towards the cost of Managed VoB) so that an operator is not disincentivised to move to alternative technologies as appropriate. This should ensure technological neutrality.
- 2.38 For further details on both margin squeeze tests please refer to Chapter 10.

Duct Access:

- 2.39 The proposed annual price per metre of sub duct is differentiated between duct access in Dublin³⁵ exchanges and duct access in provincial exchanges.
- 2.40 In line with the 2013 Recommendation, the proposed price for duct access is based on a blend of Eircom's TD costs for those ducts that can be reused for

³⁴ Outside the LEA as described in Chapter 7.

³⁵ Annex 13 contains the exchanges which are subject to "Dublin" duct access prices. All other exchanges are subject to "provincial" duct access prices.

NGA and the long-run view (or BU-LRAIC+ costs) of replacement of ducts for the provision of NGA services.

2.41 For further details please refer to Chapter 8.

Pole Access:

2.42 The proposed national annual price per pole is €9.87 (based on 2 cables per pole) or €19.74 where one cable is present.

2.43 In line with the 2013 Recommendation, for pole access the proposed price is based on a blend of Eircom's TD costs for those poles that can be reused for NGA (and including Eircom's forecasted capital spend on poles over the next 3 years) and the long run view (or BU-LRAIC+ costs) of replacement of poles for the provision of NGA services.

2.44 For further details please refer to Chapter 8.

Dark Fibre:

2.45 The proposed national annual price per metre of dark fibre is €0.19.

2.46 In line with the 2013 Recommendation, for dark fibre the proposed price is based on a blend of Eircom's TD costs for those assets that can be reused for NGA and the BU-LRAIC+ costs for those assets that cannot be reused for NGA services.

2.47 The proposed price for dark fibre only applies in those circumstances where access to civil engineering infrastructure (ducts and poles) is not available for economic, technical or capacity reasons and as such where dark fibre is available.

2.48 For further details please refer to Chapter 8.

Ancillary services:

2.49 We have reviewed the main ancillary charges associated with connections, migrations, collocation services in Market 4 and the main ancillary charges associated with SB-WLR.

2.50 ComReg considers that recent changes to the underlying costs used to set a large majority of these prices/charges needs to be reflected by Eircom in the ancillary services charges going forward.

2.51 For further details please refer to Chapter 11.

Other regulatory measures:

- 2.52 ComReg proposes that the price control period should be for three years from the date of our decision but in any event it should remain in place until further notice by ComReg. The proposed three year price control period should be from 2016 to 2018.
- 2.53 ComReg proposes that on an annual basis Eircom should review the inputs, costs and assumptions of the cost model. The annual review is an opportunity to ensure that any exceptional changes in the model are considered. If, as a result of this review, it is clear that there are material differences then Eircom should bring this to the attention of ComReg. ComReg may then assess these material differences and consider how any issues might be addressed going forward.
- 2.54 For further details please refer to Chapter 12.

Next steps:

- 2.55 ComReg believes that the proposed pricing framework set out in this document should strike the right balance between ensuring Eircom's recovery of costs while it should also send the appropriate investment signals to Eircom and other operators for efficient infrastructure investment in areas where it is considered appropriate. This document when considered in conjunction with the Bundles Decision³⁶, the NGA Decision, the WBA Price Floors Decision and the WBA Pricing Decision should ensure that competition is incentivised and fostered in the long-term so that consumers benefit from a wide variety of choice at affordable prices.
- 2.56 ComReg welcomes the views of the industry regarding the proposals set out in this document. In that regard, responses to this consultation must arrive at ComReg by 5pm, Friday, 28 August, 2015.
- 2.57 ComReg in making its final decision (if appropriate) will consider all the views of respondents to this consultation and will take utmost account of any comments from the European Commission in deciding on the appropriate price control for the wholesale access markets.

³⁶ ComReg Document No. 13/14: Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4 dated 8 February 2013 ('**Bundles Decision**').

Chapter 3

3 Background

3.1 Overview

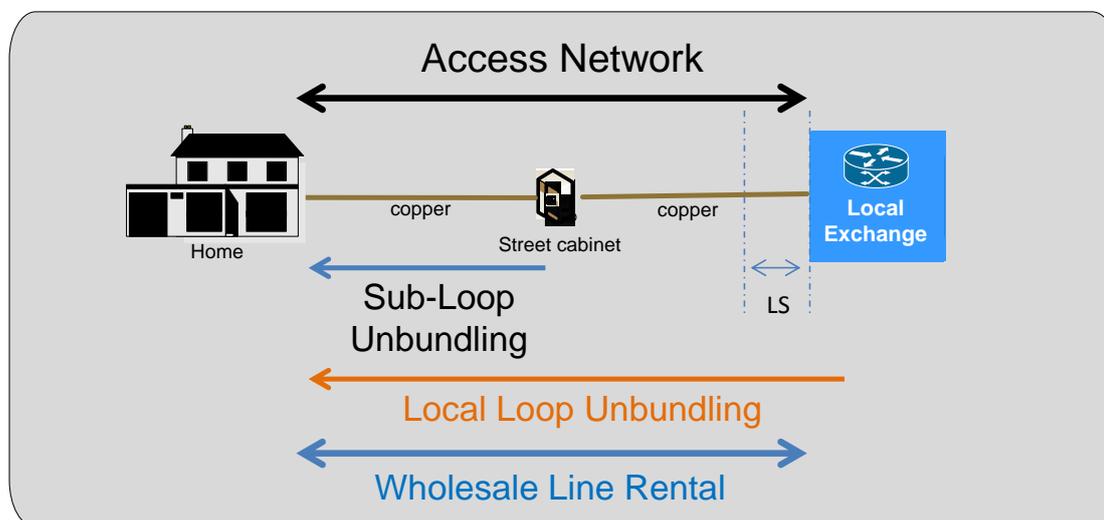
3.1 In order to assist readers of this Draft Decision, this chapter provides an overview of the Wholesale Access Services (including the associated ancillary services), under the following headings:

- Technical background;
- Competition concerns;
- Current regulatory price controls; and
- Additional related regulatory considerations.

3.2 Each is discussed in turn below.

3.2 Technical background

Figure 3: Overview of access network



3.3 The access services offered by Eircom over its wholesale network include the following:

1. Copper-based Market 4 services:

- a) **LLU**: This allows unbundled access to the local loop. The local loop is the physical path which connects a local exchange to a home or premises usually via a street side cabinet. LLU allows OAOs access to Eircom's local network at regulated prices and facilitates them in the provision of services directly to customers. LLU is an important driver of competition in the delivery of high speed broadband.
- b) **SLU**: This allows unbundled access to the local sub-loop. A sub-loop is the portion of the local loop which runs from a street side cabinet to a home or premises. SLU allows OAOs to unbundle loops at the street side cabinet.
- c) **Line Share**: This allows for renting the broadband capability of a loop only. When an operator uses a full LLU service it takes control of the entire capability of the loop, which means that no other operator can use that loop to provide services to the end customer. However, it is also possible to isolate the broadband capability of the line from the narrowband capability and allow an operator to provide broadband separately. When using Line Share to offer services to a customer an operator rents the broadband capability of a local loop only, while another operator (e.g., Eircom Retail) provides narrowband services (mainly voice) over the same loop.

2. Copper-based Market 5 services:

- a) **Bitstream**: This comprises the non-physical or active network access (Bitstream access) at a fixed location, including but not limited to:
 - **SABB**: This provides a standalone DSL broadband service over the local loop, without a Public Switched Telephone Network ('PSTN') service.

3. Copper-based Market 2 services:

- a) **SB-WLR**: This allows a fixed service provider to issue one single bill to end-users for carrier pre-select ('CPS')³⁷ "all calls" and line rental charges, which maintains a primary relationship with the end user. Some OAOs purchase SB-WLR services from Eircom to provide retail fixed telephony services

³⁷ Carrier Pre Select (CPS) is a call origination product, which allows the end user to purchase all or portion of calls (e.g. national or international calls) from one service provider (usually an OAO) while purchasing line rental from another service provider (usually Eircom). OAOs have continued to migrate their customers from CPS only to SB-WLR or WLA so that only a small percentage of end users have a CPS-only service.

directly to retail customers, while other OAOs do so for the purpose of re-selling services as part of a broader suite of their own wholesale services which are made available to OAOs.

4. Ancillary Services

- a) Ancillary Services in the context of SB-WLR means the ancillary services set out in sections 4.2 and 4.3 of the document entitled “Single Billing through Wholesale Line Rental Product Description” (issue 2.2, dated 5 December 2007) as may be amended from time to time and published on Eircom’s wholesale website. The ancillary services associated with SB-WLR are set out on Eircom’s Wholesale website³⁸. The SB-WLR ancillary services include Eircom alarm reminder, caller return, direct dialling inwards (**‘DDI’**), call barring, call answering, call forwarding, Eircom mailbox, wholesale low value customer premises equipment (**‘CPE’**) as well as a number of other services.
- b) Ancillary services in Market 4 includes associated facilities, connections, fault repair charges and any other related charges (set out in the access reference offer (**‘ARO’**) price list on Eircom’s wholesale website).

5. Civil Engineering Infrastructure

- a) Civil Engineering Infrastructure (also known as passive infrastructure) means physical local loop facilities deployed by Eircom to host local loop cables such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean or above-ground assets such as sub-ducts, ducts, manholes and poles. This Draft Decision will consider the pricing for ducts (including sub-ducts and manholes) and poles.

6. Dark Fibre

- a) Dark fibre is optical fibre that is currently installed in the core and access network but is not in use. For the purposes of this Draft Decision, dark fibre shall mean unlit fibre in Eircom’s access network. Pursuant to the NGA Decision, where access to civil engineering infrastructure is not available for economic, technical or capacity reasons, Eircom is obliged to provide

³⁸ In sections 4.2 and 4.3 of the document entitled “Single Billing through Wholesale Line Rental Product Description” (issue 2.2, dated 5 December 2007) as may be amended from time to time.

access to dark fibre, where it is available. Therefore, where access to civil engineering infrastructure via duct access cannot be met for economic or technical reasons, requests may be met by the provision of available dark fibre. Please refer to Chapter 4 (subsection 4.1.3) of the NGA Decision where this is discussed in more detail.

3.3 Competition concerns

3.3.1 Overview

3.4 The European Commission has identified a number of markets as being susceptible to ex-ante regulation. Following market analysis undertaken by ComReg, Eircom is currently considered to have SMP in a number of markets as set out in Figure 4.

Figure 4: Overview of markets

	Market	Title	Relevant ComReg document
Retail Level	Market 1	Retail Access to The Public Telephone Network at a Fixed Location	Market Review 2007: See ComReg D07/61 Market Review 2014: See ComReg D12/14
	Market 2	Wholesale Call Origination on the Public Telephone Network Provided at a Fixed Location	Market Review 2007: See ComReg D04/07 Currently being reviewed – see ComReg 14/26
Wholesale level	Market 3	Wholesale Call Termination on Individual Public Telephone Networks Provided at a Fixed Location	Market Review 2007: See ComReg D04/07 Currently being reviewed – see ComReg 12/96
	Market 4	Wholesale (Physical) Network Infrastructure Access (including shared or fully unbundled access) at a Fixed Location	Market Review 2010: See ComReg D05/10 ComReg has recently commenced review
	Market 5	Wholesale Broadband Access	Market Review 2011: See ComReg D06/11 ComReg has recently commenced review

- 3.5 Eircom's wholesale products / services (which are identified in the respective Markets above) are purchased by OAOs in order to provide downstream retail services to end-users. These downstream retail offerings compete with Eircom's own downstream retail arm.
- 3.6 In fixed markets, the access network is one of the most difficult parts of the telecommunications network for the incumbent's (i.e., Eircom) competitors to replicate economically. As in other countries, the local loop network in Ireland is characterised by a large degree of sunk costs incurred over a significant period of time and with some assets continuing to provide services after a number of decades.
- 3.7 The high cost of building an alternative copper network acts as a barrier to entry for potential new market entrants. In particular, the low population density typical of rural parts of Ireland means that infrastructure-based competition in rural fixed line networks is not likely to be economically efficient even in the long term. Therefore, the most economically efficient outcome for the Irish fixed line market necessitates an OAO obtaining access to Eircom's infrastructure.
- 3.8 Similarly, absent appropriate preventative remedies several related competition problems³⁹ may arise involving the SMP undertaking's conduct, including:
- Exploiting customers or consumers by virtue of its SMP position through, for example, setting excessive wholesale charges. This would raise the input costs for those OAOs that purchase Eircom's wholesale services. Given that such above cost wholesale prices may then be passed on by such OAOs to their retail customers via higher retail prices, it could ultimately have the potential to harm the development of effective competition in the downstream market, potentially through the actual or effective exclusion of downstream competitors;
 - Leveraging its market power into adjacent vertically or horizontally related markets through price and non-price means with the effect of foreclosing or excluding competitors in downstream retail and/or upstream wholesale markets. Eircom, as a vertically-integrated operator with SMP, has the incentive to use its market power in upstream markets to affect the competitive conditions in downstream wholesale and/or retail markets, in particular, through its ability to control the key inputs used by wholesale customers — which compete against Eircom in such markets. This could result in a distortion of or restriction in competition in these downstream markets, ultimately resulting in harm to consumers,

³⁹ ComReg would note that it is neither necessary to catalogue examples of actual abuse, nor to provide exhaustive examples of potential abuse.

potentially in the form of higher prices, lower output/sales, reduced quality or reduced consumer choice; and

- Engaging in behaviours, similar to those identified above in the context of leveraging, which delay/deter network investment and entry into the upstream and/or downstream markets.

3.9 The purpose of ex-ante regulation is to prevent the possibility of such abuses and to promote competition by facilitating entry into the relevant markets. ComReg's overall objective in imposing regulatory remedies on an operator with SMP is therefore to promote economic efficiency by setting regulation which 'mimics' a competitive market and as far as possible to maximise viable infrastructure investment which has the most efficient outcomes for consumers. The obligations imposed can include conditions such as transparency, non-discrimination, price control and accounting separation.

3.10 The current regulatory price controls are detailed in the next section.

3.4 Current regulatory price controls

3.4.1 LLU and SLU Services

3.11 In 2010, ComReg published the WPNIA Market Decision where Eircom was designated with SMP in Market 4 on a national basis. Please see Annex 10 for an updated competition assessment.

3.12 As a result of the WPNIA Market Decision, ComReg imposed a number of obligations on Eircom including the obligation of a price control and the obligation not to cause a margin squeeze.

3.13 The price control obligation imposed on Eircom in the WPNIA Market Decision is cost orientation. The cost orientation obligation for LLU and SLU was further specified by ComReg in the LLU Pricing Decision whereby the monthly rental price for LLU and SLU was set based on the BU-LRAIC+ methodology using the Copper Access Model ('CAM'). The LLU Pricing Decision determined nationally averaged maximum monthly rental prices for LLU and SLU of €12.41 and €10.53, respectively.

3.14 In January 2013, Eircom reduced the rental price for LLU from €12.41 to €9.91 and the price for SLU from €10.53 to €9.03, as set out in ComReg Information Notice 13/01. The predominant reason for the reduction in price was due to the fact that less exchanges have been unbundled by OAOs over the past few years compared to what was initially envisaged as part of the LLU Pricing Decision in 2010.

- 3.15 In line with the NGA Decision, Eircom is obliged to maintain a link between copper and fibre prices. The link between copper and fibre is established where the SLU cost oriented price is the key input to the cost stack for VUA (which currently resides in Market 5), given that it reflects the costs from the home to the cabinet. ComReg imposed a margin squeeze test between the VUA service in Market 5 and the SLU service in Market 4. This should ensure that VUA is not priced so low that it would dis-incentivise investment by alternative infrastructure operators during the transition to NGA services. The NGA Decision provided that if a reduction to the SLU price is required under this test so also would a reduction be required to the LLU price, as appropriate.
- 3.16 As set out in the NGA Decision⁴⁰, Eircom must charge the following for the SLU monthly rental charge whichever is the lower:
- (a) €10.53 per line per month;
 - (b) The SLU monthly rental charge as amended by changes made by Eircom in line with the Copper Access Model under ComReg Decision D01/10 and subject to prior review by ComReg (see Information Notice No 13/01 for reduction by Eircom to the SLU charge from €10.53 to €9.03); or
 - (c) A revised SLU monthly rental charges based on the margin squeeze test between SLU and VUA and subject to prior review by ComReg.
- 3.17 ComReg Decision D01/10 was also amended so that Eircom must charge the following for the LLU monthly rental charge, whichever is the lower:
- (a) €12.41 per line per month; or
 - (b) The LLU monthly rental charge as amended by changes made by Eircom in line with the Copper Access Model under ComReg Decision D01/10 and subject to prior review by ComReg (see Information Notice No 13/01 for the reduction by Eircom to the LLU price from €12.41 to €9.91).

3.4.2 Line Share

- 3.18 Pursuant to the WPNIA Market Decision, Line Share is also subject to the cost orientation obligation. The cost orientation obligation for Line Share was further specified in the Line Share Decision where the price is currently based on the incremental costs of providing the line share service. The current maximum monthly rental price for Line Share is €0.77.

⁴⁰ Please refer to Chapter 10 of the NGA Decision for further details.

3.4.3 SB-WLR

- 3.19 ComReg has recently carried out an updated market analysis in relation to Market 2 in the 2014 FACO Consultation Document.
- 3.20 The 2014 FACO Consultation Document seeks to address the potential competition problems associated with price related behaviours including excessive pricing and margin squeeze. Consequently, Eircom is subject to various price control and cost accounting obligations.
- 3.21 Pursuant to the 2014 FACO Consultation Document, the obligation on Eircom to provide SB-WLR is proposed to be imposed in Market 2 (rather than Market 1 on the retail fixed narrowband access market where this obligation previously resided⁴¹). As noted in the 2014 FACO Consultation Document, moving WLR obligations into the Fixed Voice Call Origination ('**FVCO**') market would, insofar as is possible, seek to address competition problems at the most upstream level and allow the potential de-regulation of downstream markets, either entirely or in part.
- 3.22 SB-WLR is currently subject to a retail minus price control, as set out in the Retail Minus Decision which is currently set at retail price less 14%. The current national price for SB-WLR is €18.02. In the 2014 FACO Consultation Document, ComReg proposed that the retail minus approach should continue until such time as ComReg completed a separate review of SB-WLR (i.e., the focus in part of this Draft Decision). ComReg intends to shortly publish a final market analysis decision in respect to FACO.

3.4.4 SABB

- 3.23 The WBA Market Decision was published in 2011 where Eircom was designated with SMP nationally. As a result ComReg imposed a number of obligations on Eircom including the obligation of a price control and an obligation not to cause a margin squeeze. Please see Annex 10 for an updated competition assessment regarding the area outside the LEA ('**Outside the LEA**').
- 3.24 The WBA Market Decision specified that the retail minus price control in ComReg Decision D01/06⁴² ('**2006 Retail Minus Decision**') would continue to apply to Eircom pending any other decisions or directions by ComReg in relation to the appropriate price control.
- 3.25 In the WBA Pricing Decision, published in 2014, ComReg imposed a national cost orientation obligation (with a sub-national cost orientation obligation Outside

⁴¹ <http://www.comreg.ie/fileupload/publications/ComReg0761.pdf>

⁴² ComReg Decision D01/06: ComReg Document No 06/01 entitled "Retail minus wholesale price control for Wholesale Broadband Access Market" dated January 2006.

the LEA) in the WBA market. ComReg also amended the retail minus price control in the WBA market to a retail margin squeeze test.

- 3.26 In the WBA Pricing Decision ComReg imposed the obligation of cost orientation with regard to the provision of SABB Outside the LEA. In the absence of a cost model to determine the appropriate cost oriented price Outside the LEA for SABB, we considered that the price for SABB in the interim period should be based on no more than the SB-WLR price less the costs avoided by not providing a voice service.
- 3.27 Up until recently, the wholesale Bitstream service provided by Eircom could only be purchased in conjunction with legacy narrowband or “POTS” based Bitstream service. Since 1 July 2013, Eircom offer a SABB service which means that customers can buy a Bitstream service without a POTs voice service i.e., there is no narrowband service. The current review must assess how best to price this service since up to now the full cost of the access network has been borne entirely by narrowband services.
- 3.28 This Draft Decision will further specify the already imposed cost orientation obligation with regard to the provision of SABB Outside the LEA.

3.4.5 Ancillary services

- 3.29 Market 4 ancillary services are already subject to the obligation of cost orientation pursuant to the WPNIA Market Decision and the NGA Decision.
- 3.30 More recently in the 2014 FACO Consultation Document, ComReg proposed to impose the obligation of cost orientation on the ancillary services for SB-WLR, which are currently set on the basis of a retail minus price control. In the 2014 FACO Consultation Document, ComReg considered that these services are not likely to be subject to sufficient competitive pressure at the retail level. A retail minus price control obligation would not ensure that the associated wholesale charges are set at an efficient level with the danger of Eircom pricing these services excessively.
- 3.31 For the purposes of this Draft Decision, without prejudice to a final position, we have assumed that the proposal to impose the obligation of cost orientation on the ancillary services for SB-WLR will take effect.

3.4.6 Civil Engineering Infrastructure

- 3.32 Pursuant to the NGA Decision, CEI (duct access) should be priced at no more than the BU-LRAIC+ costs as determined by the CAM.

- 3.33 Up until now and pursuant to the NGA Decision, Eircom has been required to negotiate in good faith with access seekers in relation to the conclusion of an agreement regarding the prices for CEI (including duct access) based on the timelines set out in the NGA Decision.

3.4.7 Dark fibre

- 3.34 Pursuant to the NGA Decision, dark fibre should be priced at no more than the BU-LRAIC+ costs as determined by the CAM but adjusted where appropriate for fibre costs.
- 3.35 As specified in the NGA Decision, dark fibre means unlit Eircom fibre in Eircom's access network. Where access to civil engineering is not available for economic, technical or capacity reasons, Eircom is obliged to provide access to dark fibre, where it is available.
- 3.36 The same price negotiation measure as that discussed at paragraph 3.33 for CEI also applies to Eircom for dark fibre.

3.5 Additional related regulatory considerations

3.5.1 Retail Line Rental

- 3.37 Eircom is subject to a retail price control pursuant to ComReg Decision D12/14⁴³ on the retail fixed voice access market ('**RFVA Decision**'). As set out in that Decision, Eircom possesses market power with respect to standalone voice access services. In the absence of remedies, it would have the incentive and ability to raise prices to the direct detriment of consumers who avail themselves of standalone voice access services. Therefore, ComReg decided that a price control was necessary and proportionate to protect those consumers who currently purchase their voice services on a stand-alone basis and do not value broadband to such an extent that they would switch to (more competitively priced) bundled services, or to mobile only. The price control measure consists of a requirement not to charge excessive prices for the supply of lower level services, that is, PSTN and integrated services digital network ('**ISDN**') basic rate access ('**BRA**') access as well as a retail price cap measure ('**RPC**'). The RPC is in the form of a RPI-X cap, that is, CPI-0⁴⁴. The RPC which relates to consumer's standalone PSTN and ISDN BRA line rental and connection fees (excluding voice calls) means that any increase by Eircom in the latter prices will be based on the rate of inflation (i.e. CPI-0) pending further consultation. The retail price cap for retail line rental is currently €20.96 (ex-VAT).

⁴³ http://www.comreg.ie/_fileupload/publications/ComReg1489.pdf

⁴⁴ Price caps are subject to an increase depending on the inflation rate.

- 3.38 The SB-WLR price is currently a retail-minus price, and therefore is pegged to the regulated RPC. Essentially, an increase in Eircom's retail RFVA price would lead to an increase in the SB-WLR price. As such, ComReg considers that the RPC remains necessary at least until such time that the SB-WLR price is set independently of Eircom's retail price for RFVA products (i.e. cost oriented). However, ComReg considers that even if a cost oriented SB-WLR price prevents Eircom from increasing its wholesale charge and hence avoiding the risk of excessive SB-WLR prices, absent appropriate remedies, the risk of a potential margin squeeze remains. In this respect, Eircom could, by reducing the retail price, reduce the retail margin available to OAOs that need to match Eircom's retail prices in a competitive retail market. Such competition concerns have been identified in paragraph 3.8.
- 3.39 Therefore, even if the SB-WLR price is set on the basis of cost orientation rather than a retail-minus regime, some form of a margin squeeze test may be required to ensure that alternative operators can continue to compete in the retail market using SB-WLR. This is discussed further in Chapter 10.

3.5.2 NGA Decision

- 3.40 In the NGA Decision ComReg has recognised the importance of the link between copper and fibre prices.
- 3.41 In that regard ComReg imposed a margin squeeze test between the VUA service in Market 5 and the SLU service in Market 4. This should ensure that VUA is not priced so low that it would dis-incentivise investment by alternative infrastructure operators during the transition to NGA services. SLU and LLU are both priced on a cost oriented basis by reference to the same BU-LRAIC+ methodology.
- 3.42 If a reduction to the SLU price is required under this test so also would a reduction be required to the LLU price, as appropriate. Therefore, it is important to note that there is a ceiling for WBA NGA prices calculated by reference to a margin test against retail prices. Copper and fibre are priced consistently relative to the cost of provision which implies a lower bound on NGA prices below which they cannot fall without a corresponding reduction in LLU (and SLU) prices. This will ensure a technology neutral approach and the consistency of copper and fibre pricing which is required in order to enhance competitive constraints on Eircom.
- 3.43 ComReg considers that if there are any changes to the LLU and SLU monthly rental charges as a result of this Draft Decision, then Eircom must respect the link that is already established between the price of SLU and VUA as set out in the NGA Decision.

3.5.3 National Broadband Plan ('NBP')

- 3.44 The National Broadband Plan ('NBP') focuses primarily on the Government's objective to increase broadband speeds especially in the more rural areas of Ireland.
- 3.45 The NBP will facilitate broadband download speeds of 70Mbps⁴⁵ with a minimum of 40 Mbps generally available and 30 Mbps available in harder to reach rural areas where a commercial provider will not deliver the equivalent service on a commercial basis. It is envisaged that the NBP will cover a significant proportion of exchanges in more rural areas of the country i.e., Outside the LEA.
- 3.46 The NBP may have implications for the potential uptake of some Wholesale Access Services, including duct access, pole access and dark fibre in these areas.

3.5.4 Universal service obligation ('USO')

- 3.47 In ComReg Decision D10/14⁴⁶ ('USO Decision') Eircom was re-designated as the universal service provider ('USP') for the purposes of providing access at a fixed location under USO ('AFL USO') for an 18 month period from July 2014 until 31 December 2015. As such, Eircom has various obligations relating to the provision of an AFL USO including a requirement to provide geographically average prices (i.e. where AFL USO charges (including retail line rental, see paragraphs 3.37-3.39) are the same for all subscribers irrespective of their geographical location).
- 3.48 The AFL USO alone would not mitigate concerns regarding a potential margin squeeze vis a vis retail and wholesale fixed voice access as set out in paragraph 3.38 to 3.39. Such margin squeeze concerns however could potentially be intensified absent an AFL USO requirement for geographically averaged prices. The existing AFL USO will remain in force until 31 December 2015. Separate to this Draft Decision, and in advance of the expiry of the current AFL USO designation, ComReg is carrying out a forward looking review of the future of the AFL element of the USO. This will publically consult, *inter alia*, on the continued need, if any, for an AFL USO and the high level consideration of the associated components, amongst others, the requirement of geographically averaged prices for AFL USO.

⁴⁵ <http://www.dcenr.gov.ie/Communications/National+Broadband+Plan/>

⁴⁶ ComReg Document No 14/71: The provision of telephony services under the Universal Service Obligation – Access at a Fixed Location; 7 July 2014.

Chapter 4

4 Price Control and Costing Methodology

4.1 Overview

- 4.1 This chapter considers the form of price control and costing methodology which should be used to determine the appropriate level of costs for Eircom's Wholesale Access Services.
- 4.2 ComReg must take account of a number of factors, as set out in the Access Regulations⁴⁷, the Framework Regulations⁴⁸ and the Communications Regulations Act (as amended) prior to imposing any SMP obligation and in particular a price control obligation. This is discussed in detail in Chapter 14 of this document in the context of the regulatory impact assessment ('**RIA**').
- 4.3 The respective discussion is considered under the following headings:
1. Forms of price control;
 2. Costing methodologies; and
 3. Applying costing methodologies to assets.

4.2 Forms of price control

- 4.4 In order to understand the proposed pricing approach going forward, it is important to recap on the current price control remedies already in place (see section 3.4).
- 4.5 Currently, the price control in place in Market 4 for LLU, SLU and Line Share is cost orientation. The monthly rental price for LLU and SLU is based on BU-LRAIC+. The Line Share price is based on incremental costs.
- 4.6 In Market 5, the price control obligation for SABB Outside the LEA is cost orientation but, to date, this has not been further specified by ComReg.
- 4.7 In Market 1, SB-WLR is currently subject to a retail minus price control.⁴⁹

⁴⁷ S.I. No 334 of 2011 European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011.

⁴⁸ S.I. No 333 of 2011 European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011.

⁴⁹ Supra n. 13

- 4.8 In the 2014 FACO Consultation Document, it is proposed that the charges associated with the SB-WLR ancillary services should be based on cost orientation i.e., no more than the actual costs incurred adjusted for efficiency plus a reasonable rate of return.
- 4.9 The ancillary services in Market 4 are subject to the obligation of cost orientation pursuant to the WPNIA Market Decision and the NGA Decision.
- 4.10 CEI (ducts and poles) and dark fibre are subject to cost orientation based on no more than BU-LRAIC+ costs but adjusted where appropriate for fibre costs (in relation to dark fibre).
- 4.11 This section assesses whether the current form of price control for the Wholesale Access Services over the next few years remains appropriate.
- 4.12 There are a number of options available to ComReg in the form of a price control for the Wholesale Access Services and the relevance and appropriateness of each approach are discussed below under the following headings:
- Option 1: Regulatory Forbearance;
 - Option 2: Benchmarking;
 - Option 3: Retail minus;
 - Option 4: Margin squeeze test; and
 - Option 5: Cost orientation.

4.2.1 Option 1: Regulatory Forbearance

- 4.13 This option would mean ‘No price control’ where Eircom would have freedom to set the monthly rental prices for the Wholesale Access Services at the level of their choice. In this situation, ComReg would have no influence over the monthly rental prices for the Wholesale Access Services.
- 4.14 However, ComReg considers that this option may not be appropriate for the following reasons:
- It would not address the competition problems identified in Market 2⁵⁰, Market 4 and Market 5 (as discussed in Chapter 3 of this Draft Decision);
 - It would not be appropriate given that Eircom has SMP in Market 2⁵¹, Market 4 and Market 5; and

⁵⁰ Supra n. 13.

⁵¹ *ibid.*

- It would contradict our experience to date of monitoring compliance with our previous ComReg Decisions which indicates that a price control obligation continues to be necessary in Market 2⁵², Market 4 and Market 5.
- 4.15 With regard to the option of forbearance, ComReg is of the preliminary view that currently this option is not appropriate for the reasons outlined above.

4.2.2 Option 2: Benchmarking

4.16 Benchmarking is where the access price is set with reference to the price of a comparable services in other countries.

4.17 Regulation 13(3) of the Access Regulations provides for benchmarking:

“The Regulator shall ensure that any cost recovery mechanism or pricing methodology that it imposes under this Regulation serves to promote efficiency and sustainable competition and maximise consumer benefits. In this regard, the Regulator may also take account of prices available in comparable competitive markets”.

4.18 Benchmarking tends to be adopted by NRAs when there is an absence of sufficient cost data to allow the regulator to arrive at a suitably informed price. However, the costs of access services have proven to be particularly sensitive to the structural factors that can apply in a specific region or country. The majority of the underlying costs of access services relate to labour and civil engineering costs. Labour costs are known to differ significantly from country to country and civil engineering costs will be affected by factors such as the different network topologies, geographic terrains and population patterns (both densities and dispersions) evident in each country.⁵³

4.19 ComReg has already modelled a significant volume of cost and network data in relation to the copper access network in Ireland and has developed an understanding of the costs of access services as a result.

4.20 In this case, ComReg is of the preliminary view that benchmarking is not an appropriate approach to set wholesale access prices at this time for the reasons set out above.

4.2.3 Option 3: Retail minus

4.21 A retail-minus price control determines the margin between the wholesale charge and the related downstream retail prices by considering what proportion of retail

⁵² Supra n. 13.

⁵³ For example, the 2010 Copper Access Model indicated that the average cost of access lines in Ireland was higher due to the lower population density and the higher proportion of one-off housing in rural areas (see Appendix C in <http://www.comreg.ie/fileupload/publications/ComReg1010.pdf>)

and other downstream costs would need to be deducted from the retail price in order to be left with the appropriate wholesale price at which competitors, reliant on the upstream (wholesale) input, can effectively replicate the retail offer of the upstream arm of the Incumbent.

- 4.22 A significant advantage of a retail minus price control is that it is comparatively easy to implement as there is no need to develop a detailed cost model of the access network. Even setting the retail margin with reference to the Incumbent's retail costs requires significantly less cost data than constructing a network cost model. However, a cost model has already been developed by ComReg to support the current cost oriented prices in Market 4 (for LLU and SLU) and this can be easily extended to capture the additional costs associated with SB-WLR.
- 4.23 The SB-WLR price is currently based on a retail minus price control. SB-WLR involves renting active equipment (such as line cards) from Eircom and so requires less investment on the part of the OAO. As such, they can be considered as closer to retail services and the OAO's ability to compete with Eircom's retail offerings should, in the first instance, depend on how efficient the OAO's retail arm is relative to Eircom's. Therefore, a retail minus control determines the retail margin by analysing the level of Eircom's retail costs (mainly sales costs, marketing/advertising, billing, product management & development, help desk, etc.) relative to the retail revenues for the corresponding retail services.
- 4.24 A number of respondents to the 2014 FACO Consultation Document suggested that the WLR price control should be revisited with a view to moving to a cost-orientation obligation. ComReg noted in the 2014 FACO Consultation Document that a change to a cost oriented price control, if justified, would warrant a separate detailed examination of underlying costs which would be more appropriately addressed in a separate review. Pending the completion of a separate review on the appropriate price control for WLR, ComReg decided in the 2014 FACO Consultation Document that in the meantime the retail minus price control should continue based on the retail price for retail line rental less 14%. In the 2014 FACO Consultation Document, ComReg carried out analysis around the appropriateness of the retail minus approach for the intervening period, particularly around the margin of 14% and whether it remained appropriate. ComReg reached the preliminary view that the retail minus of 14% continued to be appropriate, as set out in Chapter 9 of the 2014 FACO Consultation Document.

4.2.4 Option 4: Margin squeeze test

- 4.25 A margin squeeze can occur where Eircom (as a dominant operator) sets wholesale prices such that, given the prevailing retail prices, it does not allow an OAO to cover its downstream retail costs (e.g., sales, marketing etc.). Similarly, Eircom could set its downstream retail prices such that it may not cover the

- downstream retail costs incurred by the OAO after acquiring the essential wholesale inputs from Eircom's wholesale arm. In the medium-to-long-term if OAOs cannot profitably replicate Eircom retail offers they may exit the market — which would be to the long-term detriment of end-users.
- 4.26 A margin squeeze test can be set between retail and wholesale product(s) and between different wholesale products.
- 4.27 A retail margin squeeze test compares the retail revenues with the retail and wholesale costs to see if the margin is positive or negative. If there is a negative margin the wholesale price and / or the retail price may have to change. Similarly, a margin squeeze test between wholesale and wholesale product(s) ensures economic replicability at each layer of the value chain; with adequate economic space between each layer. Therefore, deeply interconnected operators can reap the benefits of network investment, providing an important constraint along the value chain, in both the wholesale and retail markets.
- 4.28 A margin squeeze test can be used as a price control obligation to set maximum wholesale prices (e.g., NGA Decision) or as a complementary test in conjunction with other regulatory tools (e.g., cost-orientation).⁵⁴
- 4.29 Eircom currently has a regulatory obligation in Market 4 not to cause a margin / price squeeze against operators who have either invested or are planning to invest in their own telecommunications infrastructure while purchasing essential facilities from Eircom wholesale.⁵⁵ The WPNIA Market Decision (ComReg D05/10) which specified this margin squeeze is not considered by this Draft Decision and will continue to apply to Eircom pending any other decisions or directions by ComReg in relation to the appropriate price control.
- 4.30 In respect to SB-WLR, the leveraging concerns (outlined in paragraph 3.8 in Chapter 3) on a stand-alone basis are currently addressed as the wholesale price is based on a price control of retail minus of at least 14% and the retail price is subject to a retail price cap of CPI-x%. However, as noted in paragraphs 4.39-4.40, ComReg considers that it may be more appropriate to amend the current price control of retail-minus for SB-WLR to a cost orientation obligation. Chapter 10, considers whether the potential may still exist for a margin squeeze to occur between the price of retail line rental and wholesale line rental and whether it is

⁵⁴ Please see the Bundles Decision and also BEREC Guidance on the regulatory accounting approach to the economic replicability test as set out in BOR 14/90 at http://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/4782-berec-guidance-on-the-regulatory-accounting-approach-to-the-economic-replicability-test-ie-ex-antesector-specific-margin-squeeze-tests

⁵⁵ Pursuant to s.12.4 of the Decision Instrument contained in Appendix C of ComReg Decision No D05/10 "Market Review: Wholesale Physical Network Infrastructure Access (Market 4)", 20 May 2010 ('ComReg D05/10').

appropriate to address any potential margin squeeze concerns as part of an additional price control obligation.

4.2.5 Option 5: Cost orientation

- 4.31 Regulation 13(1) of the Access Regulations provides that ComReg may, *inter alia*, impose on an operator obligations relating to cost recovery and price controls. These include obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of access or interconnection in situations where a market analysis indicates that a lack of effective competition means that the operator concerned may sustain prices at an excessively high level or may apply a price squeeze to the detriment of end-users.
- 4.32 A cost orientation obligation should allow the SMP operator to ensure that its wholesale prices recover no more than its actual incurred costs adjusted for efficiency plus a reasonable rate of return. The estimate of the level of costs typically includes the efficiently incurred operating costs of the operator (Incumbent) plus an allowance for the appropriate cost of capital (or rate of return⁵⁶) in line with Regulation 13(2) of the Access Regulations.
- 4.33 Setting wholesale access prices using the cost orientation approach breaks the link between the incumbent's control of the retail price and the wholesale price faced by its competitors. ComReg considers that this helps ensure greater predictability of access price levels for alternative operators as cost oriented prices can be determined for the entire period of the price control thereby allowing them to make investment decisions and develop business plans with a greater degree of confidence.
- 4.34 A cost orientation price control is designed to identify the correct level of access prices, while under a retail minus approach price control the access price may be too high if the retail price is too high.⁵⁷ ComReg considers that if the access price is set too high, service-based competition may not develop and efficient investment decisions may be impaired due to the access price misrepresenting the build-or-buy signal.

⁵⁶ The rate of return applied in this Draft Decision is equivalent to the current fixed line telecoms pre-tax WACC of 8.18%.

⁵⁷ High retail prices are more likely to arise in rural areas due to the absence of competition from alternative infrastructure providers. However, in urban areas where sufficient competition exists at the retail level the retail minus approach may be adequate.

- 4.35 A drawback of the cost orientation price control is that the development of a cost model can be a time consuming and resource intensive process. However, Eircom's cost accounting systems contain significant detail on its access costs. In addition, ComReg has developed a detailed model of a copper access network in Ireland that allows it to analyse costs at the required level of granularity to inform pricing decisions.
- 4.36 Currently, Eircom's wholesale prices in Market 4 are set on the basis of cost orientation. The local loop remains a bottle neck in terms of developing effective competition and full LLU, SLU and Line Share are important inputs for OAOs as they try to compete with Eircom. ComReg considers that for this reason it is important that OAOs and investors have certainty with regard to the prices of these services.
- 4.37 In addition, given that Market 4 services have a high capital cost component that requires a significant level of investment which is recovered over a prolonged period of time, it is important that wholesale prices transmit the correct build-or-buy signals to inform investment decisions, where there is a possibility of efficient network deployment by alternative operators. Consequently, cost-orientation can ensure that the wholesale price correctly informs the investment decisions of both incumbents and competitors.
- 4.38 In the case of assets which are not likely to be replicated by an alternative operator, e.g., ducts and poles, the cost orientation approach can be designed to ensure that the incumbent operator is only capable of recovering its efficiently incurred costs including an appropriate return on past and future investments.
- 4.39 In the responses to the 2014 FACO Consultation Document, the majority of respondents stated that the price control for SB-WLR should be amended from a retail minus price control to a cost orientation price control. ComReg considers that a cost orientation price control for SB-WLR is likely to provide greater certainty to OAOs going forward as the cost oriented price reflects the relevant costs of providing the service which can be determined in advance of the price control period.
- 4.40 ComReg considers that a cost orientation obligation is justified for SB-WLR for the following reasons:
- The FACO market is a national market where Eircom has SMP;
 - Eircom is the sole supplier in the FACO markets having held a stable 100% market share over time. It therefore does not face existing competition within such markets;
 - Eircom has a high market share of over 80% of the low level fixed access and call origination ('**LL-FACO**') market, nationally; and

- Eircom has a high and stable market share of around 80% of the high level fixed access and call origination ('**HL-FACO**') market, nationally.
- 4.41 By adopting a cost orientation approach for SB-WLR, the same pricing approach is applied for all the Wholesale Access Services. This should avoid potential inconsistencies between access prices that would otherwise prevent an OAO from climbing the investment ladder.
- 4.42 For Line Share, ComReg considers that a cost orientation obligation continues to be appropriate for the reasons set out in the Line Share Decision at Annex E.
- 4.43 For SABB, ComReg considers that a cost orientation obligation Outside the LEA continues to be appropriate for the reasons set out in the WBA Pricing Decision at Chapter 10.
- 4.44 For CEI and dark fibre, ComReg considers that a cost orientation obligation continues to be appropriate for the reasons set out in the NGA Decision at Chapter 10.
- 4.45 For ancillary services associated with SB-WLR, ComReg considers that a cost orientation obligation is appropriate for the reasons set out in the 2014 FACO Consultation Document at Chapter 9.

ComReg's Preliminary View

LLU and SLU:

- 4.46 The obligation of cost orientation should continue to apply to Eircom with regard to the rental prices for the provision of LLU and SLU.

SB-WLR:

- 4.47 The obligation of cost orientation should apply to Eircom with regard to the rental price for the provision of SB-WLR.

SABB:

- 4.48 The obligation of cost orientation Outside the LEA should continue to apply to Eircom with regard to the rental price for the provision of SABB.

Line Share:

- 4.49 The obligation of cost orientation should continue to apply to Eircom with regard to the rental price for the provision of Line Share.

CEI and dark fibre:

- 4.50 The obligation of cost orientation should continue to apply to Eircom with regard to the rental price for the provision of CEI and dark fibre.

Ancillary services:

- 4.51 The obligation of cost orientation should continue to apply to Eircom with regard to the prices for ancillary services associated with Market 4 products and services.
- 4.52 The obligation of cost orientation should continue to apply to Eircom with regard to the prices for ancillary services associated with SB-WLR.

Q. 1 Do you agree with ComReg's preliminary view that the price control for SB-WLR should be amended from a retail minus to a cost orientation price control? Please provide reasons for your responses.

Q. 2 Do you agree with ComReg's preliminary views that the cost orientation price control remains appropriate for determining the prices for LLU, SLU, Line Share, SABB Outside the LEA, CEI, dark fibre and the ancillary services for Market 4 and SB-WLR? Please provide reasons for your responses.

4.3 Costing Methodologies

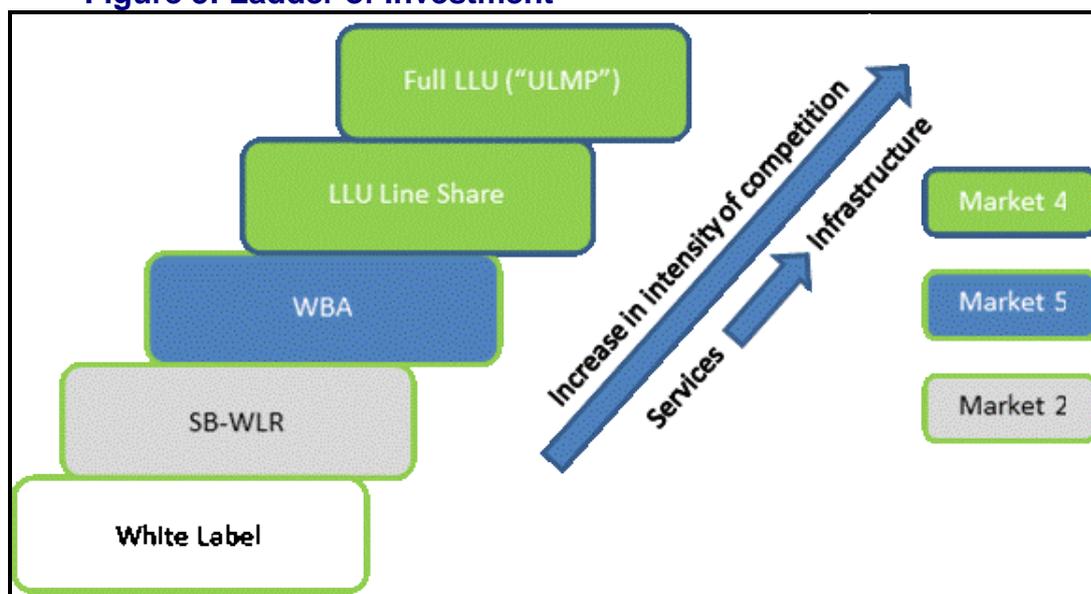
4.3.1 Overview

- 4.53 The costing methodology determines which costs are included in the cost model and how this is transformed into a unit price. The following questions are relevant in determining the appropriate costing methodology to adopt:
- What cost items should be included?
 - How should costs be appraised?
 - What model should be used to arrive at unit cost?
- 4.54 When considering the most appropriate methodology to apply in order to determine the costs associated with the Wholesale Access Services, ComReg must balance a number of objectives, including: the promotion of competition; incentivising infrastructure investment; ensuring the appropriate cost recovery for Eircom; and ensuring the interests of end-users.
- 4.55 ComReg considers that infrastructure-based competition from OAOs has in theory the most potential to offer sustainable competition to Eircom in the provision of broadband to the benefit of end-users. In general, operators with their own infrastructure are better able to offer differentiated retail products and to set prices independently of Eircom as compared to those OAOs using LLU, WBA and WLR. However, it requires significant investment to duplicate infrastructures in their entirety, thus this option will rarely be chosen by OAOs in the short to medium term. There is also a debate on whether this is desirable for society and whether it is feasible in the longer term to have several local loops in parallel given the lower economies of scale and scope (and therefore higher costs translating into higher prices) generated by the presence of competing local loops.
- 4.56 ComReg considers that infrastructure-based competition must therefore be promoted. In general, this ensures that OAOs are better able to offer differentiated retail products and to set prices independently of Eircom as compared to those OAOs using WBA and WLR. However, it requires significant backhaul investment (but significantly lower than for the local loop).
- 4.57 ComReg considers that from a regulatory perspective it is important that the appropriate incentives are maintained to encourage OAOs to 'climb the ladder of investment'. In order for these incentives to exist, OAOs must have sufficient margins or 'economic space' between different wholesale products or 'rungs' on the ladder of investment. This should promote the development of effective retail competition which is capable of constraining the integrated incumbent on an

ongoing and sustainable basis. As the European Commission has noted: *“Competing network infrastructures are essential for achieving sustainable competition in networks and services in the long run”*.⁵⁸

4.58 To achieve ComReg’s regulatory objective of promoting efficient infrastructure investment and protecting the interests of end-users, it is important to ensure that there are appropriate protections and incentives in place for OAOs who choose to ‘climb the ladder of investment’ as opposed to acting as resellers. A simplified illustration of the “Ladder of Investment” is presented graphically in Figure 5.

Figure 5: Ladder of Investment



4.59 The higher up the ‘ladder’ that a competitor ascends the more investment they must make. It is important that when such investment decisions are taken by competitors that they have a regulatory framework they can rely on to ensure investments are not undermined by anti-competitive behaviour. ComReg has ensured, and will continue to ensure, that the appropriate protection and incentives are in place to enable OAOs to climb this investment ladder — in particular, by ensuring that Eircom cannot squeeze competitors between the relative prices of its different wholesale products across and within regulated markets. For example, Eircom’s price for SB-WLR and WBA combined should always be greater than its price for SB-WLR and LLU LS combined, which in turn should always be greater than its price for Full LLU (‘ULMP’).

⁵⁸ Explanatory note accompanying Recommendation on relevant Product and Service Markets, C(2007) 5406.

- 4.60 Given the economies of scale, infrastructure-based competition is more likely in the more urban parts of the country (or larger exchange area ('LEA')). More rural areas (or Outside the LEA) represent those areas which have less / no infrastructure based competition and represent areas which are prospectively unlikely to become as competitive compared to the LEA.
- 4.61 As such, Wholesale Access Service prices should be set in such way that OAOs are able to make an efficient decision on whether to build their own network or to use one of the access services of the Incumbent. Similarly, they should enable an efficient decision on which service to use.
- 4.62 ComReg must consider the following factors when determining the appropriate costing methodology to apply for the Wholesale Access Services:
1. Sending a correct build-or-buy signal:
 - a) In the LEA, the build-or-buy signal should be interpreted differently at the different levels of the investment ladder. In the LEA, Eircom faces some competitive pressure at the retail level where UPC has rolled out its bidirectional cable network and where Eircom also faces retail and wholesale competition from OAOs that have unbundled Eircom's exchanges. The developments in the LEA are set out in Chapter 6 (subsection 6.2.1). ComReg considers the following with regard to the build-or-buy signals in the LEA:
 - Bitstream prices should be set in such a way that the incentive to deploy alternative (backhaul/active) infrastructure ("build") is encouraged;
 - LLU (Line Share and full LLU) and SLU prices (as well as duct access) should not deter investment in the alternative local loop. However, because duplication of the local loop and the presence of several operators at a street cabinet is not always desirable/feasible (due to the lack of economies of scale) and where alternative local loops (based on alternative technologies) are already in place, it is important to avoid over-encouraging the "build" strategy;
 - Take account of the 2013 Recommendation.
 - b) Outside the LEA is representative of those exchange areas where there are typically higher costs for potential entrants due to longer local loop lengths, greater distance to provide backhaul, and fewer economies of scope/scale. Outside the LEA the prospects for entry by a further LLU operator may be limited. DSL (or Bitstream) is an important access medium Outside the LEA. Alternative DSL-based operators are almost entirely reliant on Bitstream from Eircom in order to provide their retail offering, with only a very small proportion of DSL-based subscribers using line share. This is further discussed in Chapter 6 (subsection 6.2.2).

2. Avoid under-recovery of costs by Eircom;
3. Avoid over-recovery of costs by Eircom, especially Outside the LEA where Eircom's local loop and Eircom's core network are likely to be the only fixed networks available;
4. Ensure consistency across the investment ladder;
5. Maintain price stability; and
6. The 2013 Recommendation.

4.63 The remainder of this chapter is discussed under the following headings:

1. Appropriate cost standard;
2. Historic costs or current costs; and
3. Appropriate cost model.

4.3.2 Appropriate cost standard

4.64 The use of cost standards is the means by which costs are allocated to services with the purpose of allowing the operator to recover all the cost associated with its network.

4.65 Certain assets and resources are dedicated to unique services and therefore these associated costs are considered as a direct cost and can be recovered solely from those services. However, in the case of assets and resources that can be used by many different services rules are needed to inform the allocation of the related costs to the particular services that the assets/resources support:

- Joint costs are incurred by some but not all services (e.g., DSLAMs can provide voice and internet services but are not compatible with high speed leased lines);
- Common network costs are used by all services (e.g., common network costs of ducts and trenching are consumed by all fixed line services); and
- Corporate overheads cannot be allocated to services using a specific allocation method (e.g., the costs of the Chief Executive's office would be allocated to all services).

4.66 The options for the appropriate cost standard for the purposes of a price control typically involve the concept of either:

1. Long run incremental cost ('**LRIC**') (or Long run average incremental costs ('**LRAIC**') or LRAIC plus a mark-up for common costs ('**LRAIC+**'));
or
2. Fully allocated costs ('**FAC**').

- 4.67 LRIC only includes the direct fixed, sunk capital and operating costs relevant to the increment of providing the service (or often referred to as 'pure LRIC'). As a result, this approach does not include recovery for common or shared costs (such as overhead, billing systems etc.) from other divisions of the Incumbent's business.
- 4.68 LRAIC typically includes all of the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned, plus an apportionment of joint and common costs. LRAIC+ includes appropriate amounts of variable, fixed and common costs, which is the calculus faced by any operator when deciding to enter or expand. The main difference between LRAIC+ and LRAIC is that LRAIC+ includes a mark up to allow for the recovery of inter service common costs such as corporate overheads, typically using an equi-proportionate mark up ('**EPMU**'). The current monthly rental price for LLU and SLU is based on a BU-LRAIC+ methodology.
- 4.69 The economic rationale for applying Pure LRIC in a telecoms setting is that a particular service is not required to recover any common or shared costs. Pure LRIC has been used by NRAs in recent years to set the prices for wholesale voice call termination services on the basis that there is sufficient scope for the network operator to recover all shared and common costs across the remaining services it provides. However, the deployment of local loops in the access network usually represents the most significant network platform in terms of the fixed network operator's costs and features a large element of joint and common costs that must be shared by the various services it supports.
- 4.70 ComReg considers that LRAIC+ is the appropriate cost standard to encourage efficient investment decisions in the access network while ensuring that an operator is capable of recovering (but not over-recovering) all of its costs.
- 4.71 In the FAC approach the whole set of costs incurred by the regulated operator are typically allocated to products following allocation rules determined by the direct or indirect causality of costs with products. This approach includes fixed and common costs. The FAC approach results in a price signal which has the advantage of being relatively consistent with the recorded investments incurred by the Incumbent. The efficiency / entry signals depend on the cost appraisal and the choice between top down and bottom up, which is discussed below. However, where a FAC approach is adopted, care should be taken to ensure that inefficiently incurred costs are excluded.

- 4.72 FAC modelling is similar to LRAIC+ to the extent that it attributes all the common costs between the various services offered by the operator, such that they sum to the total of existing costs.
- 4.73 This means that for large increments, such as the whole local loop, the LRAIC+ would be similar to the FAC approach. However, as noted in the TERA Report⁵⁹, the LRAIC+ and FAC results can differ due to the different efficiency levels that are inherent to both approaches. The concept of LRIC cost is generally applied in the context of an efficient operator, while the FAC concept is applied to an existing operator and so runs the risk of including legacy inefficiencies.

4.3.3 Historical costs or current costs

- 4.74 There are two options in terms of considering the appropriate cost base to adopt:
1. Current cost; or
 2. Historical cost.
- 4.75 The current cost approach values assets at the current market value and allows us to reflect the changes in asset prices. In addition, the current cost approach can be implemented either based on the Incumbent's accounting system in which case it is called current cost accounting or ('CCA') or on a bottom-up ('BU') model basis. Eircom no longer publishes its accounts on a CCA basis. The second approach enables us to reflect the costs that a hypothetical entrant would incur when investing at any particular point in a modern equivalent asset ('MEA'). In this case, where technology is changing rapidly, the price set for the use of a particular asset may not reflect the actual costs incurred (in the past). Hence, there is less of a direct relationship between the prices charged and the actual investment made.
- 4.76 The economic rationale for the current cost approach applied by means of a BU model is that by linking the value of the assets to newly deployed network it promotes efficient investment incentives. The current cost approach also ensures that the Incumbent recovers its future costs thereby encouraging investment. A potential entrant is charged an access price in principle similar to what it might pay to build its own network, and thus has a finely balanced 'build-or-buy' decision.

⁵⁹ Report on the determination of appropriate costing and pricing methodologies for the copper access network in Ireland, p63.

- 4.77 The current cost approach is particularly relevant in the more competitive areas of the country i.e., the LEA. The current access prices for LLU and SLU are based on the BU-LRAIC+ methodology using the CAM. ComReg considers that the BU-LRAIC+ approach for access services should send the appropriate “build or buy” signals to the market place and encourage efficient investment and innovation in new and enhanced infrastructures.
- 4.78 The HCA approach on the other hand uses the Incumbents costs, which reduces the chance of under recovery of costs as the value is linked to the actual investment made as opposed to the MEA. Some of the Incumbents assets may be fully depreciated but still in use and the HCA approach should ensure that Eircom is not over recovering the costs for these assets.
- 4.79 A key criterion in asset valuation is the principle of asset replicability. In other words, if there is no prospect of a competitor replicating the service in question (or bypassing the bottleneck with an alternative platform), it is reasonable to base the regulatory pricing on historical costs. Put another way, there may be a limited rationale to determine prices based on non-replicable infrastructure on replacement costs if this means that the Incumbent recovers more than the cost it actually incurred. The concept of asset replicability means that if there is actual investment the Incumbent will recover the cost of the asset, if there is no investment and assets are “sweated” to get the maximum value from them then the Incumbent will not be compensated over and above the initial Gross Book Value. Therefore, this creates the appropriate investment signals for the Incumbent.
- 4.80 As such, the HCA approach may be more pragmatic and practical where there are limited prospects of investment by alternative infrastructure.
- 4.81 For certain Wholesale Access Services ComReg considers that the HCA costs may be more appropriate especially with regard to the area Outside the LEA rather than the MEA approach or BU-LRAIC+ approaches — which may be more appropriate cost bases for the LEA (where competing infrastructures exist and/or prospectively may occur in the medium-to-long term). The risk of using the MEA / BU-LRAIC+ approach is that it could calculate the cost of a new network being built today and not the actual costs incurred by Eircom. The BU-LRAIC+ approach could result in prices which over-compensate Eircom relative to its actual investment in attempting to set the appropriate “build or buy” signal in the knowledge that due to the lack of economies of scale or scope it is unlikely that a commercial operator would invest (i.e., build) and compete with the incumbent using infrastructure-based competition.

4.82 We consider that the decision in the *Arcor*⁶⁰ case is also very relevant in the context of this review. On 18 July, 2007, Advocate General Poiares Maduro delivered an opinion in that case in which he considered the obligation of cost orientation for setting LLU prices. The judgment and the Advocate General's opinion are a valid source of guidance for EU regulators. In answer to a question posed by the German Court about the possible use of analytical (i.e., independent) models for the setting of LLU prices the Advocate General suggested, at paragraph 84 of his opinion that not taking costs booked in the operator's accounts as a starting point for establishing charges, is not compatible with the objectives of the costorientation principle:

"In order to assess whether the charges are consistent with the notified operator's costs, the notified operator's accounts provide the only possible starting-point for establishing those costs."

4.83 The Advocate General also stated that analytical models can be used if the use of gross replacement cost ('**GRC**') is more suitable:

"where incentives to invest in alternative infrastructure justifiably take precedence over the aim of fostering short term competition on the local loop access market, giving priority to the cost of investment in a new, modern and efficient network at the expense of the notified operator's actual capital costs should be regarded as compatible with the principle of rates set on the basis of cost-orientation". (See paragraph 89 and footnote 48).

4.84 The Advocate General also found that it is important to bear in mind that a decision to set rates for access to the notified operator's local loop must be reached by striking a balance between two conflicting principles. On the one hand, the essential purpose of the regulation is to ensure effective and immediate unbundling of local loop access and the consequent fostering of competition on the local access market. On the other hand, the approved rates must not be set at such a level that they might deter investment in infrastructure.

4.85 Therefore, in other words, NRAs have to consider two principles which may not always be fully consistent: 1) fostering competition 2) encouraging investment in infrastructure.

4.86 Consequently, ComReg is of the preliminary view that when the objective of encouraging alternative operator investment is less relevant, then fostering competition is more important and on that basis the costs borne by the operator (i.e., those in the accounts) should be the basis for setting the charges.

⁶⁰ Judgment of the European Court of Justice ("the ECJ") delivered on 24 April, 2008 in Case C-55/06 *Arcor AG & Co. KG v Federal Republic of Germany*.

4.3.4 Appropriate cost model

- 4.87 Based on ComReg's preliminary views that LRAIC+ costs are more appropriate where infrastructure investment is likely while HCA costs are relevant where there are limited prospects of investment, ComReg must consider what type of model is appropriate to determine the costs of provision of the access services.
- 4.88 ComReg has considered the following two options:
1. A top down ("TD") model; or
 2. A bottom up ("BU") model.
- 4.89 A TD cost model uses accounting information of the incumbent to separate out the relevant costs down to a unit cost.
- 4.90 The top-down approach is better suited to achieve exact cost-recovery as it is linked to the actual investments made by the incumbent operator and recognises the extent to which the relevant asset base has already been depreciated⁶¹. The main disadvantage of this option is that the accounting information may include inefficient costs incurred by the incumbent.
- 4.91 TD models can be constructed on a HCA or CCA basis. For a TD model based on HCA, the net book values of relevant assets are derived from the Incumbent's fixed asset register and depreciated over their remaining useful life⁶². When CCA is applied in a TD model, the relevant assets are re-valued at their current costs, assuming similar-aged assets. This can be done using indexation where an appropriate index is applied to the operator's historical costs values to express asset valuation in current terms. CCA can also be applied using an absolute valuation approach where the existing number of assets is multiplied by the current acquisition price. The MEA approach bases the unit cost on the current acquisition price of the most efficient modern-equivalent asset capable of providing the same services.
- 4.92 For further details on TD models please refer to Section 6 of the TERA Report in Annex 7 to the Draft Decision.

⁶¹ Bottom up models calculate the replacement cost of the network without reference to the investment history of the incumbent operator.

⁶² The regulatory asset lives of assets are intended to reflect the economic asset life and may differ from the statutory asset lives of assets.

- 4.93 A BU model reflects the choices of a hypothetical, forward-looking efficient operator from both a technical and an operational point of view. A BU model is a data intensive process of dimensioning the network assets as if the network was being built (either as it stands, or with improvements to the topology). This approach is associated with models that are aimed at promoting efficient entry, since the cost model can consider how a network would be built today, rather than modelling the actual network built.
- 4.94 As set out in Section 6 of the TERA Report, a bottom-up model is developed by following three general steps:
- First, the services to be modelled are identified (different access services, ancillary services) and data on the service demand are gathered (number and location of customers);
 - Second, the model designs the network by establishing which assets (equipment, cables, etc.) are required to provide the services and their related demand; and
 - Thirdly, once the network has been designed, each asset is valued and depreciated, and operating and maintenance costs are added. A unit cost of usage can be derived (for example, cost per line and month or cost per connection or per migration from one service to another) through allocation keys.
- 4.95 As the valuation process is based on current asset prices, a BU model effectively determines the cost today of building hypothetical efficient network capable of delivering the assumed level of demand. For further details on BU models please refer to Section 6 of the TERA Report in Annex 7 to the Draft Decision.
- 4.96 When modelling the efficient network, two approaches can be adopted:
1. **Scorched node:** this approach takes as a starting point the nodes of the existing Access Network of the Incumbent, such as the Main Distribution Frames (“MDFs”), and then builds the optimised network within the constraints of those existing nodes; and
 2. **Scorched earth:** this approach takes the Access Network topology without any constraints from the existing MDFs of the incumbent operator.
- 4.97 A scorched node approach is often the preferred approach by NRAs as it allows for the modelling of efficient costs and scale, whilst at the same time enabling costs and technology assumptions to be closely aligned with those actually faced by the regulated operator. In the LLU Pricing Decision in 2010 ComReg adopted the “scorched node” approach and used the location of Eircom’s MDFs in its cost

model. From the location of these MDFs ComReg, with the assistance of its consultants, TERA, modelled an efficient access network.

- 4.98 ComReg is of the preliminary view that the scorched node approach should be applied in the context of the updated access network model as part of this review. ComReg proposes to use the real geographic coordinates of Eircom's MDF's and cabinets⁶³ in adopting the scorched node approach for the updated access network model.
- 4.99 The main economic reason to use a BU model is the need to send a build-or-buy signal to alternative operators who may want to replicate the asset and to send the right signal to the market when networks need to be renewed (which is currently the case with the deployment of NGA networks). It is also more efficient to make forward-looking estimations based on expected levels of demand rather than relying on historical data.
- 4.100 As a BU model calculates the level of network costs on the basis of the quantity of equipment and infrastructure that an operator using efficient engineering rules would deploy to support an assumed level of demand, the engineering and economic aspect of BU models tend to lend themselves to the LRIC approach. The combination of LRIC with a BU model is one of the most commonly encountered practices in cost models.
- 4.101 A TD LRIC model does not fully encompass the engineering model and network redesign aspects of a BU LRIC model. A TD cost model uses the accounting information of the operator as a starting point and as a consequence the model is based on an existing network, which may not represent the most efficient network deployment. Consequently adjustments for potential inefficiencies in the top-down costs have to be considered.
- 4.102 In addition, because TD models are constrained by the level of costing and operational data contained in the operator's information systems, they often lack the level of granularity required to adequately identify incremental costs. Even when operational and costing information is available at a regional and local level there can still be practical issues in attempting to incorporate and maintain such a level of detail in a TD model. For this reason the FAC approach is most frequently applied to TD models.
- 4.103 The TD HCA in the context of this Draft Decision means Eircom's actual accounting data (for 2014 in this case) adjusted for efficiencies as well as the forecast for future expenditures over the price control period similarly adjusted for efficiencies. The accounting net book value of each asset is taken as the basis for capital costs and this value is depreciated over the remaining lifetime of each

⁶³ Further discussion of the scorched node and scorched earth approaches can be found in Section 8 of the TERA Report.

asset. Operating expenditure is also estimated from historic accounting information and common cost items are allocated to different services using allocation keys. An uplift to allow for the rate of return is added to the Eircom costs. The TD HCA methodology is referred to throughout this document as ‘Eircom’s Actual Costs Adjusted for Efficiencies’.

4.3.5 ComReg’s Preliminary View

4.104 Eircom’s Actual Costs Adjusted for Efficiencies are an appropriate basis to determine costs where the asset(s) concerned are non-replicable and where the objective is to ensure that there is no over-or-under recovery of costs.

4.105 The BU-LRAIC+ methodology is appropriate where the asset(s) concerned are replicable and where the objective is to encourage the deployment of alternative infrastructure.

4.4 Applying costing methodologies to assets

4.106 ComReg considers that it is necessary to consider if different costing methodologies should be applied to the different types of assets in the access network. LLU, SLU, Line Share, SB-WLR and SABB share some common assets and common costs. Figure 6 summarises the assets used by LLU, SLU, Line Share, SB-WLR and SABB.

Figure 6: Assets shared by wholesale access services

	Full LLU	SLU	Line Share	SB-WLR	SABB
Network Termination Unit (NTU)	✓	✓	✓	✓	✓
Final drop	✓	✓	✓	✓	✓
Trenches/chambers/poles on D-Side	✓	✓	✓	✓	✓
D-Side cables and joints	✓	✓	✓	✓	✓
Cabinet	✓	✓	✓	✓	✓
Trenches/chambers/poles on E-Side	✓		✓	✓	✓
E-Side copper cables and joints	✓		✓	✓	✓
E-Side fibre cables and joints					
Main Distribution Frame (MDF)	✓		✓	✓	✓
Voice line card				✓	
DSL line card					✓
Traffic related costs (backhaul, aggregation nodes, etc.)					✓
Wholesale specific costs	✓	✓	✓	✓	✓

Source: TERA Report

4.107 This subsection is discussed under the following headings:

1. Costing methodology options for assets / services; and
2. Asset categories to consider.

4.4.1 Costing methodology options for assets / services

4.108 ComReg considers that there are two broad approaches⁶⁴ that may be used for determining the appropriate costs for LLU, SLU, SB-WLR, SABB, CEI and dark fibre:

1. **Option 1:** This option would determine a costing methodology for each service independently (taking into account the build or buy signal that ComReg would prefer to promote for each service). For example, Distribution side ('**D-side**') cables could be based on the BU-LRAIC+ approach for SB-WLR while the D-side cables could be based on Eircom's TD data for SLU or full LLU.
2. **Option 2:** This option would determine a costing methodology for each asset, and that same costing methodology would apply for each service which uses that asset. For example, if D-side cables are based on the BU-LRAIC+ approach for SB-WLR, they would be based on the BU-LRAIC+ approach for full LLU, SLU and SABB.

4.109 Option 1 would mean that the basis for deriving the cost of a given asset could differ depending on the service that the asset was deemed to be supporting. This could lead to discrepancies in the value of assets as applied to different services thereby introducing inconsistencies across the investment ladder. Such discrepancies in the way an asset is treated could favour, for example, the use of SABB over LLU or SLU which may inhibit incentives for OAOs to climb the investment ladder.

4.110 Option 2 should ensure consistency across the value chain and it should send the correct build-or-buy signal to the market. Under Option 2, operators automatically choose the service and the corresponding investment level that is most relevant for each given exchange. This approach also provides more consistency across the investment ladder. ComReg considers that Option 2 is consistent with the 2013 Recommendation which distinguishes between reusable and non-reusable civil engineering assets. This is discussed in more detail in subsection 4.4.2.

4.111 ComReg is of the preliminary view that determining a costing methodology for each asset irrespective of the service (Option 2) is the appropriate methodology for deriving the costs associated with LLU, SLU, SB-WLR and SABB, CEI and dark fibre.

⁶⁴ See also Section 6 (6.3) of the TERA Report.

4.4.2 Asset categories to consider

4.112 As set out in section 4.4.1, ComReg is of the preliminary view that the most appropriate option for determining the relevant asset costs for LLU, SLU, SB-WLR, SABB, CEI and dark fibre is to determine a cost methodology for each asset and apply that methodology regardless of the service being provided.

4.113 As such, ComReg considers that there are three main groups of assets to consider:

1. **Reusable passive civil engineering assets:** These are assets which can be reused for NGA and which include duct, trenches, chambers and poles on the distribution side ('**D-side**') and on the exchange side ('**E-side**');
2. **Other passive local loop assets and non-reusable civil engineering assets:** These assets include the network termination unit ('**NTU**'), final drops, D-side cables, E-side cables, cabinets, and main distribution frames ('**MDFs**'). These can also include passive civil engineering assets which cannot be reused for NGA because they cannot support new additional cables, for example. Therefore, ducts, trenches, chambers and poles on the D-Side and on the E-Side which cannot be reused for NGA are also included in this category; and
3. **Active assets:** These include the electronic equipment such as voice and digital subscriber line ('**DSL**') cards and backhaul used for SB-WLR and SABB services.

Each group of asset category is discussed in turn:

1. Reusable passive civil engineering assets:

4.114 In the 2013 Recommendation the European Commission distinguishes between reusable and non-reusable civil engineering assets.

4.115 The European Commission defines reusable civil engineering assets as "*...those legacy civil engineering assets that are used for the copper network and can be reused to accommodate an NGA network.*"

4.116 ComReg considers that reusable civil engineering assets in the context of this Draft Decision include duct, trenches, poles and chambers which can be reused for NGA (referred to throughout the rest of this document as '**Reusable Assets**').

4.117 The fact that the Reusable Assets are both very costly to deploy and have long life-times means that their duplication should be avoided — as such parallel networks are not appropriate from an economic efficiency perspective. Therefore, no infrastructure based competition is expected to develop for these assets and cost recovery should be the key objective.

- 4.118 Paragraph 34 of the 2013 Recommendation sets out that the reusable civil engineering assets should be valued on the basis of a Regulatory Asset Base ('**RAB**') approach derived from the SMP operator's accounts as follows:

"NRAs should value reusable legacy civil engineering assets and their corresponding RAB on the basis of the indexation method. Specifically, NRAs should set the RAB for this type of assets at the regulatory accounting value net of the accumulated depreciation at the time of calculation, indexed by an appropriate price index, such as the retail price index. NRAs should examine the accounts of the SMP operator where available in order to determine whether they are sufficiently reliable as a basis to reconstruct the regulatory accounting value. They should otherwise conduct a valuation on the basis of a benchmark of best practices in comparable Member States. NRAs should not include reusable legacy civil engineering assets that are fully depreciated but still in use."

- 4.119 ComReg considers that the example of a retail price index used by the European Commission in the 2013 Recommendation would inflate Eircom's accounting NBV and may result in an over recovery⁶⁵ of costs by Eircom and somewhat higher prices. We propose to take Eircom's accounting NBV directly from its accounts and project the NBV forward by including allowance for future investment in related network assets over the price control period. This approach ensures that for Reusable Assets Eircom is not recovering more than what they are investing in network infrastructure while allowing other operators to access this non-replicable infrastructure at an efficient price level. ComReg considers that this approach should facilitate strict cost recovery for the Reusable Assets.
- 4.120 The Reusable Assets in our cost model are valued based on the net book value ('**NBV**') from Eircom's accounts and depreciated over the remaining lifetime of the asset by applying a tilted annuity formula which uses as a parameter the asset price index – this approach is referred to as '**Eircom's Indexed Regulatory Asset Base (RAB)**' throughout this Draft Decision. Please refer to Chapter 5 paragraphs 5.216 to 5.225 for further details on how the tilted annuity formula is implemented in the cost model.
- 4.121 In addition, we propose to depreciate the NBV over the remaining asset lifetime using an asset specific price index (as part of the tilted annuity formula) instead of the retail price index which should ensure that regulated prices follow the

⁶⁵ By applying a RPI (or CPI) to assets bought many years ago inflates/increases the asset value (given that the CPI has been positive over the long-term) compared to the price that Eircom paid for these assets at the time of purchase. Hence, Eircom would over recover its costs compared to what it initially paid for these assets. ComReg considers that for assets which are reused for NGA services it is important to provide the appropriate build/buy signals to operators. Therefore, it would be inappropriate to set the price above efficient costs as it is preferable to "buy" access to these assets rather than "build". In addition, this approach ensures strict cost recovery, in that Eircom recoups the money that it invested in the asset plus a rate of return.

evolution of network asset prices and this should provide better “build or buy” signals.

- 4.122 This approach is also consistent with Regulation 13 (2) of the Access Regulations as it “.....take into account the investment made by the operator which the Regulator considers relevant and allow the operator a reasonable rate of return on adequate capital employed, taking into account any risks involved specific to a particular new investment network project.”

Treatment of poles and ducts:

- 4.123 While we consider that a large proportion of Reusable Assets will be reused for NGA, there will be an element of Reusable Assets i.e., poles and ducts that cannot be reused for NGA and so will need to be replaced based on a BU-LRAIC + basis.
- 4.124 Therefore, ComReg proposes that a combination of Eircom’s Indexed RAB and BU-LRAIC+ costs should be used to determine duct and pole costs, as follows:

A. Top down (TD) valuation:

- 4.125 In 2009 ComReg published its Decision on Eircom’s regulatory asset lives in ComReg Decision D03/09⁶⁶ where it revised the asset life for poles from 15 years to 30 years to more closely align with the average economic life of poles. The implementation of this change in asset life resulted in a significant reduction in the annual depreciation charge associated with poles in Eircom’s HCAs. Consequently, the capital value of poles in Eircom’s accounts increase year on year as older poles with no residual capital value in the HCAs need to be replaced by new poles each year. This is compounded by the fact that the installation cost of poles increases over time and also given the requirement under health and safety regulations where Eircom incurs a cost in safely disposing of old poles – referred to as the asset retirement obligation (‘**ARO**’).
- 4.126 Therefore, it is proposed that the TD valuation of poles in the model takes account of Eircom’s forecasted capital costs associated with ongoing annual investment in poles over the three year price control period. The model assumes the same level of investment each year over the three year price control period based on Eircom’s budgeted pole investment spend for 2015 (of €3.2). The forecasted annual investment of €3.2 means replacing the equivalent of 3.2 poles (3.2% of Eircom’s pole inventory) each year from 2015-2017. We have assumed in the model that the annual re-investment each year increases with price trends (discussed in Chapter 5). The increase in annual depreciation charges and the

⁶⁶ ComReg Document No 09/65 - Response to Consultation Document No. 09/11: Review of the regulatory asset lives of Eircom Limited (‘**Regulatory Asset Lives Decision**’).

cost of capital associated with this ongoing replacement investment is then factored into the TD valuation of Eircom's pole network.

4.127 As well as the capital costs of poles, we also need to take account of the additional operating expenditure associated with the pole network. While the asset life of a pole is 30 years in Eircom's Regulatory Accounts the useful life of poles can be longer or shorter than this. Consequently, Eircom can be expected to replace a percentage of its pole stock, annually. As ComReg understand it, this replacement rate is achieved typically by way of: (1) scheduled and programmed maintenance test and replace routines, (2) planned and reactive alterations for network operational reasons and (3) reactive replacement arising from damage to plant. For these reasons, Eircom undertakes surveys of the pole network each year and the costs of undertaking these surveys contribute to the annual operating costs of the pole network. For example, when new or replacement cables are to be deployed along a pole route the relevant poles are surveyed to confirm if they are fit for purpose. Such a survey is intended not only to ensure that the existing pole has the necessary capacity to support additional or replacement cables but also that it complies with the requisite safety standards. The appropriate remedy for a dangerous pole is to replace it. As ComReg understands it, Eircom also conducts routine surveys of its pole inventory as it targets testing every pole in its network at least once every twelve years and, if the tests indicate that the pole is likely to fail in the period before the next survey, the pole is scheduled for replacement. Another element of operating expenditure that is relevant to the pole network is a proportion of the network rates that network operators such as Eircom has to pay to local authorities each year. Finally, the pole price should allow for a recovery of fixed and common costs on the basis of an equi-proportionate mark up ('EPMU') on allocated costs to ensure that Eircom is in a position to recover all of its efficiently incurred costs. To this end ComReg has analysed the costs in Eircom's cost accounting systems and identified those elements of operational expenditure that it considers to be pole related and recoverable via a pole access price.

B. Bottom up (BU) valuation:

4.128 While the valuation of poles in the TD approach takes into the account the age profile and depreciation history of Eircom's actual pole inventory, a BU LRAIC+ valuation of poles takes account of the valuation of Eircom's pole network in the long run. Therefore, the BU valuation considers the future investment that would be required to facilitate the deployment of NGA technology. A full BU valuation of Eircom's pole network would assume that all poles are replaced and can be derived by multiplying the current Eircom network inventory of poles (of \times) by

the unit cost of a pole⁶⁷. The relevant depreciation factor⁶⁸ is then applied to calculate the associated annual cost as per the following formula:

$$\text{€ poles} * \text{unit cost of pole}^{69} * \text{depreciation factor}^{70}.$$

4.129 However, we do not assume that all poles are replaced – see proposed adjustment in Part C below.

4.130 We also propose to take account of annual operating costs associated with the pole network in the BU valuation in line with the approach set out at paragraph 4.127.

C. Reuse and replacement adjustment:

4.131 For the purposes of the model ComReg has assumed that the future deployment of NGA technology will result in a further 8% replacement of Eircom's existing inventory of poles (i.e., 8% of € poles = € poles replaced). This is over and above Eircom's forecasted pole investment as set out in part A above (TD valuation).

4.132 The proposed BU valuation for replacement of poles in the access cost model is as follows:

$$8\% * \text{BU valuation (i.e., formula in part B)}.$$

4.133 For the remaining 92%, we assume reutilisation of Eircom's existing pole network based on the following:

$$92\% * \text{TD valuation (in part A)}.$$

4.134 For underground assets (ducts, trenches, chambers) we propose a similar methodology to that described at paragraph 4.132 and 4.133, except we assume a replacement rate of 5% for underground assets based on BU-LRAIC+ costs while the balance of 95% relates to underground assets that can be reused for NGA based on Eircom's Indexed RAB .

4.135 Recognising that poles may need to be replaced over the proposed price control period and in anticipation of the implementation of the NBP as well as recognising the fact that new poles would generate higher annuities in the future compared to the poles registered and depreciated in Eircom's accounts (see paragraph

⁶⁷ This is based on the current installation cost of a pole (at € poles) plus the cost of the Asset Retirement Obligation (at € poles), as provided by Eircom. The Asset Retirement Obligation costs relate to the cost incurred by an operator in safely disposing of the pole after it has been withdrawn from the network.

⁶⁸ Please see subsection 5.5.3 in Chapter 5.

⁶⁹ Supra n. 67

⁷⁰ Supra n. 68.

4.125), ComReg has carried out a number of sensitivities around the percentage of reuse and replacement of poles.

4.136 ComReg has considered two additional options as follows:

- Option 1: This assumes an 85% reuse of poles (based on Eircom's Indexed RAB) with a 15% replacement of poles (based on BU-LRAIC+ costs). Similar to the formulae applied in paragraphs 4.132 and 4.133, the 85% reuse would mean an allowance for \times poles ($\times * 85\%$) over the three years while the 15% replacement would mean an extra \times poles ($\times * 15\%$). In total this scenario would provide for circa \times poles which represents circa $\times\%$ of Eircom's current pole base. The outcome of this scenario results in an annual national price per pole of €11.77 based on 2 cables (compared to €9.87 under the 92% / 8% split).
- Option 2: This assumes a 95% reuse of poles (based on Eircom's Indexed RAB) with a 5% replacement of poles (based on BU-LRAIC+ costs). Similar to the formulae applied in paragraphs 4.132 and 4.133, the 95% reuse would mean an allowance for \times poles ($\times * 95\%$) over the three years while the 5% replacement would mean an extra \times poles ($\times * 5\%$). In total this scenario would provide for circa \times poles which represents circa $\times\%$ of Eircom's current pole base. The outcome of this scenario results in an annual national price per pole of €9.05 based on 2 cables (compared with €9.87 under the 92% / 8% split).

4.137 On balance we consider that our proposed approach of 92% reutilisation of the existing pole base and the provision of 8% for pole replacement is reasonable as we are providing for circa \times poles (or $\times\%$ of Eircom's current pole base) while also taking into account Eircom's committed capital spend on poles. Our proposed approach should send the correct signals to Eircom with regard to the replacement and reuse of poles in Eircom's existing network. Please refer to paragraphs 4.141 and 4.142 for discussion on investment incentives.

4.138 The other alternative approach is to assume 100% reuse of ducts and poles and to allow Eircom to recover the cost of pole replacement annually by reference to a comparison with its HCAs. By assuming 100% reuse, this would result in an annual national price per pole of circa €7.68 (based on 2 cables). However, ComReg considers that this approach may not provide the correct investment signals for Eircom. Instead this approach may lead to price uncertainty and instability as Eircom would have to demonstrate to ComReg annually by way of its HCAs the amount invested in poles for that particular financial period in order to recoup those costs going forward. Depending on the significance of any investment by Eircom in poles and ducts this may result in changes to pole and duct prices (as well as local loop prices) which may not be in the interests of market stability.

D. 2013 Recommendation:

- 4.139 ComReg considers that this approach is consistent with the 2013 Recommendation as it would not be economically efficient for access operators to build new CEI such as poles when it is possible to re-use the existing infrastructure assets by buying access to them from Eircom. Consequently, valuing the reusable element of the pole network using Eircom's Indexed RAB allows Eircom to recover its actual efficient investment in these assets while using a BU-LRAIC+ approach for the non-reusable element ensures that appropriate incentives are in place to encourage efficient investment by Eircom and other access operators.
- 4.140 Therefore, ComReg considers that the valuation of poles should be adjusted to take into account the extent that poles can be reused or where they require replacement to support NGA deployment. As Eircom commenced deployment of its NGA network a number of years ago there is now some evidence available of the extent to which CEI assets such as poles can be re-used when deploying NGA.

E. Investment incentives:

- 4.141 From an investment point of view ComReg considers that this approach should send the correct signals to Eircom with regard to the replacement of ducts and poles in Eircom's existing network. While the duct/pole is being reused it is based on Eircom's Indexed RAB. This means Eircom can recover the original investment cost but if it is necessary to replace the duct/pole, then the element of cost should be based on BU-LRAIC+ costs to ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner.
- 4.142 ComReg are cognisant of the fact that over the years Eircom may have been sweating its assets, particularly poles and as a result a large part of Eircom's current pole base may require replacement. This is evident from recent correspondence from Eircom (at Annex 11) where Eircom state that in 2014 8% of its pole base was already over 30 years old. ComReg considers that Eircom's past investment decisions on its pole network should not mean that the price per pole should now reflect a high percentage of pole replacement of its current pole network. In this regard ComReg considers that an annual review is necessary to provide a comparison of the average number of poles installed on its network with the quantity of new and replacement poles allowed for in the access cost model. ComReg considers that this valuation approach supports cost recovery and continued investment by Eircom in its existing access network, where appropriate⁷¹. This should allow Eircom to recover any money invested in

⁷¹ Note that 8% replacement of poles for NGA purposes is a long term view and therefore any reconciliation to Eircom's actual investment may not reconcile.

maintaining or upgrading its network on the basis that Eircom will have the assurance that what it spends can be recouped. Therefore, pole access prices could increase in the future depending on the materiality of future investments by Eircom. On the other hand this approach also ensures that Eircom cannot over recover the cost of poles if they invest less than that provisioned for in the cost model.

- 4.143 ComReg considers that for brand new poles required by OAOs either for further deployment of the network or in the case where the Eircom pole is at full capacity, the OAO should support the cost of installing a new pole itself through its own procurement process or by purchasing the new pole from Eircom. This is further discussed in Chapter 8 (subsection 8.3).

2. Other passive local loop assets and non-reusable civil engineering assets

- 4.144 The European Commission defines non-reusable civil engineering assets as “...*those legacy civil engineering assets that are used for the copper network but cannot be reused to accommodate a NGA network.*”
- 4.145 ComReg considers that other passive local loop assets include NTU, final drops, joints, D-side cables, E-side cables, cabinets and MDFs. Non-reusable civil engineering assets include duct, trenches, poles and chambers which cannot be reused for NGA. The ‘other passive local loop assets’ and ‘non-reusable civil engineering assets’ are referred to throughout the rest of this document as ‘**Non-reusable Assets**’.
- 4.146 Unlike the Reusable Assets, the copper cables or Non-reusable Assets, especially in the LEA, are likely to be replaced by optical fibre — at least on the E-side. ComReg considers that in these areas OAOs should be encouraged to invest in the alternative NGA-based infrastructure.
- 4.147 Paragraph 33 of the 2013 Recommendation sets out that the Non-reusable Assets should be valued on the basis of a Regulatory Asset Base (‘**RAB**’) approach based on replacement costs:
- “NRAs should value all assets constituting the RAB of the modelled network on the basis of replacement costs, except for reusable legacy civil engineering assets.”*
- 4.148 Paragraph 31 of the 2013 Recommendation further specifies that a BU-LRIC+ costing methodology should be used to determine the current costs:

“NRAs should adopt a BU LRIC+ costing methodology that estimates the current cost that a hypothetical efficient operator would incur to build a modern efficient network, which is an NGA network....”

4.149 Therefore, it is clear that the 2013 Recommendation specifies that the calculation of copper wholesale access prices should be based on replacement costs using a BU-LRIC+ approach except for Reusable Assets. The BU-LRIC+ approach should construct a NGA network as NGA is the modern equivalent asset (**‘MEA’**) for copper. The BU-LRIC+ is defined in the 2013 Recommendation as:

“.....the incremental capital (including sunk) and operating costs borne by a hypothetically efficient operator in providing all access services and adds a mark-up for strict recovery of common costs. Therefore, the BU LRIC+ methodology allows for recovery of the total efficiently incurred costs.”

4.150 It is important to note that the BU-LRIC+ approach referred to in the 2013 Recommendation recovers the same level of costs as the BU-LRAIC+ approach that ComReg refers to throughout this Draft Decision. ComReg uses the term “BU-LRAIC+” throughout the rest of this document.

4.151 With regard to Non-reusable Assets, ComReg considers that it is important to send the correct build-or-buy signal, so that an OAO is encouraged to take an efficient investment decision. ComReg believes that such a build-or-buy signal is best ensured by adopting a BU LRAIC+ methodology, based on replacement costs.

4.152 As well as sending a correct build-or-buy signal, ComReg considers that this approach also ensures consistency across the ladder of investment.

4.153 In the more rural areas of the country (**‘Outside the LEA’**), the copper cables are, in contrast, unlikely to be replaced by NGA. ComReg considers that the issue of build-or-buy signals may not be as relevant. Instead, the main objective in those areas are to avoid over-or under-recovery of costs by Eircom. ComReg considers that in the more rural areas reference to Eircom’s Actual Costs Adjusted for Efficiencies maybe more appropriate based on the costs of exchange lines Outside the LEA, may be more appropriate. This is discussed in more detail with regard to SB-WLR in Chapter 6 (subsection 6.6) and for SABB in Chapter 7 of this Draft Decision.

3. Active assets

4.154 SB-WLR and SABB use active assets (line card, backhaul) on top of Eircom’s copper local loop.

4.155 In order to ensure that OAOs are encouraged to climb the ladder of investment and migrate to LLU based services, especially in the LEA, the costs relating to these assets need to transmit the correct build-or-buy signals.

4.156 ComReg considers that the BU-LRAIC+ methodology is the appropriate methodology to adopt. However, ComReg considers that the BU-LRAIC+ costs should be adjusted to the scale of an efficient OAO to give sufficient economic space for LLU, SLU and Line Share.

ComReg's Preliminary View:

4.157 Eircom's Indexed RAB should be applied to Reusable Assets.

4.158 A BU-LRAIC+ methodology should be applied to Non-reusable Assets.

4.159 For active assets (line card, backhaul, etc.), a BU-LRAIC+ methodology should be applied with an adjustment for economies of scale.

Q. 3 Do you agree with ComReg's preliminary views that in general Eircom's Indexed RAB should be applied to Reusable Assets while a BU-LRAIC+ methodology should be applied to Non-reusable Assets and active assets? Please provide reasons for your response.

Q. 4 Do you agree with ComReg's preliminary view that for Reusable Assets we should take account of reuse and replacement of existing assets as described at paragraphs 4.132, 4.133 and 4.134 rather than assuming 100% reuse of existing assets? Please provide reasons for your response.

Chapter 5

5 Cost Modelling

5.1 Overview

- 5.1 In Chapter 4 we discussed the options available to ComReg in order to determine the appropriate costing methodology to assess the level of costs relevant to LLU, SLU, SB-WLR, SABB, CEI and dark fibre.
- 5.2 In this chapter we discuss the proposed model used to determine the appropriate level of costs associated with LLU, SLU, SB-WLR, SABB, CEI and dark fibre. We also discuss the proposed inputs and assumptions used in the underlying model.
- 5.3 In 2010, ComReg published its LLU Pricing Decision, as summarised in Chapter 3. The LLU Pricing Decision determined the national average monthly rental price for LLU and SLU based on the BU-LRAIC+ methodology using the Copper Access Model ('**CAM**'). ComReg engaged TERA to assist it with the development of the CAM in 2010.
- 5.4 In this Draft Decision we outline how we have updated the existing CAM (referred to in this Draft Decision as the '**Revised CAM**'), with the assistance of TERA, to take account of the following main changes:
- To build the model based on fibre to the cabinet ('**FTTC**') technology while adjusting it by replacing the fibre elements with copper elements given that the access services to be priced are copper related. The FTTC network ensures the model is future proofed for pricing purposes.
 - To include SB-WLR, SABB, CEI services and dark fibre in the model (the existing CAM included LLU and SLU services only) with the associated costs for each service.
 - To incorporate Eircom's Indexed RAB into the model to take account of the proposal that Reusable Assets should be based on accounting data (while the BU-LRAIC+ methodology should continue to apply to Non-reusable Assets).
 - To realign the model to take account of assets / services associated with each MDF which can be consolidated into different grouping or regions i.e., the LEA and Outside the LEA.
 - To take account of updated costing information from Eircom's audited regulatory accounts.

- To take account of updated asset prices.
- To take account of the updated geospatial database on the location of roads and buildings.
- To model more precisely the network at a street/road level in order to calculate the cost for very specific geographic areas i.e., LEA, sub-loop not longer than 1km from the cabinet.

5.5 It is important to note that the Revised CAM can account for costs in two ways:

- A combination of Eircom's Indexed RAB and BU-LRAIC+ costs; or
- All of Eircom's Actual Costs Adjusted for Efficiencies.

5.6 This is discussed later in this chapter (subsection 5.5) but also in the context of the pricing approach for the various wholesale access services, in Chapters 6, 7 and 8.

5.7 The remainder of this chapter is discussed under the following headings:

- Background to updating the CAM;
- Cost model layout / architecture;
- Network dimensioning;
- Network costing; and
- Network cost allocation.

5.2 Background to updating the CAM

5.2.1 Information request:

5.8 In February 2014, ComReg issued an information request to Eircom, pursuant to Section 13(D)(1) of the Communications Regulations Act 2002 (as amended), to seek updated information regarding Eircom's access network both in terms of financial data and network specific data. Eircom has made a number of submissions to ComReg in response to our request and this data has been reflected as appropriate in the Revised CAM.

5.9 While the information received from Eircom is largely confidential / commercially sensitive we are consulting on the main principles and inputs of the Revised CAM below which should allow respondents the opportunity to respond on the main inputs of the model.

5.2.2 Site visits:

5.10 As part of our review, ComReg (and TERA) made a number of site visits to parts of Eircom's access network, which included:

- A passive street cabinet;
- An active street cabinet;
- An aerial deployment⁷²;
- A chamber;
- An exchange in a small rural community and a large suburban community (with an associated manhole); and
- Customer premises installation.

5.11 The site visits and discussions with Eircom has enabled ComReg and TERA to further our understanding of the current Eircom engineering rules and how they are applied in practice.

5.2.3 Geo-mapping:

5.12 Geocible⁷³ was engaged to map the roads/streets and buildings in Ireland for the purposes of updating the Revised CAM.

5.13 The database used for the road infrastructure is the Ordnance Survey Ireland ('OSI') database and the database used for buildings is the Gamma database. By combining the two sources, Geocible linked the building data with the road/street infrastructure. The telecoms infrastructure for each building is deployed along the road/street network.

5.14 The objective of the geo-mapping exercise is to derive all the data needed to compute the network demand at the highest level of granularity available.

⁷² This relates to Eircom's overhead network and more particularly cable and poles.

⁷³ French based geo-mapping company, contracted by TERA Consultants.

- 5.15 Annex 8 provides background details on the work carried out by Geocible and may assist the reader's understanding by providing context to the network dimensioning phase of the model, as discussed in section 5.4.
- 5.16 In summary, the outputs of the geo-mapping phase are:
- The set of paths linking each section⁷⁴ to a street cabinet⁷⁵ ('**SC**');
 - The set of paths linking each SC to its main distribution frame⁷⁶ ('**MDF**'); and
 - The set of sections with the following information:
 - Length of the section;
 - Number of constructions located on the section;
 - Number of dwellings located on the section; and
 - Number of isolated buildings.

5.3 Cost model layout / architecture

- 5.17 When modelling the network of an operator, a key choice relates to the technology to be modelled.
- 5.18 In the BU model approach, assets are valued based on the cost of using a Modern Equivalent Asset ('**MEA**') built with the most efficient technology available.
- 5.19 According to Paragraph 31⁷⁷ of the 2013 Recommendation, the bottom-up model should be based on an NGA network.
- 5.20 While the 2013 Recommendation does not specify what the modern equivalent asset for copper is in order to respect the technological neutrality principle, ComReg considers that the following options are relevant:

⁷⁴ A section is a portion of street between two consecutive crossroads.

⁷⁵ A street cabinet is a cabinet installed on the side of the street which accommodates passive and active equipment and can be configured for pure fibre or a combination of copper-fibre and for spliced, cross- connect and splitter applications to serve customer- specific needs.

⁷⁶ A MDF is a termination point within the local telephone exchange where exchange equipment and terminations of local loops are connected by jumper wires at the MDF.

⁷⁷ "NRAs should adopt a BU LRIC+ costing methodology that estimates the current cost that a hypothetical efficient operator would incur to build a modern efficient network, which is an NGA network...."

- Fixed Wireless Access ('FWA') network;
- FTTC network; or
- Fibre to the home ('FTTH') network.

5.21 With a FWA network, voice and broadband data is delivered to transmission towers (ground stations) via fibre connections and radio signals are used to access the end-user. The receiver can be a mobile device (such as a smartphone), or a dedicated transceiver (an antenna) installed on the customer's premises to receive the signal and deliver it to a modem. FWA tends to offer broadband speeds that are lower than copper/FTTC or FTTH. In addition, the speed generally decreases significantly with the distance. The quality of FWA service is adversely affected by obstacles such as hills, trees, walls or even rain and fog, contrary to wired networks. Therefore, ComReg considers that a FWA network is not considered as the MEA in this specific case.

5.22 In Section (41) in the preamble of the 2013 Recommendation, the European Commission noted that :

"An FttH network, an FttC network or a combination of both can be considered a modern efficient NGA network..."

5.23 ComReg considers that given the technology that is commercially the most likely to be widely used in Ireland is FTTC, that the model should be based on this technology. At the same time, we recognise that there may also be some deployment of FTTH in some areas e.g., ESB/Vodafone joint venture company (known as 'SIRO') proposed FTTH deployment.

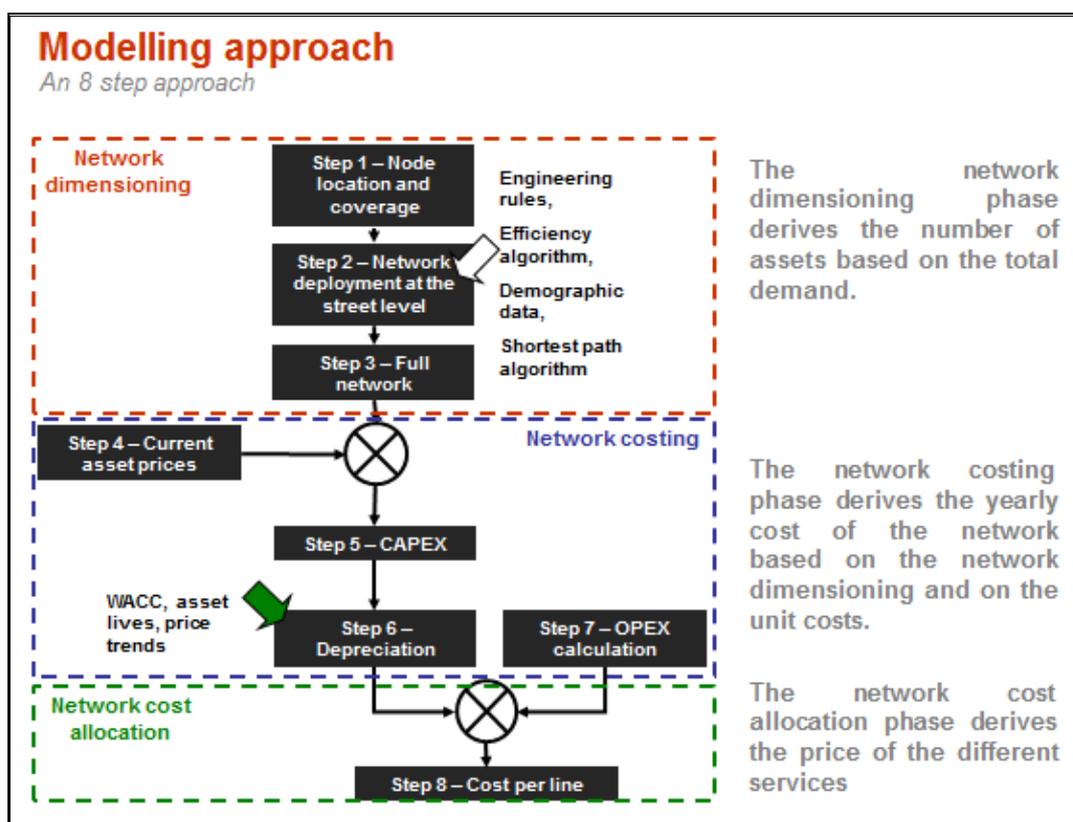
5.24 However, given that the access services under review (LLU, SLU, Line Share, SB-WLR, SABB and CEI) are entirely based on the copper network, the model must be adjusted to replace the optical elements with copper elements. Paragraph 37 of the 2013 Recommendation specifies the following with regard to adjustments for copper:

In light of the principle of technological neutrality NRAs should consider various approaches to modelling the hypothetical efficient NGA network depending on the access technology and network topology that best fit national circumstances. When determining the access prices of services that are entirely based on copper, NRAs should adjust the cost calculated for the modeled NGA network to reflect the different features of wholesale access services that are based entirely on copper. For this purpose, the NRAs should estimate the cost difference between an access product based on for example FttC/FttH and an access product based entirely on copper by replacing the optical elements with efficiently priced copper elements, where appropriate, in the NGA engineering model. Where appropriate, NRAs could otherwise obtain the copper cost by modelling

an NGA overlay network, where two networks (copper and fibre, either FttH or FttC) share to an extent the same civil infrastructure.

- 5.25 It is important to understand that modelling an NGA network and adjusting the cost to reflect the different features for LLU, SLU, SB-WLR and SABB that are entirely based on copper is the same as modelling an entire copper access network.
- 5.26 ComReg is of the preliminary view that the model should be based on FTTC technology but adjusted to reflect the features of the copper Wholesale Access Services.
- 5.27 ComReg’s proposed modelling approach used to determine the costs for LLU, SLU, SB-WLR, SABB, CEI and dark fibre is illustrated in Figure 7.

Figure 7: Illustration of modelling approach for Eircom’s wholesale access network



Source: TERA

- 5.28 As illustrated in Figure 7, the proposed modelling approach is based on three phases as follows:

1. **Phase 1: Network dimensioning:** this phase derives the number of assets based on the total demand i.e., steps 1 to 3 in Figure 7.

2. **Phase 2: Network costing:** this phase derives the annual cost of the network by applying the current asset prices to the inventory of assets and calculating Eircom's Indexed RAB for re-useable assets and subsequently calculating an asset specific depreciation cost. Operating costs for the network are calculated using Eircom's HCAs as a starting point and applying efficiency adjustments. Phase 2 is captured in steps 4 to 7 in Figure 7.
3. **Phase 3: Network cost allocation:** this phase derives the costs of the individual services, i.e., step 8 in Figure 7.

5.29 Each of the three phases are discussed in detail below with reference with Steps 1 – 8 in Figure 7.

5.4 Network Dimensioning

5.30 Dimensioning the copper access network means computing the number of assets required to meet the demand.

5.31 It is important to consider the following proposed principles with regards to fixed access networks:

- Fixed wired access networks are dimensioned based on all dwellings located in the areas covered (and not just on the basis of the current demand);
- Fixed wired access networks follow streets and roads; and
- The path followed by the cable connecting any dwelling to a network aggregation point is the shortest path i.e., there is optimisation of the network length in order to ensure the best quality of service.

5.32 Fixed wired asset network costs mainly consist of:

- Civil engineering costs (ducts, poles, trenches); and
- Cable costs.

5.33 Civil engineering asset costs depend on:

- The length of streets/roads;
- The unit costs (mainly based on local wages); and
- The number and size of telecommunications cables which they support.

5.34 Cable costs depend on:

- The length of streets/roads;
- The unit costs of laying cables (mainly based on local wages);
- The unit cost of cable; and
- The number of dwellings served by these cables.

5.35 Therefore, ComReg considers that three types of data are required to build the access network model, which include:

- Street / road length;
- Unit cost data; and
- Paths between dwellings and network points.

5.36 In the subsections below, ComReg has set out the proposed approach to network dimensioning with regard to steps 1 to 3 in Figure 7, under the following headings:

1. Step 1: Node location and coverage;
2. Step 2: Network deployment at the street level; and
3. Step 3: Full network.

5.4.1 Step 1: Node location and coverage

5.37 The proposed starting point for the network dimensioning phase is to determine the network node (exchange) locations and the coverage areas.

5.38 As set out in Chapter 4, ComReg is of the preliminary view that the “scorched node approach” should be used in the model — which means that the model would use Eircom’s exchange positions.

5.39 The data required for this Step of the modelling has been gathered by Geocible.

5.40 As set out in Annex 8, Eircom provided the coordinates of all MDFs and an electronic map (shape file) with the coverage area of each MDF. Eircom also provided the coordinates of all SCs. However, the coverage of the SCs was not provided. The coverage of the SCs has been computed using a Voronoï based algorithm. The Geocible exercise splits each MDF area into areas ensuring that each section⁷⁸ is located in the same area as its closest SC. This approach

⁷⁸ A section is a portion of street between two consecutive crossroads. There is no crossroads in a section.

means that the modelling is more realistic given that the MDF areas were not based on Eircom's maps in the CAM in 2010.

5.41 Therefore, ComReg has updated the Revised CAM to identify:

- The MDF (exchange) positions of Eircom; and
- The SC positions of Eircom.

5.42 Once the MDF positions are established, the country is split into MDF areas and subsequently within each MDF area each end-user is connected to the same MDF (directly or indirectly through a SC).

5.43 This means that end-users are connected to the nearest SC (during this process the MDF is considered as a SC, i.e. they are connected to the nearest MDF or SC).

5.44 Each SC is connected to its parent MDF. The parent MDF is determined based on the location of the SC. Thus all customers located in the same MDF area are connected (directly or indirectly) to the same MDF.

5.45 Similarly, once the SC positions are identified, each MDF area is split into SC areas and inside each SC area each end-user can be connected to the same SC.

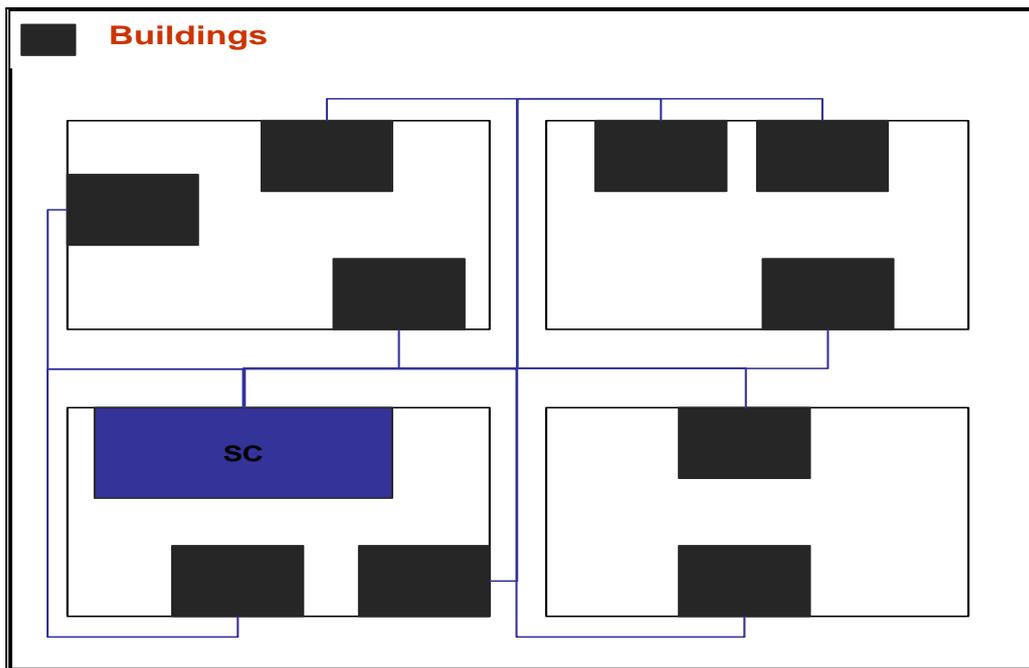
5.46 If some end-users are directly connected to the MDF, then ComReg is of the preliminary view for the purposes of the network dimensioning assumed in the model that the MDF is also considered as being the SC.

5.4.2 Step 2: Network deployment at the street level

5.47 Having determined the MDF and the SC coverage areas above, it is possible to compute the shortest path to connect each end user to a SC and the shortest path from each SC to its MDF. This optimises the assets needed to roll-out the network and reflects how network operators plan their networks.

5.48 Figure 8 illustrates the shortest paths from the buildings to the SC in one area. This demonstrates how the network is dimensioned in the Revised CAM.

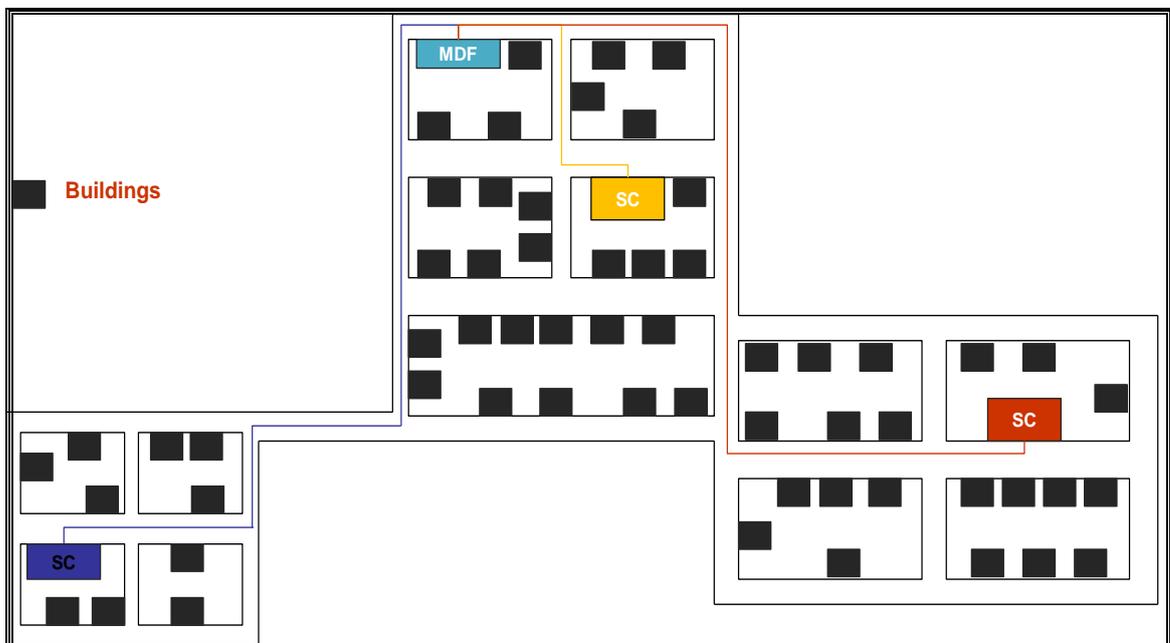
Figure 8: Illustration of shortest paths in one SC area



Source: TERA

5.49 In the Revised CAM the shortest path concept is also applied to connect the SC to the MDF. Figure 9 illustrates the shortest paths to connect the SC to the MDF.

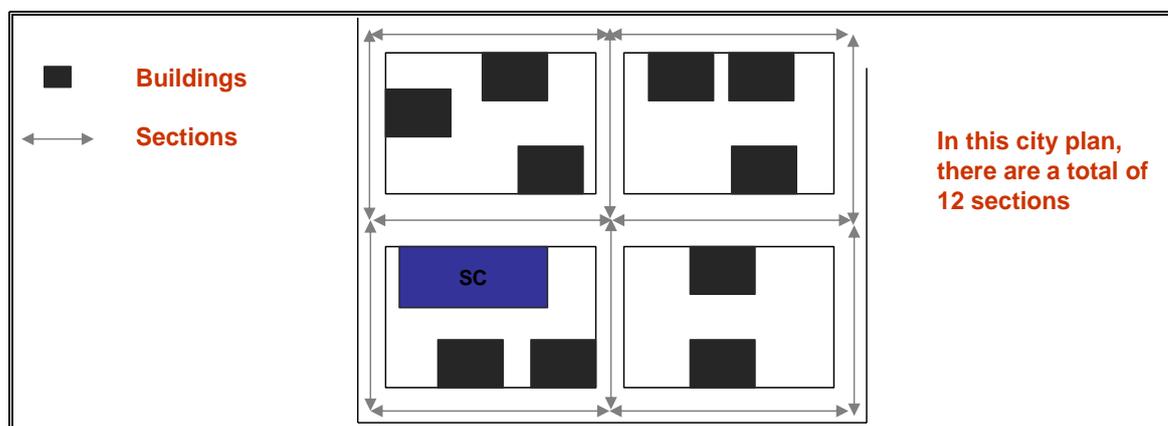
Figure 9: Illustration of shortest paths to connect the SC to the MDF



Source: TERA

- 5.50 ComReg considers that having computed all the shortest paths required, it is possible to compute the demand for the network at the “section” level. A section is a portion of street between two consecutive crossroads. There is no crossroads in a section. This is illustrated by the grey arrows in Figure 10.
- 5.51 ComReg proposes that the demand is computed at the section level as it is the most granular level at which data is available. Furthermore, this level is consistent with the level at which asset optimisation is carried out by operators in reality.
- 5.52 Figure 10 illustrates the demand at the section level. In essence, the demand of the section is all the buildings located in this section. The demand of the rear area of the section is all buildings where the shortest path to the SC or the MDF goes through the section.

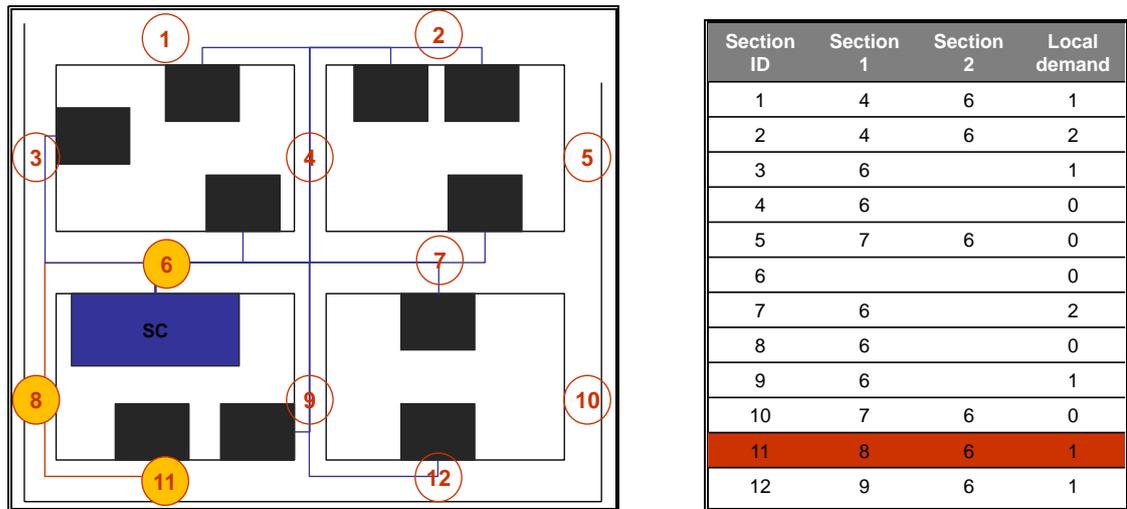
Figure 10: Illustration of demand at the section level



Source: TERA

- 5.53 Demand at the section level is further illustrated in Figure 11. The table (on the right hand side) of Figure 11 lists the path to the SC for each section (section ID). For example, to connect section '11' to the SC, the shortest path goes through section '8' then section '6' where the SC is located. This is the proposed approach for dimensioning the network demand in the Revised CAM.

Figure 11: Illustration of demand at section level (shortest paths to the SC)

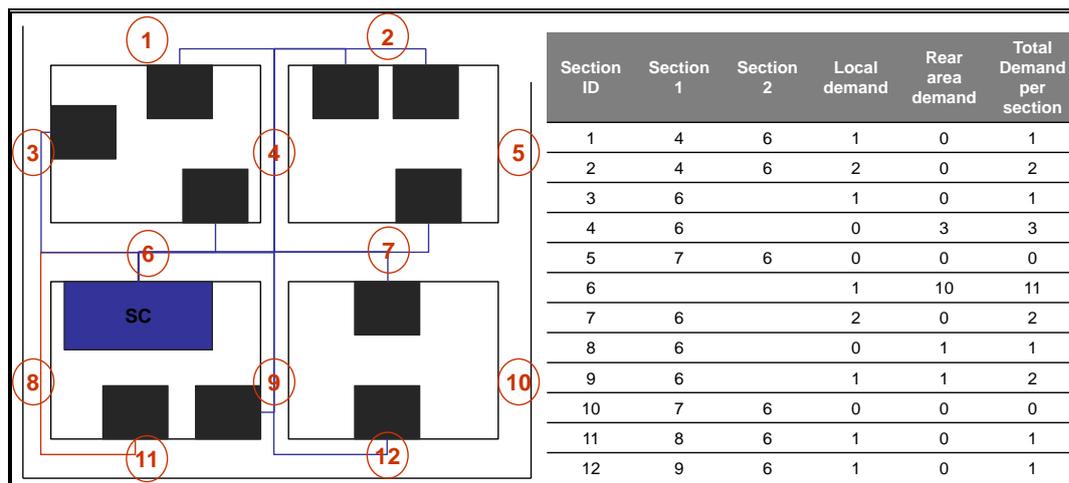


■ BUILDINGS

Source: TERA

5.54 Figure 12 illustrates how the Revised CAM takes account of the total demand per section. For example, Section 4 has no local demand but Section 1 and Section 2 use Section 4 to reach the SC. As Section 1 has local demand of 1 (1 building) and Section 2 has local demand of 2 (2 buildings) the proposed total demand for Section 4 is 3. This is illustrated in the table on the right hand side of Figure 12.

Figure 12: Illustration of total demand at section level



■ BUILDINGS

Source: TERA

5.55 Having computed the proposed demand at the section level, it is possible to dimension the copper access network at the section level by computing the number of assets required to meet the demand. Please refer to subsection 5.4.3 for the proposed approach for determining the appropriate level of assets required in the Revised CAM.

5.4.3 Step 3: Full network

5.56 Dimensioning the copper access network at the national level is achieved by aggregating the number of assets at each section level to derive the inventory of the network (i.e., the total number of assets needed). Step 3 is the end of the network dimensioning phase.

5.57 Each section is aggregated into individual MDF areas and these are subsequently aggregated at the National level. It is at the MDF level that the model groups exchanges to determine sub national levels such as the LEA.

5.58 ComReg considers that the typical assets to be dimensioned in the model include:

- Distribution points ('**DPs**');
- Copper cables;
- Joints;
- Ducts, trenches, poles;
- Street cabinets; and
- MDFs.

5.59 The remainder of this subsection on the proposed deployment of network assets is discussed under the following headings:

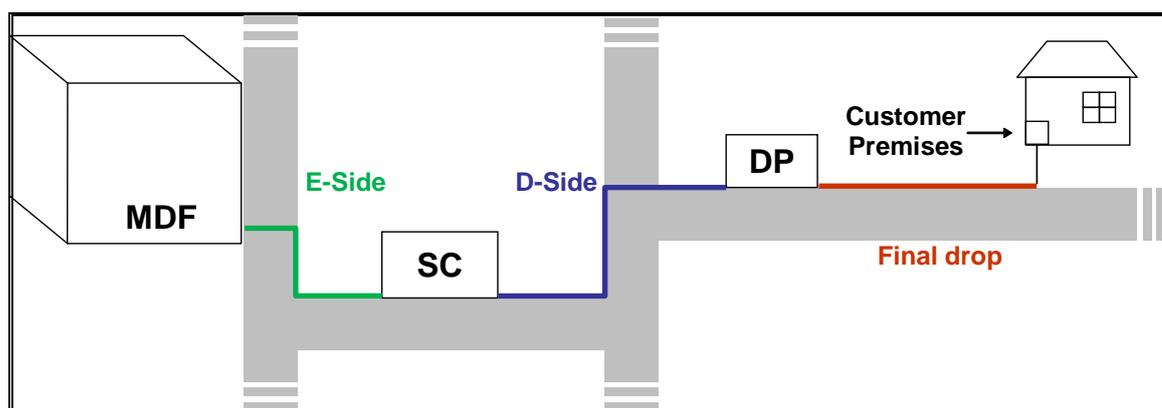
1. Final drops;
2. D-side copper cables;
3. E-side copper cables;
4. Joints, Chambers, Manholes;
5. Ducts, trenches, poles;
6. MDF and SC;
7. Network termination unit ('**NTU**') and main termination;

- 8. NGA; and
- 9. Core and access shared network assets.

1. Final drops:

5.60 The final drop is the portion of the cable that connects buildings to the network (i.e., the portion of cable between the building and the distribution point). The final drop is illustrated by the red line in Figure 13.

Figure 13: Illustration of final drop

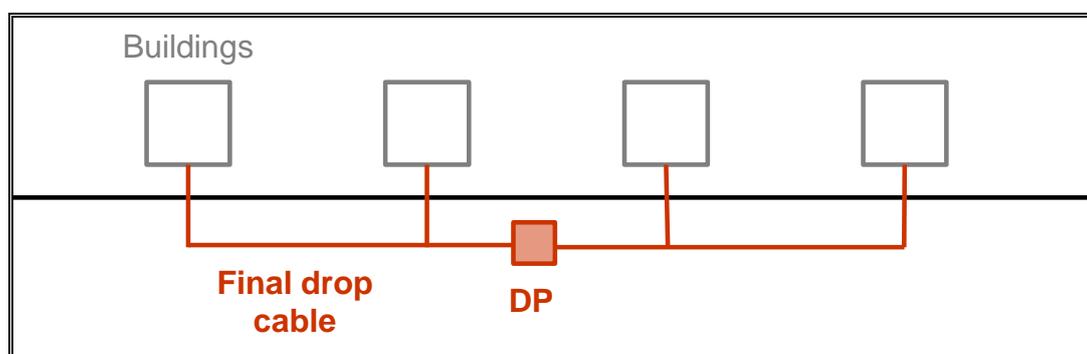


Source: TERA

- 5.61 The Revised CAM takes account of the following with regard to the final drop:
- Two pairs of copper cable are installed per dwelling;
 - The final drop cable is a dedicated cable per dwelling;
 - There are no joints modelled between the dwelling and the DP;
 - Overhead final drop cables are installed on poles;
 - Underground final drop cables are laid into ducts;
 - There is one duct per construction; and
 - The size of the duct depends on the number of final drop cables, hence on the number of dwellings per construction.
- 5.62 If the section is “urban”, ComReg proposes that the final drop cable should be underground but if the section is “rural”, the final drop cable should be aerial.

- 5.63 Each road section has been classified as belonging to either a rural geotype or an urban geotype. The methodology used to derive whether a road section is in a rural or an urban geotype was defined by TERA/Geocible in the former version of the CAM. A road section is considered as urban if it is located within a "housing area". A "housing area" is a group of buildings that are very close to one another and which forms a compact settlement area (as opposed to being in the open countryside). In order to validate this key assumption, two processes were carried out at that time: validation at the national level, validation at the exchange area level.
- 5.64 ComReg considers that the length of the final drop depends on the location of the DPs on the section, as illustrated in Figure 14. Therefore, ComReg proposes that the number of DPs and the location of DPs should be modelled in the Revised CAM.

Figure 14: Illustration of DP location of the section



Source: TERA

- 5.65 The Revised CAM looks at 4 different scenarios for the final drop DPs in each section:
- The distribution network is underground and there is one trench on the major side;
 - The distribution network is underground and there are two trenches;
 - The distribution network is aerial; and
 - Treatment of isolated constructions.
- 5.66 The choice between A and B is done according to the optimisation of the length of infrastructure and is described in paragraphs 5.87 to 5.107 below on D-side copper cables. The choice between A/B on the one side and C is done according to the urban/rural geotype. The last configuration is selected only for isolated buildings which are defined below.

5.67 Each scenario is discussed in turn below.

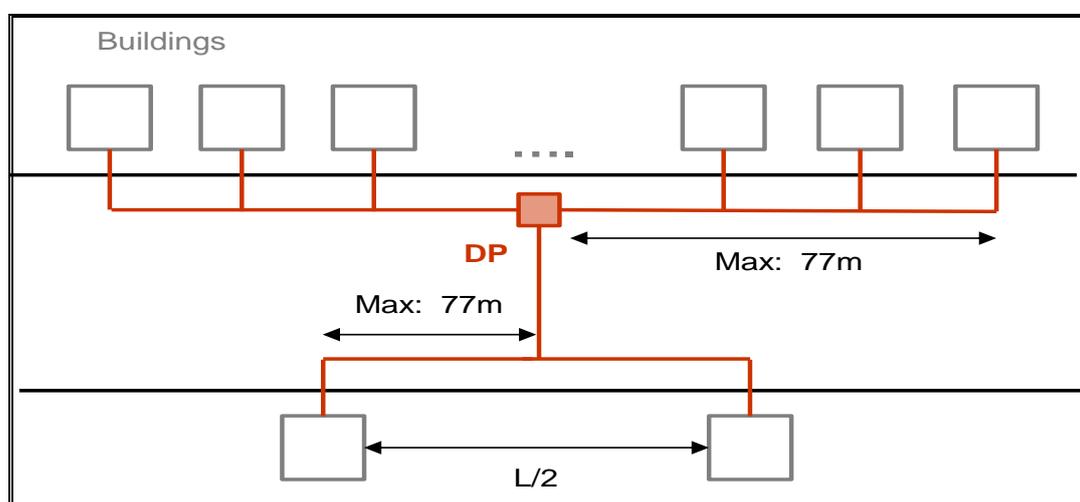
A. The distribution network is underground and there is one trench on the major side:

5.68 Under this scenario, it is proposed that the number of underground DPs are dimensioned based on the following engineering rules:

- An underground DP can manage up to 10 dwellings; and
- The maximum distance between a DP and the last building on the horizontal part is \leq , as specified by Eircom.

5.69 Please refer to Figure 15 for an illustration.

Figure 15: Illustration of maximum distance between DP and last building



Source: TERA

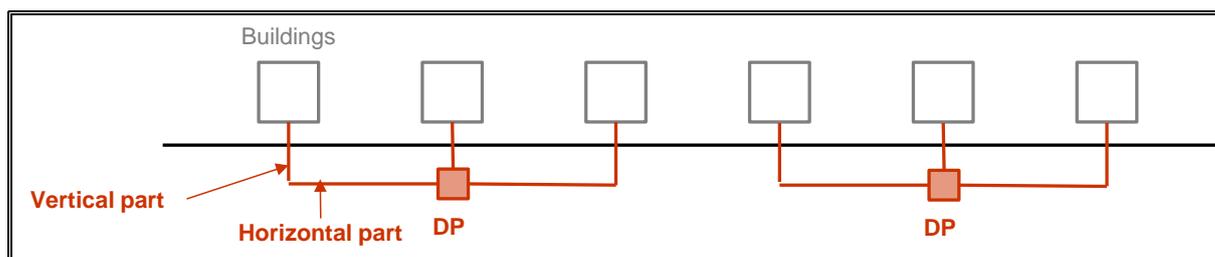
5.70 In addition, it is proposed that DPs are installed in chambers and there is one chamber per DP. This is also discussed later in this subsection in the context of chambers.

5.71 ComReg proposes that underground final drops should be divided into two parts:

- A “horizontal” part which is part of the cable parallel to the section and where underground final drops are laid into trenches shared with others cables (D-Side/E-Side); and
- A “vertical” part dedicated to each final drop, perpendicular to the section.

5.72 Please see Figure 16 for an illustration.

Figure 16: Final drop: horizontal and vertical parts



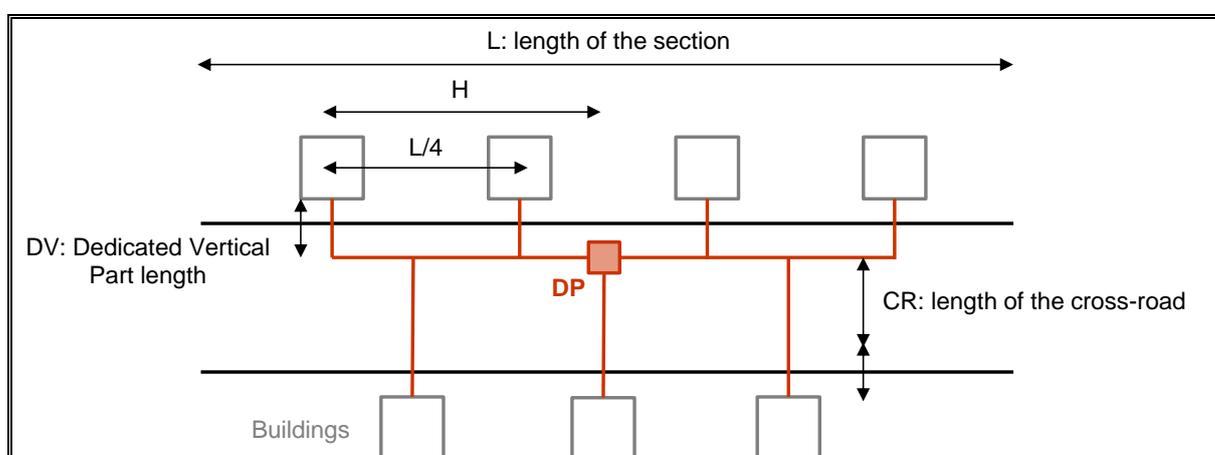
Source: TERA

5.73 ComReg considers that the length of the horizontal part depends on the number of DPs located in the relevant section. The length of the vertical part depends on:

- The length between the buildings and the road, which ComReg proposes should be 3 meters; and
- The width of the cross-road where there are two trenches on the section, which ComReg proposes should be 7 meters.

5.74 As an example in Figure 17 there are seven buildings and one DP on the section i.e., four buildings on the major⁷⁹ side and three on the minor⁸⁰ side.

Figure 17: Calculation of length of final drop



Source: TERA

5.75 ComReg proposes that the length of the final drop (with one trench) in the Revised CAM should be calculated as follows:

- Vertical part: $V = (7 \cdot DV) + (3 \cdot CR)$;
- Maximum horizontal part: $H = (3/4 \cdot L) / 2$;

⁷⁹ Side of the section with the maximum number of constructions.

⁸⁰ Side of the section with the minimum number of constructions.

- Horizontal length = $H \cdot \text{RatioAvgToMaximum}^{81} \cdot 4$.

B. The distribution network is underground and there are two trenches:

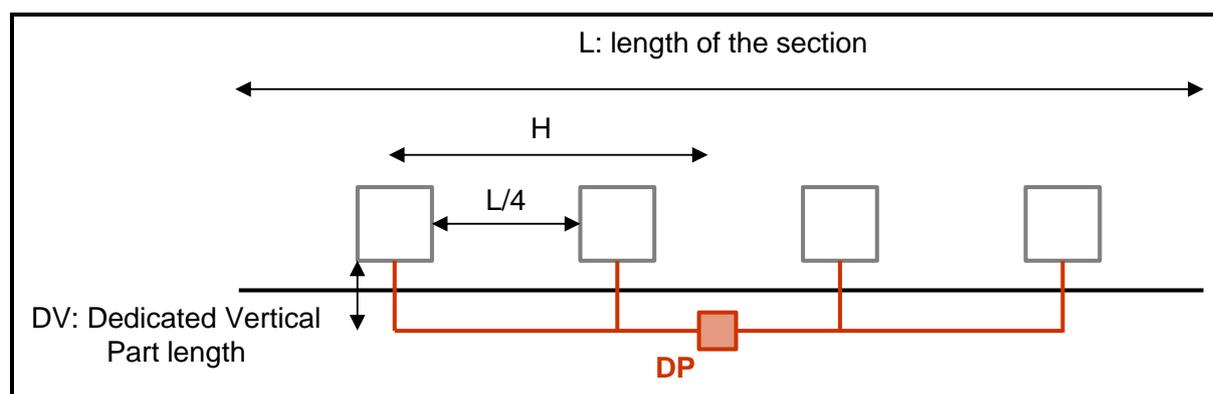
5.76 Under this scenario ComReg proposes that the length of the final drop on the section where there are two trenches should be based on the sum of:

- The length of final drop on the major side of the section; and
- The length of final drop on the minor side of the section.

5.77 ComReg proposes that the length of the final drop (with two trenches) in the Revised CAM should be calculated as the sum of the vertical part and the horizontal part (illustrated by Figure 18):

- Vertical part: $V = (P1 \cdot DV)$
where P1 is the number of buildings that impacts the number of DPs.
- Maximum horizontal part: $H = L \cdot (1 - (1/P1)) / (2 \cdot N)$
where N is the number of DPs.
- Horizontal length = $H \cdot \text{RatioAvgToMaximum} \cdot P1$.

Figure 18: Final drop length with two trenches



Source: TERA

⁸¹ The “RatioAvgToMaximum” is a parameter defined by TERA which allows for transformation of the Maximum Horizontal Part into an Average Horizontal Part. The value used in the model is 0.3.

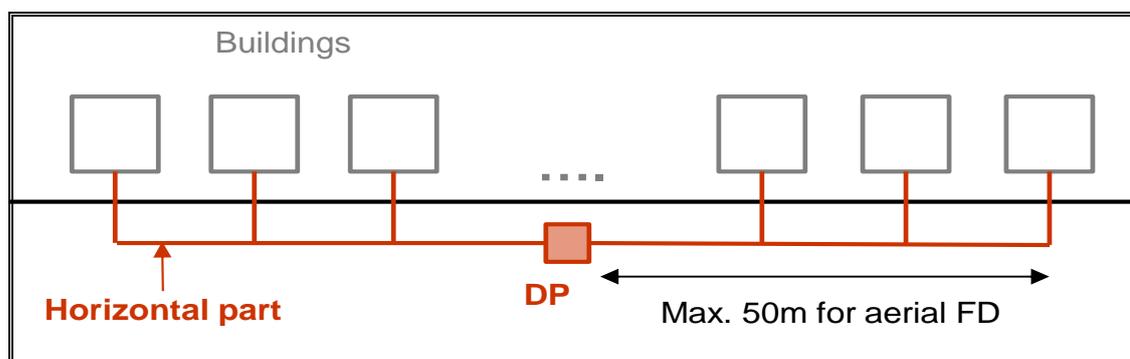
C. The distribution network is aerial;

5.78 Under this scenario and where the final drop is based on an aerial distribution ComReg proposes that the number of overhead DPs should be dimensioned based on the following engineering rules:

- An overhead DP should manage up to 10 dwellings; and
- The maximum distance between a DP and the last building on the horizontal part is 50m.

5.79 Figure 19 illustrates the concept of the horizontal part but in an aerial configuration, as described in the diagram below, where buildings and DP are linked with a straight connection.

Figure 19: Distance from DP to buildings with aerial final drop on the horizontal part



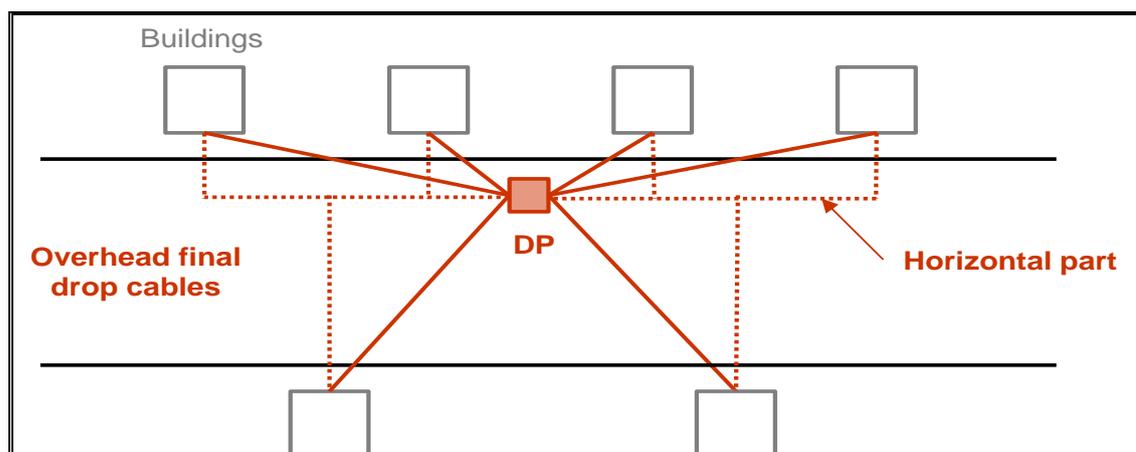
Source: TERA

5.80 In the Revised CAM the following is proposed with regard to the final drop based on aerial distribution:

- DPs are installed on poles;
- Poles are only deployed on the major side of the section. No poles are installed on the minor side;
- There is one pole per distribution point; and
- The distance from the building to the DP should be equally distributed over the section.

5.81 For the aerial network, it is proposed that the length of the final drop cable is the square root of the sum of the square of the length of the “horizontal” part and the square of the length of the “vertical” part, as illustrated in Figure 20.

Figure 20: Length of final drop with aerial distribution



Source: TERA

5.82 ComReg considers that the length of the horizontal part depends on the number of DPs located in the section under review. The length of the vertical part depends on:

- The length between the buildings and the road which ComReg proposes should be 3 meters; and
- The width of the cross-road in cases where there are two trenches on the section which ComReg proposes should be 7 meters.

D. Treatment of isolated constructions:

5.83 The concept of isolated constructions is different from the implemented in the 2010 CAM. In the 2010 CAM isolated houses were defined as “one off” houses or very small clusters of houses, most of which were located by Geocible in the rural parts of Ireland.

5.84 An isolated construction in the Revised CAM is a construction located in a Gamma square which is not crossed by any road/street – it is therefore generally much further from the street/road than other constructions.

5.85 Under this scenario, isolated constructions are also taken into account to calculate the number of buildings that can be supported by a DP. ComReg considers that the maximum number of dwellings i.e., 10 for a DP, already takes account of isolated buildings that are linked to the section.

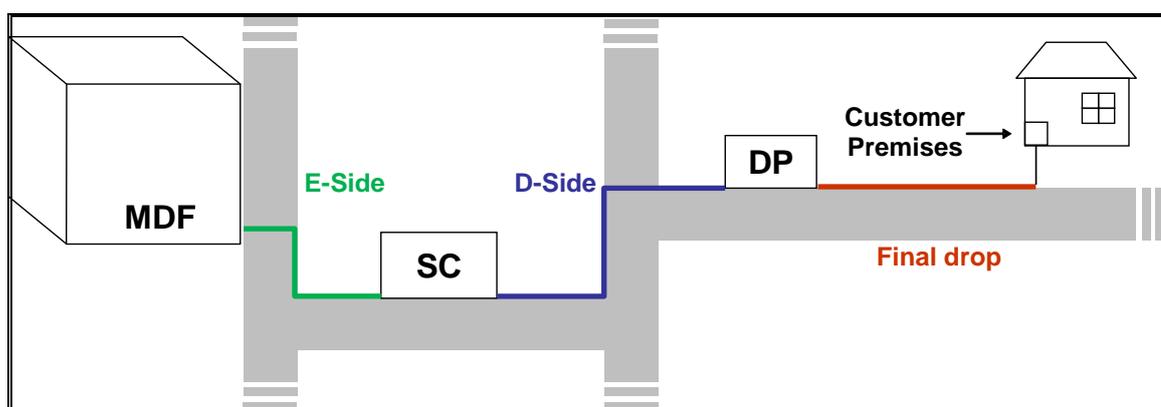
5.86 However, the maximum distance between the last building and the DP does not take into consideration the position of isolated buildings. ComReg considers that the final drop for isolated constructions can be overhead or underground. The

length of final drops for isolated constructions is provided by the database and ComReg proposes that this length should be the same for underground isolated final drops and aerial isolated final drops.

2. D-side Copper Cables:

5.87 The distribution side ('**D-Side**') cable represents the link between the DP and the SC, as illustrated below by the blue line in Figure 21.

Figure 21: Illustration of link from DP to SC



Source: TERA

5.88 The D-side cable is present on each section. The D-Side cable aggregates (on the same cable):

- The demand of the section; and
- The demand of each section for which the route to the SC uses the section.

5.89 If the section is “urban”, ComReg proposes that the D-Side cable should be underground but if the section is “rural”, the D-Side cable could be aerial or underground.

5.90 ComReg proposes that if there are more than 200 pairs on the aerial D-Side cable (this is the maximum number of pairs that can be supported by poles), the D-Side cable should be underground.

5.91 ComReg proposes that if the section hosts an E-Side cable, the D-Side cable located on the major side should be underground.

5.92 ComReg proposes that if the section hosts a core cable, the D-Side cable should be underground.

- 5.93 The Revised CAM looks at 4 different scenarios for the D-side cable:
- A. The distribution network is underground and there is one trench on the major side.
 - B. The distribution network is underground and there are two trenches.
 - C. The distribution network is aerial.
 - D. Final drops are aerial but the D-Side is underground.

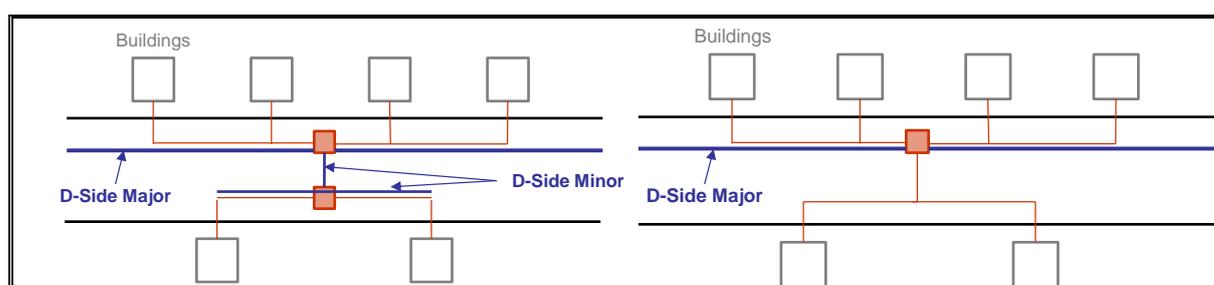
A. The distribution network is underground and there is one trench on the major side

- 5.94 Under this scenario, ComReg proposes that if there are two trenches modelled in the section, the D-Side cables should be divided into two parts, as follows:
- The “major” part (on the major side of the section); and
 - The “minor part” (on the minor side of the section).

5.95 The major cable is the one that connects each section to the SC. Please see illustration in Figure 22 (as a reminder of the configuration).

5.96 When there is only one trench on the section, ComReg proposes that no minor part is modelled.

Figure 22: Illustration of D-side cable on major section



Source: TERA

- 5.97 ComReg considers that the number of pairs on the D-Side minor section depends on the number of dwellings located on the minor side of the current section, i.e., the number of buildings multiplied by the verticality⁸² of the section.
- 5.98 On the other hand, ComReg proposes that the number of pairs on the D-Side major section depends on:

⁸² The number of dwellings per construction.

- The size of the D-Side cable located at the beginning of the current section (before taking account of the current section) and the number of dwellings at the rear area of the current section: and
- The number of dwellings located on the current section, i.e. the number of buildings multiplied by the verticality of the section.

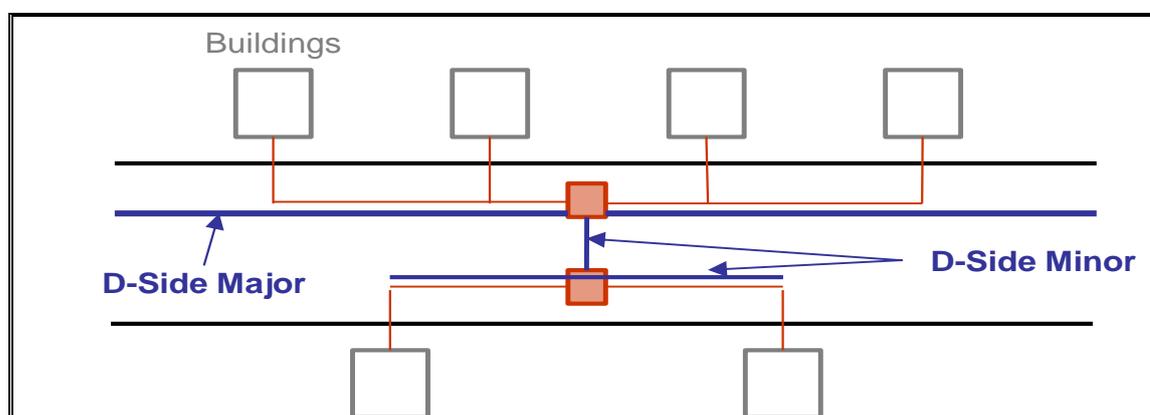
5.99 The Revised CAM reflects the following:

- Two pairs of cables per dwelling are installed for underground D-Side cables;
- D-Side joints are modelled on the section; and
- D-Side cables are laid into ducts. Those ducts are shared with E-Side cables.

B. The distribution network is underground and there are two trenches on the current section

5.100 Under this scenario, ComReg proposes that the length of the D-Side cable on the major side of the section equals the length of the section. Please see Figure 23 for an illustration.

Figure 23: Illustration of length of D-side major



Source: TERA

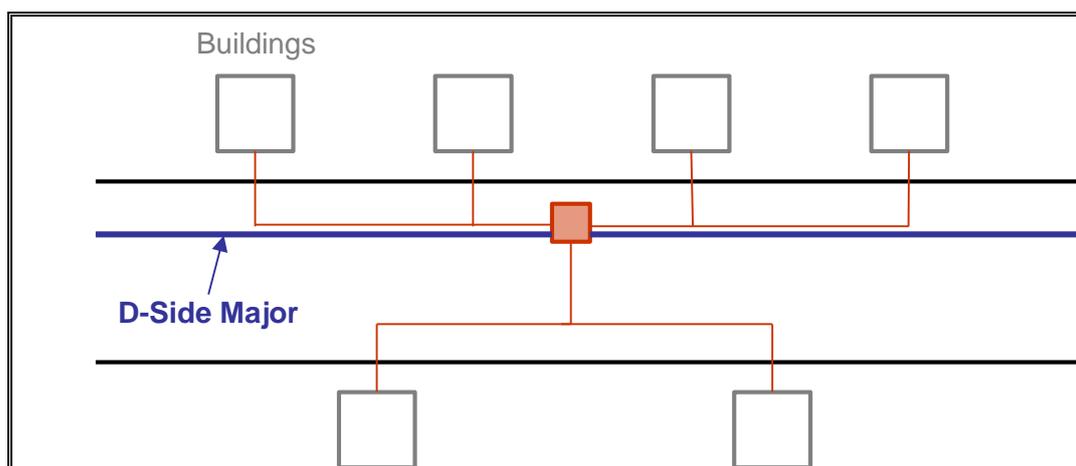
5.101 ComReg proposes that the length of the “minor” part of the D-Side depends on the following:

- P1: the number of buildings on this side that impacts the number of DP;
- N: the number of DPs on the side;
- NR: the number of cross-road;

- CR: the length of the cross-road; and
- Length of the minor part = $(L/N)*(N-1)+(NR*CR)$.

5.102 ComReg is of the preliminary view that the length of the D-Side should equal the length of the section, as illustrated in Figure 24.

Figure 24: Illustration of length of D-side



Source: TERA

C. The distribution network is aerial

5.103 Under this scenario, ComReg proposes that in the Revised CAM one pair of cables per dwelling should be installed for aerial D-Side cables. ComReg considers that D-Side joints should be modelled on the section (as discussed below) while D-Side cables should be supported by poles and installed only on one side of the section (on the major side).

D. The final drops are aerial and the D-side is underground

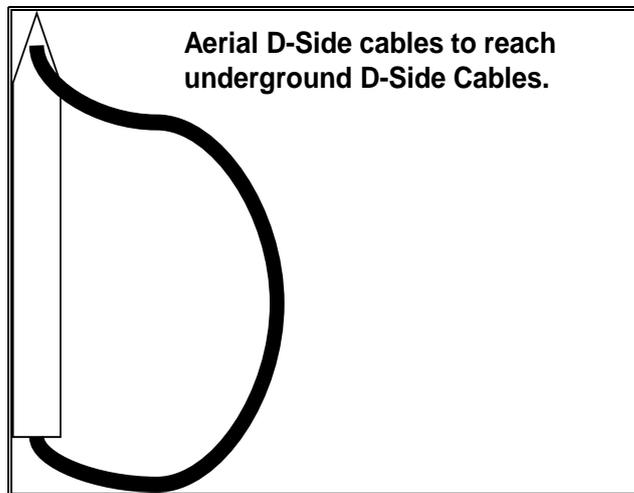
5.104 Under this scenario, if the D-Side demand on the section exceeds 200 pairs (2 cables of 100 pairs), ComReg proposes that the D-Side should not be aerial but should be underground even if the section is rural. Hence, the same principles as the ones described above for the underground D-Side with one trench are applied.

5.105 However, some D-Side overhead cables are modelled from the DP to reach the D-Side underground cables and in this case the following should apply:

- The size of the cable is calculated per pole and depends on the number of dwellings per pole; and

- The length of the cable is the height of the pole (calculated on an average basis).

Figure 25: Illustration of Aerial D-side to underground D-side cables



Source: TERA

5.106 In summary, the calculations presented above for D-side copper cable provides information on the number of pairs required for the D-Side on the section. The model then chooses the type of cables required. The cable chosen is the smallest one (in terms of number of pairs) which is large enough to fulfil the demand. The following should be noted:

- If the required number of pairs is bigger than the biggest cable, the cable type used is the bigger cable multiplied by the rounded up number of the required size divided by the size of the cable; and
- For example, if the available cable are 20-pairs, 50-pairs or 100-pairs, and the demand represents 48 pairs, the 50-pairs cable is installed.

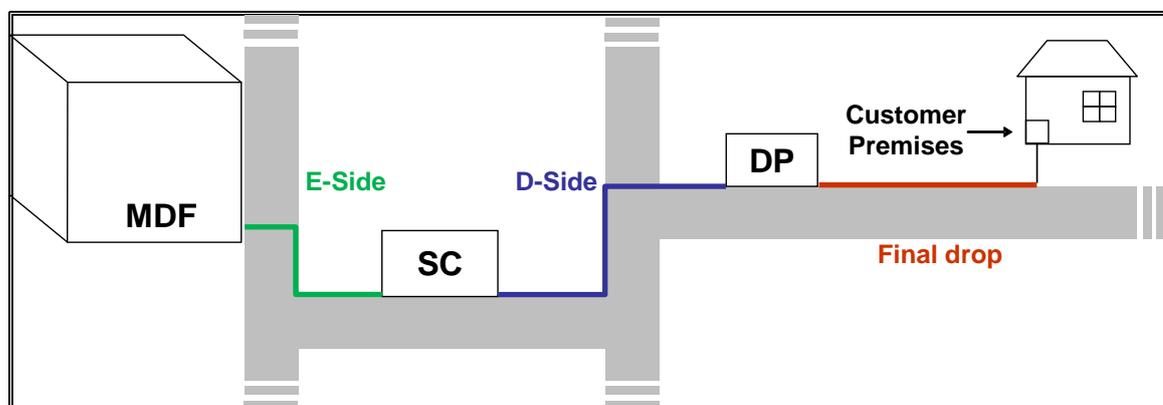
5.107 If the number of pairs required is above 100 and this is the biggest cable ComReg considers that the following should apply:

- Cables of 100-pairs are installed;
- The number of cables is the smallest number which is large enough; and
- For example, if the demand is 288-pairs and the maximum of cables pairs is 100, 3 cables of 100-pairs are installed.

3. E-side Copper Cables:

5.108 E-Side copper cables are cables that go from the SC to the MDF, as illustrated by the green line in Figure 26.

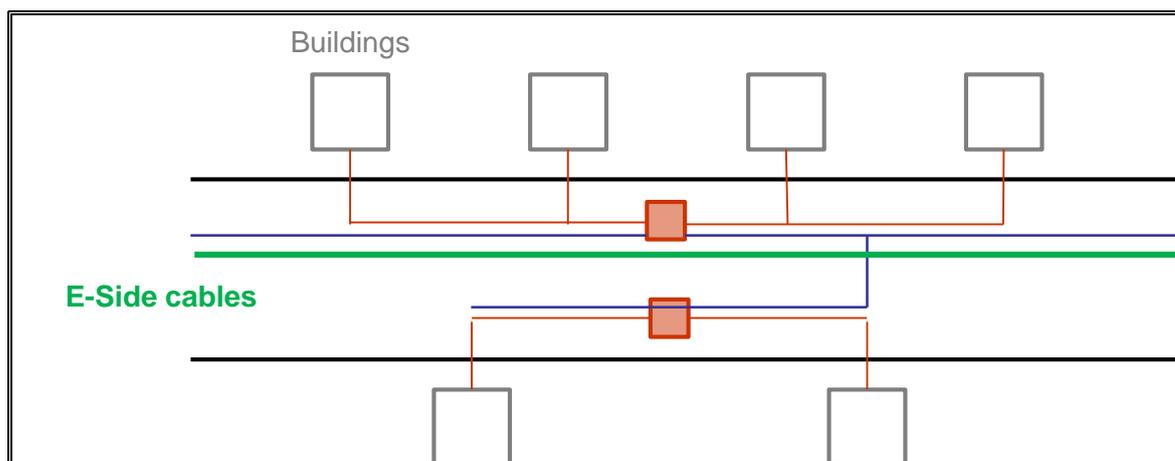
Figure 26: Illustration of E-side cable



Source: TERA

- 5.109 Similar to the proposed approach for the D-Side cables, the E-Side cables are aggregated together.
- 5.110 ComReg proposes that it should be mandatory for the E-Side cables to be underground and located on the major side of the section.
- 5.111 ComReg proposes that there should be 1.1 pairs of cable per dwelling installed for underground E-Side cables. The E-Side joints are modelled on the section, as discussed further below. ComReg considers that the E-Side cables should be laid into ducts and those ducts are shared with D-Side cables.
- 5.112 ComReg considers that the number of pairs on the E-Side major part of the section depends on the SC to MDF paths using the current section. It is proposed that the number of copper pairs on the E-side is driven by the number of dwellings connected to the SC. E-Side cables are not present on each section: only if the section is located on a route between a SC and a MDF.
- 5.113 ComReg considers that the length of the E-Side cables is the length of the section where they are installed, as illustrated in Figure 27. Once the length is calculated, a curvature factor is applied to take into account the non-linearity of cables.

Figure 27: Illustration of length of E-Side Cables



Source: TERA

5.114 In summary, the proposed calculations presented above for E-side copper cables provides information on the number of pairs required for the E-Side on the section. The model then chooses the type of cables required. The choice of the cable is the smallest cable for which the size is higher than the required number of pairs. If the required number of pairs is bigger than the biggest cable, the cable type used is the bigger cable multiplied by the rounded-up number of the required size divided by the size of the cable. Please refer to the details set out above with regard to the D-side cables.

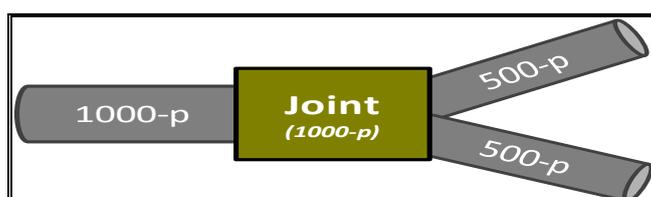
4. Joints, Chamber, Manholes:

5.115 A joint is an asset of the access network which allows for the following:

- Connect two cable ends of a cable (at an intersection, for example); and
- Connect distinct cables (at cross-roads, for example to connect the D-Side major cables and the D-Side minor cables).

5.116 The size of the joint is dimensioned by the largest cable using the joint, as illustrated in Figure 28.

Figure 28: Illustration of joint dimensioning



Source: TERA

5.117 Final drops are considered to be single dedicated cables, therefore no joints are required between the buildings and the DP. In this case, DPs are specific joints.

5.118 From the DP to the SC, ComReg considers that multiple joints should be installed either for D-Side cables or E-Side cables.

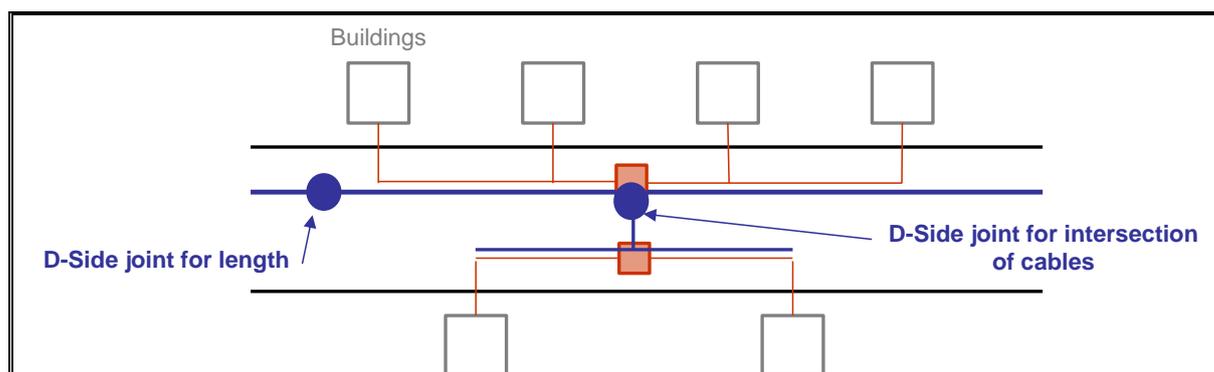
5.119 ComReg considers that a joint is mandatory at different levels, as follows:

- At the end of each section and for each cable; and
- On the same section if the maximum distance between two joints for each type of cable is reached.

5.120 Please refer to Figure 29 for an illustration of joint requirements.

5.121 When there are two trenches on the section, ComReg considers that a joint is needed to connect the D-Side minor cables and the D-Side major cables. This joint is dimensioned by the D-Side major cables size.

Figure 29: Illustration of joint requirements

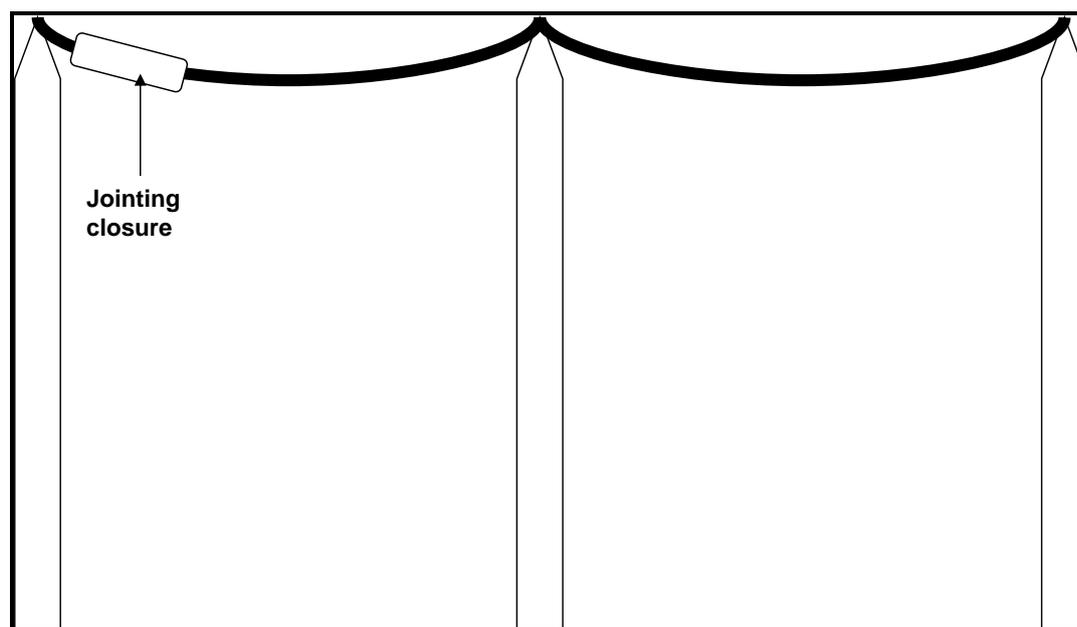


Source: TERA

5.122 For the D-Side and for each section that is not the first section of the path to the SC, ComReg proposes that a joint is modelled at the beginning of the section.

5.123 DPs are considered as D-Side joints. Hence, the number of D-Side joints equals the difference between the number of joints calculated on the maximum distance and the number of DPs. ComReg proposes that the number of E-Side joints is calculated on the maximum distance between two joints.

5.124 For aerial joints, similar rules are applied to that of aerial D-Side cables (above at paragraphs 5.87 to 5.107). ComReg considers that there can be joints on poles if the maximum distance between two joints for each type of cable is reached, as illustrated in Figure 30.

Figure 30: Illustration of aerial joints – E-side

Source: TERA

- 5.125 Set out below is ComReg's proposed approach with regard to modelling the required number of chambers in the Revised CAM.
- 5.126 For underground cables, each time a joint or a DP is modelled, a chamber is required. A chamber can be shared by several joints. ComReg proposes that if multiple joints are required at a same location because of multiple cables, only one chamber is installed. ComReg considers that the number of chambers also depends on the maximum distance between two chambers (same rules as the ones for joints).
- 5.127 ComReg proposes that the number of chambers depends on:
- The number of joints for D-Side;
 - The number of joints for E-Side; and
 - The number of DPs.
- 5.128 ComReg proposes that if the number of chambers calculated on the basis of the number of joints does not allow for the maximum distance between two chambers, then the number of chambers is calculated on the distance criteria.
- 5.129 In addition, each time there is a connection between overhead and underground cables, a chamber is modelled.

- 5.130 ComReg considers that the type of chamber installed depends on the area (Dublin or not) and the type of joints (D-Side or E-Side joints) that are located in the box.
- 5.131 With regard to the proposed approach for determining the number of manholes, ComReg proposes that one manhole is installed for each MDF.

5. Ducts, Trenches and Poles:

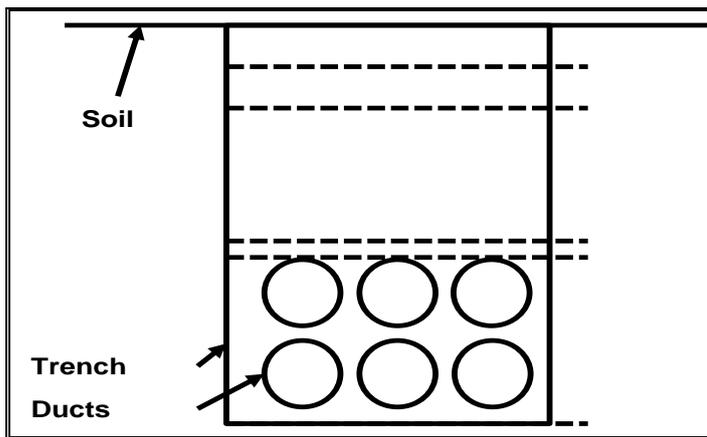
- 5.132 Ducts are used to protect cables in the underground infrastructure. Two types of duct are modelled in the Revised CAM.
- 5.133 There is duct of 037mm which is used for final drops only and there is duct of 110mm which is used for D-Side and E-Side cables.
- 5.134 For ducts that are not fully occupied ComReg considers that the following should apply in the Revised CAM:

- A spare capacity of 25% should be incorporated;
- For empty spaces a mark-up of 20% should apply to the surface of the ducts; and
- Ducts surface is calculated with the formula below:

$$\text{Ducts Surface} = \pi * (\text{Interior Diameter of the duct}/2)^2 * (1 - \text{Empty Space Mark-Up}) * (1 - \text{Spare Capacity Mark-Up}).$$

- 5.135 In the Revised CAM ComReg assumes that D-Side and E-Side cable are put in the same ducts but final drops have dedicated ducts. In addition, ComReg assumes that there is one duct per building to cover all the dwellings in that building.
- 5.136 To calculate the required number of ducts, the Revised CAM calculates the surface of copper cables and compares it to the surface of the ducts. The surface of copper cables depends on the copper cables diameter and the number of copper cables. For the final drop, the Revised CAM calculates the number of 037mm duct required for each building. If more than one duct is needed, then 110mm ducts are installed for the final drops all over the section. ComReg proposes that isolated constructions are connected with 037mm ducts.
- 5.137 ComReg proposes that the length of ducts for D-Side and E-Side equals the length of trench (as discussed below) and the length of ducts for final drops equals the length of final drops per building.
- 5.138 Trenches are used to support the ducts, as illustrated in Figure 31.

Figure 31: Illustration of duct and trench underground



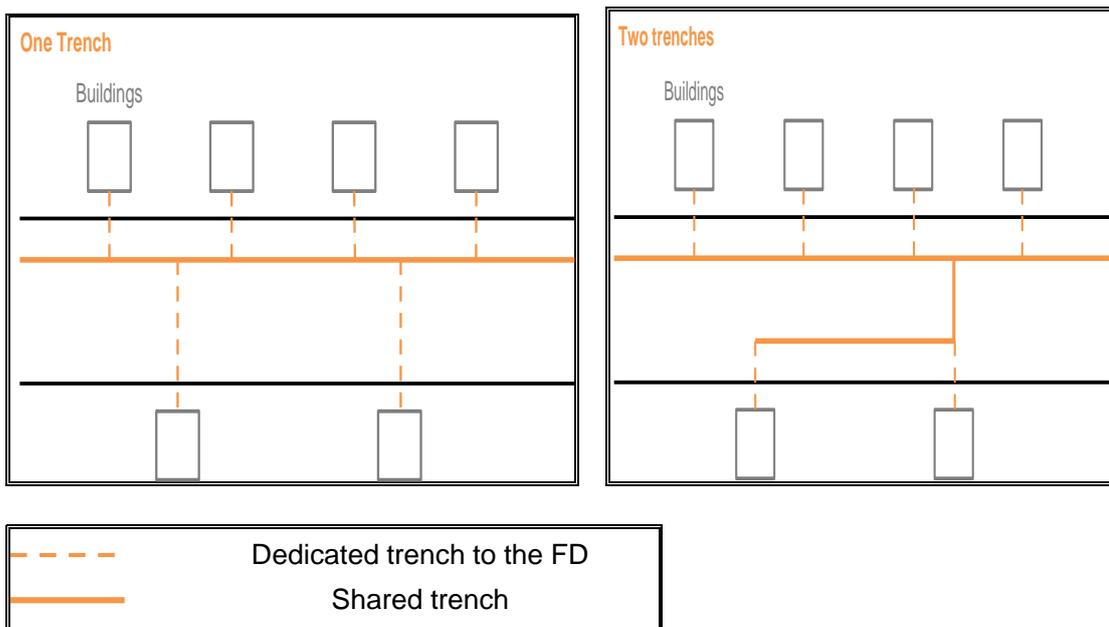
Source: TERA

5.139 In the Revised CAM it is proposed that two types of trenches are modelled as follows:

- Trenches that are dedicated to the final drop (perpendicular part of the final drop); and
- Trenches that are shared with others types of cables (D-Side and E-Side).

5.140 Trenches can be present on both sides of the current section or on the major side only of the section. Please refer to Figure 32 for an illustration.

Figure 32: Illustration of trench on the section



Source: TERA

5.141 ComReg considers that if there are buildings on both sides of the section, the model should choose the configuration which minimizes the length of trenches dug.

5.142 In the case of 'two trenches', ComReg proposes the following in the Revised CAM:

- Trenches are dug on both sides of the road;
- The length on the major side equals the section length;
- The length on the minor side equals the length of D-Side cables;
- The road is crossed once; and
- The length of the cross road is dug once.

5.143 In the case of 'one trench', ComReg proposes the following in the Revised CAM:

- The trench is dug on the main side of the road;
- The length on the major side equals the section length; and
- The road is crossed once for each building on the second side. This part of the trench is considered as final drop trench.

5.144 ComReg considers that the size of the trenches in the section should be based on the number of ducts installed in the section. In order to take into account the ducts dedicated to the final drop from the building to the DP, ComReg proposes that the Revised CAM should calculate an average number of duct per DP. This average number is considered as ducts for final drops in the section.

5.145 In the Revised CAM, ComReg proposes three types of modelling approaches for trenches, as follows:

- 1-2 ways: trenches that can support one or two ducts;
- 4-6 ways: trenches that can support from 4 to 6 ducts and are used for trenches with 3 ducts as well; and
- 9-12 ways: trenches that can support from 9 to 12 ducts and are used for trenches that support from 7 to 12 ducts.

5.146 ComReg considers that if the number of ducts required on the section is more than 12 ducts then the model should add another '9-12 ways' trench.

5.147 The structure of the trenches also depend on the surface type, which include:

- Footway;
- Carriageway; and
- Verge.

5.148 Depending on the exchange capacity, the distribution of the surface type per MDF is different, as illustrated in Figure 33.

Figure 33: Illustration of the distribution of surface type per Geo type MDF


5.149 ComReg has set out below our proposed approach regarding the number of poles to consider in the Revised CAM.

5.150 Poles are installed each time there are overhead cables (final drop or D-Side) on the section.

5.151 ComReg considers that the number of poles in the Revised CAM should depend on:

- The number of DPs; (poles are installed at minima each time an overhead DP is installed);
- The number of overhead joints; and
- The maximum distance between two poles if some cables are deployed all along the section.

5.152 Therefore, the number of poles on the section is the maximum number of poles described above.

5.153 If final drops are aerial but the D-Side is underground on the section, ComReg considers that the number of poles should equal the number of DPs, for example.

5.154 Whenever the cable is coming from the aerial network to reach the underground network, ComReg proposes that the overhead D-Side cables should be dimensioned by the height of the pole.

6. Street Cabinet and MDF:

5.155 In the Revised CAM, ComReg considers that SCs should be made up of the following elements:

- Street Cabinet; and

- SC jumper.

5.156 ComReg has assumed in the Revised CAM that one SC Jumper is installed per active line.

5.157 For MDFs in the Revised CAM, ComReg considers that there are different types of assets dimensioned, as follows:

- One manhole per MDF;
- One pressurisation machine per MDF;
- The number of MDF blocks on the customer side (access facing⁸³ – or called cable side by Eircom) depends on the number of active lines on the MDF;
- Building costs (capital costs and operating costs) are included (in the OPEX model); and
- The number of MDF frames depend on the number of dwellings covered by the MDF.

5.158 ComReg proposes that there should be no block exchange side (core facing⁸⁴) dimensioned in the Revised CAM for the MDF as it is recovered through ancillary charges (included in the licence fee).

7. NTU and Main Termination:

5.159 For the NTU, ComReg proposes that one NTU should be counted for each active line as well as taking account of churn.

5.160 Main terminations⁸⁵ are installed on the section where there are a SC or a MDF. The type of main termination depends on:

- The type of cables (D-Side cables or E-Side cables);
- The number of cables; and
- The size of the cables.

5.161 ComReg proposes that in the Revised CAM there should be one termination counted for each cable.

⁸³ Also referred to as the Horizontal Side in many other countries.

⁸⁴ Also referred to as the Vertical Side in many other countries.

⁸⁵ This means terminating at the street cabinet or at the MDF, i.e. pulling the cable below the cabinet or the exchange and then connecting it to the MDF for the exchange and to the cabinet.

8. NGA:

5.162 Some SCs are NGA enabled SCs, which have been identified by Eircom.

5.163 In the Revised CAM, ComReg proposes that from each NGA SC, a 24 fibre cable should be installed on the major side of the section. ComReg proposes the following approach with regard to the fibre cable:

- NGA cables are always underground;
- Each cable is installed in a dedicated subduct;
- The subduct is put in the duct of the major side of the section; and
- The fibre cable has a specific joint.

5.164 In the Revised CAM, ComReg considers that the NGA fibre cables should share the following assets in the access network:

- Ducts;
- Trenches; and
- Chambers.

9. Core and access shared network assets:

5.165 An allocation key is used to separate civil engineering assets shared between the core and access network. In the CAM in 2010 duct and trench costs were equally distributed between core and access cables when duct and trenches host both networks. For consistency purposes it is proposed to continue with this approach.

5.166 The fibre cables rolled-out for the core network shares some trenches with the access network.

5.167 On each section identified as belonging to one of the core routes, a fibre cable is installed on the major side of the section. In the Revised CAM, ComReg proposes the following with regard to the core fibre cables:

- Core fibre cables are always underground;
- Each cable is installed in a dedicated subduct;
- The subduct is put in the duct of the major side of the section; and
- The core fibre cable has a specific joint.

5.168 In the Revised CAM, the core fibre cables also share the following assets on the access network:

- Ducts;
- Trenches; and
- Chambers.

5.169 The same proposed principles as discussed in the paragraph 5.165 and 5.166 above also apply with regard to leased lines fibre cables which share some trench with the access network. However, for leased lines ComReg considers that the leased lines fibre cables should either be underground or overhead (based on the same rules as the copper D-Side cables). In the Revised CAM, the underground leased lines fibre cables also share the duct, trenches and chambers of the access network. ComReg considers that the overhead leased lines fibre cables should share the poles of the access network. ComReg proposes that the costs between cables used by fibre leased lines in the access network and copper access network should be allocated based on the size (diameter) of cables used by each network.

5.170 ComReg has set out below our proposed approach with regard to the allocation of shared assets.

5.171 In the Revised CAM, the following is the proposed approach with regard to shared assets:

- Trenches are shared with D-Side cable, E-Side cable, final drops, NGA cables, leased lines and the core network;
- Ducts are shared between D-Side cable, E-Side cable, leased line cables and NGA cables;
- Chambers are shared between D-Side cable, E-Side cable, the final drop level of the network, core cables, leased lines cables and NGA cables; and
- Poles are shared with D-Side cable and the final drop.

5.172 ComReg proposes that for trench, duct and chambers the assets should be allocated to each part of the network on the basis of the surface occupied by the cables. For poles, when the D-Side cables are underground and the poles are deployed for the final drop, ComReg proposes that all the poles should be allocated to the final drop even if there are D-Side overhead cables on the section (the height of the pole). Otherwise, poles should be allocated on a surface basis at the section level between the D-Side cables and the final drop.

5.5 Network Costing

- 5.173 Once the network has been dimensioned (as outlined in Steps 1-3 of Figure 7 in subsection 5.3), the next phase of the model is determining the total investment and the annualised cost of the access network (Steps 4 – 7 of Figure 7 in subsection 5.3).
- 5.174 In this phase of the model, the Revised CAM can derive results at the MDF level to obtain:
- Results at the national level;
 - Results for the LEA (which we considered to be “urban” in the network dimensioning phase);
 - Results Outside the LEA (which we considered to be “rural” in the network dimensioning phase); and
 - Any other combination of MDFs.
- 5.175 As set out in Chapter 4, ComReg has proposed that in general Reusable Assets should be based on Eircom’s Indexed RAB while Non-reusable Assets should be based on BU-LRAIC+ costs.
- 5.176 The total annual cost of the network is the sum of the annualised costs of the network plus the annual operating cost of the network.
- 5.177 The annualised cost of the access network is a blend between Eircom’s Indexed RAB derived from Eircom’s TD cost accounting data and the BU-LRAIC+ costs derived from the network dimensioning phase, as discussed in subsection 5.5.3 below.
- 5.178 Eircom’s TD model for capital costs (or CAPEX) is integrated into the Revised CAM and provides Eircom’s Actual Costs Adjusted for Efficiencies per exchange and per asset class for the last 40 years. In particular, it provides the net book value (**‘NBV’**), the gross book value (**‘GBV’**), the depreciation charge for each year per asset class and per exchange.
- 5.179 In the subsections below we discuss our proposed approach for determining the appropriate level of network costs in the Revised CAM, in line with the steps identified earlier in Figure 7 i.e., Steps 4 – 7.

5.5.1 Step 4: Current asset prices

5.180 The first step of the network costing phase is to derive the current unit costs of the assets. This involves:

- Obtaining the appropriate current asset prices;
- Applying price trends in order to obtain the future forecasted costs; and
- Applying relevant mark-ups in order to capture all the required costs.

5.181 The remainder of Step 4 is discussed under the following headings:

1. Current assets prices;
2. Price trends; and
3. Relevant mark-ups.

1. Current asset prices:

5.182 ComReg proposes to use the current asset and contractor prices as provided by Eircom for 2013 which are adjusted by 5% to account for likely discounts on large scale projects. This should ensure that the model reflects the reality of the access network insofar as possible.

2. Price trends:

5.183 ComReg considers that it is necessary to take a view on the future price trends for the relevant access network assets as part of the Revised CAM. In the LLU Pricing Decision in 2010 price trends were also incorporated in the model.

5.184 ComReg believes that it is more appropriate to focus on long-term price trends because:

- Long-term prices better reflect the considerations made by investors when considering potential deployments;
- There are practical difficulties with generating robust short-term price forecasts.

5.185 Paragraph 34⁸⁶ of the 2013 Recommendation refers to a “retail price index”.

⁸⁶ “NRAs should value reusable legacy civil engineering assets and their corresponding RAB on the basis of the indexation method. Specifically, NRAs should set the RAB for this type of assets at the regulatory accounting value net of the accumulated depreciation at the time of calculation, indexed by an appropriate price index, such as the retail price index....”.

- 5.186 However, ComReg considers that using an asset specific price index enables the setting of regulated prices which follow the evolution of network asset prices and therefore provides better “build or buy” signals. Please refer to Chapter 4, paragraphs 4.118 -4.121 for further details on this point.
- 5.187 In deriving these alternative price trends, ComReg proposes to distinguish between those assets that are predominantly copper based (copper cable) and those that are not, that is assets such as chambers, trenches, jointing closures, cable installations and so forth.
- 5.188 For copper cables, ComReg proposes to adopt the same price trend as that applied in the 2010 LLU Pricing Decision. For non-copper related assets, ComReg proposes to adopt the same approach that was applied in the CAM in the 2010 LLU Pricing Decision. Therefore, the price trend for non-copper related assets should be observed over an extended period i.e., from 2000 to 2012, in the Revised CAM. ComReg considers that by using the same price trend period as that used in the LLU Pricing Decision in 2010 it ensures regulatory consistency.

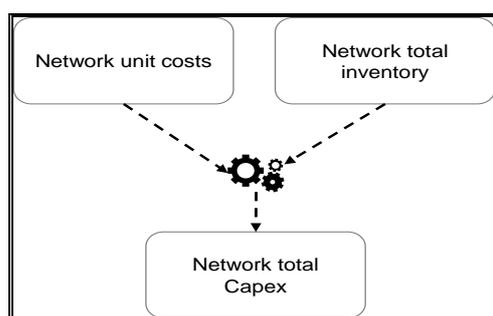
3. Relevant mark-ups:

- 5.189 It is proposed that mark-ups are applied to the asset prices to take account of the following costs which have been incurred by Eircom in relation to the access network:
- Quality checks for performance and quality of work carried out by contractors;
 - Network planning and survey work;
 - Travel and subsistence;
 - Transport; and
 - Non-field staff time.
- 5.190 These costs were also included in the 2010 CAM.
- 5.191 Once this step is completed, the model should include the asset prices adjusted for price trends and with mark-ups applied to take account of various related asset costs.

5.5.2 Step 5: Capital costs

- 5.192 This step involves determining the total network investment (or capital costs) by applying the unit costs of the assets (from Step 4) to the network inventory (the BU assets required to run the network as determined in Step 3).
- 5.193 ComReg proposes that the capital costs should be derived by multiplying the number of assets by the unit costs adjusted to the current year using price trends (as discussed in Step 4). This is illustrated in Figure 34.

Figure 34: Determining capital costs



Source: TERA

5.5.3 Step 6: Depreciation (or calculation of network annual cost)

- 5.194 This step determines the annual network cost by applying the depreciation formula to the network capital costs (from Step 5 above).
- 5.195 As outlined in Chapter 4, it is proposed that in general Reusable Assets are based on Eircom's Indexed RAB and Non-reusable Assets are based on BU-LRAIC+ costs.
- 5.196 The network annual cost is a proposed blend of the Eircom's Actual Costs Adjusted for Efficiencies (TD costs) and the BU-LRAIC+ costs.
- 5.197 As set out in Chapter 4, in particular paragraphs 4.123 to 4.134, the BU modelling approach takes into account the fact that some civil engineering assets (poles and ducts) will need to be replaced by Eircom and hence cannot in all case be reused.
- 5.198 ComReg has made a number of adjustments in the model regarding replacement of poles and ducts as well as reuse of existing poles and ducts. Please refer to the detailed discussion in Chapter 4 at paragraphs 4.123 to 4.134.
- 5.199 The approach described at paragraphs 4.123 to 4.134 is particularly relevant in determining the costs for LLU, SLU and pole access. This is discussed further in Chapter 6 (LLU and SLU) and in Chapter 8 (pole access).

5.200 The remainder of Step 6 is discussed under the following headings:

1. BU-LRAIC annual network costs; and
2. TD annual network costs.

1. **BU-LRAIC+ annual network costs:**

5.201 The bottom-up annual networks costs are derived from:

- The network inventory (as already determined in Step 3 of network dimensioning phase);
- The unit costs (determined in Step 4); and
- The depreciation factor.

5.202 Therefore, it is proposed that the BU annual network costs should be calculated as follows:

Number of assets X Unit costs of assets (current year) X Depreciation factor.

5.203 The proposed depreciation factor for BU annual network costs is obtained via the tilted annuity formula as follows:

$$\bullet \quad \textit{Depreciation factor} = \frac{\textit{WACC} - \textit{Price Trend}}{1 - \left(\frac{1 + \textit{Price Trend}}{1 + \textit{WACC}}\right)^{\textit{Asset life}}} * (1 + \textit{WACC})^{\textit{Payment term}}$$

5.204 An annuity formula is used to apply the cost of capital to the cost of the assets on the network. A tilt is applied to an annuity to reflect the expected changes in the prices of assets and is intended to send better economic signals to market players, giving market players incentives to invest now if prices are expected to increase or delay investment if prices are expected to decline. In this context, the tilted annuity formula is a formula which calculates for a given asset an annuity which covers both the associated cost of capital and the depreciation charge for each year of the economic life of the asset. The tilted annuity formula is the formula applied in the 2010 LLU Pricing Decision for consistency purposes.

5.205 In terms of the proposed tilted annuity formula above, the proposed price trend has been discussed at subsection 5.5.1. The WACC applied in the Revised CAM is the revised fixed line telecoms WACC of 8.18% (nominal pre-tax WACC) as set out in ComReg Decision D15/14⁸⁷.

⁸⁷ http://www.comreg.ie/_fileupload/publications/ComReg14136.pdf

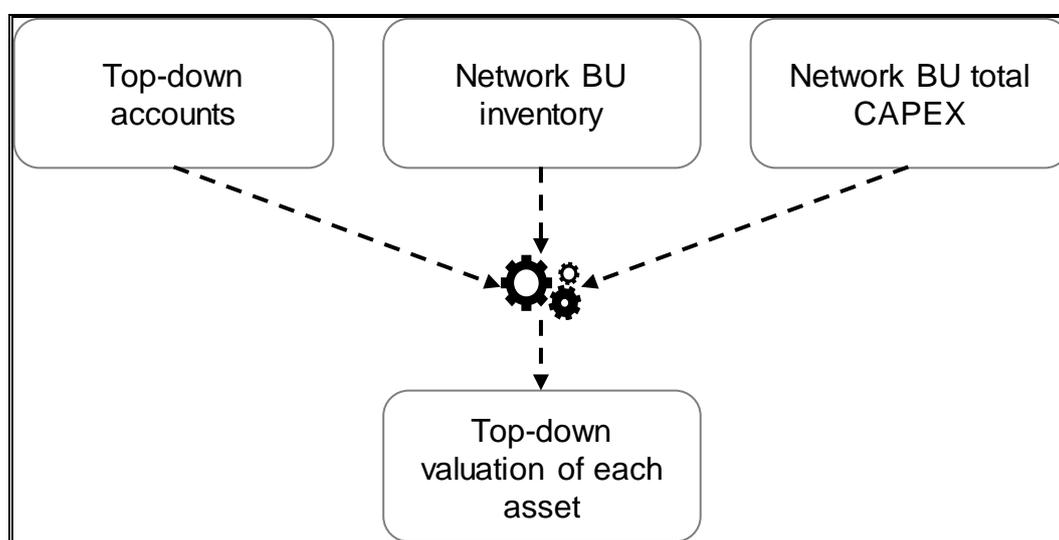
- 5.206 An additional element to consider in setting the depreciation factor, (tilted annuity formula) is the timing of the revenue receipts after an investment has been made.
- 5.207 In building BU-LRAIC models NRAs generally assume that the network is built almost instantaneously in that revenues can be received shortly after the investment cost is incurred (certainly within one year).
- 5.208 In determining the appropriate payment term to apply in the depreciation formula, ComReg considered three options:
- Option 1 assumes that revenues are realised the same time as investments are made; therefore the assumption is that a network is instantaneously built and operational;
 - Option 2 assume that revenues are realised approximately 6 months after the investments are made; therefore the assumption is that a network is instantaneously built and operational 6 months after the initial investment;
 - Option 3 assumes that revenues are realised approximately 12 months after the investments are made; therefore the assumption is that a network is instantaneously built and operational 12 months after the initial investment.
- 5.209 ComReg considers that the payment of contractors' invoices, the operational launch of the network and the generation of revenues, generally occur at approximately the same time. Therefore, the Revised CAM assumes that revenues are realised at the same time investments are made – the network is instantaneously built and operational.

2. TD annual network costs:

- 5.210 As set out in Chapter 4, ComReg proposes that in general Reusable Assets for network deployment should be based on Eircom's Indexed RAB.
- 5.211 The starting point to determine the TD HCA valuation of assets is Eircom's Fixed Asset Register ('**FAR**'). The FAR provides the history of investments made by Eircom and so reflects the roll-out of the network overtime. The investments in the FAR are split by asset class and per exchange. By matching the FAR's asset classes with the BU model (assets determined by the network dimensioning phase), it is thus possible to derive an investment chronology per BU asset.
- 5.212 A single asset class in the FAR corresponds to several assets in the BU model.

- 5.213 ComReg proposes that the investments recorded by Eircom should be split between several assets in the BU model in order to determine an investment chronology. The proposed split is calculated based on the BU network capital costs (at Step 5).
- 5.214 For the years after 2014, with the exception of pole assets, which take account of Eircom's verified investment plans in poles over the lifetime of price control the Revised CAM has taken account of additional investment on the basis of the level of investment observed in Eircom's HCAs for 2014.
- 5.215 The TD valuation for Reusable Assets in the Revised CAM is illustrated in Figure 35.

Figure 35: Approach for TD valuation of assets



Source: TERA

- 5.216 Once the TD valuation is established for each asset the Revised CAM then applies a depreciation formula on the NBV of each asset using the remaining asset life, as discussed below. Eircom's regulatory asset lives are based on ComReg Decision D03/09 and these are the asset lives that are reflected in the Revised CAM.
- 5.217 As set out in Chapter 4, in the 2013 Recommendation the European Commission specified the following with regard to the treatment of Reusable Assets:

“NRAs should value reusable legacy civil engineering assets and their corresponding RAB on the basis of the indexation method. Specifically, NRAs should set the RAB for this type of assets at the regulatory accounting value net of the accumulated depreciation at the time of calculation, indexed by an appropriate price index, such as the retail price index.”

5.218 To ensure cost recovery for Reusable Assets ComReg considers that it is necessary to depreciate the regulatory accounting value net of the accumulated depreciation at the time of calculation over the remaining lifetime of the assets.

5.219 ComReg has considered the following 3 options for the TD model:

- Option 1: The annual depreciation cost is based on the HCA (straight line depreciation);
- Option 2: The annual depreciation cost is based on the CCA financial capital maintenance ('FCM'); and
- Option 3: The annual depreciation costs are computed using the tilted annuity formula applied to the current net book value of the Reusable Assets with their remaining asset life.

5.220 The European Commission seems to disregard Option 1 given that it does not take into account any index. In addition, Option 1 is less relevant for regulatory purposes as it calculates annuities which do not evolve with asset price trends and therefore Option 1 is not forward looking from a price setting point of view and does not send right build or buy signals.

5.221 The CCA-FCM method and the tilted annuity method are compatible with the use of an index.

5.222 The CCA-FCM method requires the revaluation of assets and this can be done in several ways, including the use of indexation. While the CCA-FCM can be implemented using an index, the annuities calculated with this approach do not increase with the index.

5.223 The tilted annuity method calculates annuities which increase every year with price trends (index). This method is generally used in BU models but can also be used in TD models.

5.224 ComReg considers that the CCA-FCM and tilted annuity ensure strict cost recovery since they are calculated based on the NBV of the assets, derived from Eircom's accounts. Both methods seem consistent with the 2013 Recommendation.

5.225 ComReg is of the preliminary view that in order to ensure regulatory consistency the titled annuity approach should be adopted for LLU, SLU and poles, as set out in paragraph 5.203. The HCA / straight line approach is relevant to SB-WLR and SABB Outside the LEA, by reference to Eircom's accounts. An OCM approach

as suggested by Eircom does not ensure cost recovery and therefore we consider that it is not appropriate.

5.5.4 Step 7: Determining total annual costs

5.226 The total annual cost is obtained by summing:

- The annual network cost (determined in Step 6); and
- The operating costs (including indirect capital costs).

5.227 As noted above in Step 6, it is proposed that the annual network costs are determined by applying the depreciation formula to the network capital costs.

5.228 The operating costs and indirect capital costs⁸⁸ are calculated in a separate operating cost model ('**OPEX model**'). The OPEX model is interfaced with the capital cost model (or CAM) in the final stages of the modelling process.

5.229 The OPEX model is based on an analysis of operating expenditure costs extracted from Eircom's HCAs for the year ended 30th June 2014⁸⁹ for the wholesale access markets⁹⁰.

5.230 The HCAs are prepared on a FAC basis using an Activity Based Costing ('**ABC**') approach.

5.231 The 2014 HCAs show that, after depreciation charges associated with network infrastructure of €3<m, there is a cost of €3<m associated with the repair and maintenance activity.

5.232 To identify the operating costs relevant to the CAM ComReg focused its analysis on those copper related costs which include the Copper Access Network but also those proportions of Provisioning and Repair that are related to Market 1 and Market 4⁹¹.

5.233 ComReg used the analysis from Eircom to identify the costs in terms of pay and non-pay costs and to identify the various activity costs into direct, indirect or common cost categories in the context of the copper access network.

5.234 The direct, indirect and common costs are discussed in turn below.

⁸⁸ Indirect capital costs include planning and designing costs of the network as well as the cost of inspecting capital cost projects.

⁸⁹ http://www.eircom.ie/bveircom/pdf/HCA_Accounts_2014.pdf

⁹⁰ Operating costs allocated to the wholesale access market is contained on page 11 of the 2014 Eircom HCA Statements.

⁹¹ The "Network Cost Market Summary" on page 25 of the 2014 HCA Statements shows the distribution of NE costs across the various wholesale markets.

- **Direct costs:** The direct cost category associated with the copper access network are the pay costs of Eircom's local access front line field force directly involved in local access repair and maintenance activities or service installation/provisioning activities. Direct costs also include the costs of contractors (classified as non-pay) that are contracted by Eircom to support either network repair or service provisioning. Direct costs would be expected to vary should the number of faults change to a more optimised cable network (e.g. due to BU modelling assumptions) or if the level of faults change year on year.
- **Indirect costs:** The indirect cost category includes network support costs such as the pay costs of line managers and central support staff that either manage or support the front line activities of field staff and contractors. It would also include activities such as IT, procurement and transport. Generally indirect activities would be expected to vary to a significant degree in response to changes in the level of direct activities. Therefore, these cost activities are treated as variable for the purpose of modelling operating costs.
- **Common costs:** The common cost category includes costs such as network rates and general corporate overheads such as finance and general management. These cost categories would not be expected to change materially in response to changes in the level of front line activity represented by the direct cost category. Therefore, these cost activities are treated as fixed for the purpose of modelling operating costs.

5.235 Analysing costs in this way allows ComReg to model the level of operating expenditure that is consistent with a number of different modelling approaches. For example, the capital costs in the BU model approach reflects the costs of deploying a new copper cable network. Given the fact that the majority of faults are related to the cables in the network one would expect that the quantity of faults would be lower in the context of the cable assumptions in the BU model. This would mean that the direct costs of repair and maintenance would be lower, which would also lead to lower costs for the associated indirect activities. As a result, while the BU model would be expected to include a higher level of capital costs than would be evident in Eircom's HCAs, it would have a lower level of operating costs due to the deployment of a new efficient network.

5.236 ComReg considers that there is consistency between OPEX and CAPEX costs in the Revised CAM. Based on Eircom's 2011 study, it appears that 80% of faults are generated with reference to cables which are replaced in the Revised CAM. Other faults are due to poles but the number of poles being renewed in the model is reasonable (and poles likely to generate faults are more likely to be replaced in any event). Therefore, ComReg is of the preliminary view that the OPEX and CAPEX costs are reasonably consistent.

5.237 The operating costs are discussed below under the following headings:

1. BU LRAIC+ approach;
2. TD approach; and
3. Wholesale specific costs.

1. BU-LRAIC+ approach:

5.238 The starting point to determine the operating costs in the context of the BU-LRAIC+ approach is Eircom's HCAs for 2014 which are adjusted for efficiencies (detailed below).

5.239 In the OPEX model ComReg has proposed a number of efficiency adjustments to Eircom's Actual Costs Adjusted for Efficiencies in order to derive the efficient level of operating costs for the access network. The proposed steps involved in determining the appropriate level of efficient OPEX are:

- Determining a reasonable line fault index ('LFI') representative of a new efficient network;
- Determining a reasonable number of direct front line staff required to handle this level of LFI;
- Adjusting the existing operating costs based on the efficient level of staff (at point 2 above);
- Determining a reasonable level of actual indirect and common costs; and
- Interfacing the OPEX model with the main capital cost model.

5.240 One of the main parameters impacting the level of operating costs is the LFI. It is important to determine a reasonable LFI representative of a new efficient network and to determine a reasonable number of staff consistent with that level of LFI. An increase in the LFI results in an increase in labour / staff costs for those involved in repairing network faults, which results in an increase to the overall operating costs.

- 5.241 In the existing CAM in 2010, we considered that the LFI of an efficient network was 8%. As part of that review we received data from Eircom on the performance of new network builds and recently renewed network where it was observed that line faults were much lower than the line faults of the old network; for example, in a new housing development where all infrastructure was underground the average LFI would be much lower than in an area where the infrastructure is based on a mixture of overhead and underground. In 2010 ComReg decided that a maximum LFI of 8% was more appropriate on the basis that the modelled network related to that of an efficient network. This meant that the level of staff required to run the network was significantly less than reality and as a result the operating costs were adjusted / flexed to take account of the required level of staff for the LFI of 8%.
- 5.242 ComReg is of the preliminary view that the LFI of 8% remains appropriate in the context of this Draft Decision. While the LFI of 8% in 2010 related to a brand new network, the Revised CAM is based on some assets that are not completely new i.e., Reusable Assets. However, ComReg considers that a LFI of 8% remains appropriate as faults are mainly related to Non-reusable Assets.
- 5.243 The LFI of 8% means that the level of staff required to run the access network is somewhat less than the number of staff currently employed by Eircom in the access network today. Similar to the approach in the 2010 LLU Pricing Decision, ComReg proposes to incorporate a headcount number in the OPEX model which we consider sufficient to run a network with a LFI of 8% on a network consisting of new copper cables.
- 5.244 The operating cost model also includes the cost of additional contractor staff that are required for winter periods and to assist during periods of emergency (storms, etc.).
- 5.245 The operating costs are either fixed or variable costs and we propose the following adjustments:
- Direct costs are adjusted to be consistent with the lower headcount required to maintain the LFI of a new efficient network;
 - Indirect costs have been flexed based on the changes to direct costs arising from the proposed headcount numbers in the OPEX model; and
 - Common costs that are deemed to be fixed are maintained constant for modelling purposes.
- 5.246 Therefore, variable costs have been adjusted to reflect the lower number of staff required to support a more efficient network that is assumed in the BU-LRAIC+ model.

5.247 Having determined the level of efficient operating costs that is relevant to the BU-LRAIC+ model the next stage in the cost modelling process is to consider how these operating costs are distributed to the different exchange areas across the network. The operating costs information received from Eircom related to the copper access network at a national level. As the Revised CAM has the ability to assess costs at a regional level it is necessary to derive an appropriate basis for attributing operating costs to each exchange/MDF area. To do this ComReg has categorised operating costs in terms of two key cost drivers:

- Staff driven costs; and
- Line / network driven costs.

5.248 For staff driven costs Eircom provided ComReg with details on the number of Front Line Teams that are responsible for operating and maintaining the different regional areas in its network. Combining this information with projections of fault incidences at each MDF allowed ComReg to attribute the direct pay and indirect costs (e.g. transport, procurement and IT) associated with front line staff down to an MDF level.

5.249 For line/network driven costs ComReg considers that line numbers by MDF are an appropriate basis for attributing the other cost categories such as corporate services, finance and general network related costs (e.g. network planning, network accommodation and network rates) to each MDF.

5.250 Using both cost drivers to attribute operating costs allows the BU model to analyse operating costs at an MDF level. Individual MDFs can then be aggregated into regional groupings such as LEA / Outside the LEA or Dublin / Provincial to assess cost variations at a regional level.

2. TD approach:

5.251 So far in this chapter we have discussed the combination of TD costs and BU-LRAIC+ costs in the Revised CAM. As stated in paragraph 5.5, the Revised CAM can also calculate the TD costs (Eircom's Actual Costs Adjusted for Efficiencies) for the entire access network, i.e., with no allowance for BU-LRAIC+ costs. This approach is discussed in paragraphs 5.252 to 5.260 below.

5.252 As with the BU-LRAIC+ approach, the starting point to determine the operating costs in the context of the TD model is Eircom's HCAs for 2014.

5.253 However, the network that is modelled under TD is assumed to have the same investment history as Eircom's existing network. Therefore, the TD approach does not consider that the same level of operating cost savings are appropriate as that modelled under the BU approach described above. The age profile of assets in Eircom's network means that the level of capital costs in the TD model

is lower than in the case using the BU model as a significant element of the TD cost base has been depreciated.

- 5.254 On the other hand, as the LFI associated with a new network is lower than the LFI of an older network, it is assumed in the TD model that Eircom's existing network would experience a higher level of faults than would be consistent with a network comprised of new copper cables. As a result ComReg considers it reasonable to allow for a higher number of front line staff in the TD model to cater for the higher LFI consistent with the age profile of the cables in Eircom's existing copper access network.
- 5.255 ComReg has considered some efficiency gains in terms of the level of operating costs in 2014. A review of costs in Eircom's HCAs indicates that operating costs for the access network have declined broadly in line with service volumes in recent years. This has been achieved primarily by headcount reductions in the network field force over the last number of years. While the same level of cost reductions may not be envisaged over the current price control period ComReg consider that further cost reductions should be achievable.
- 5.256 During the course of the 2013/ 2014 financial year the level of maintenance costs in the Eircom network was elevated due to the unprecedented level of storm activity that occurred in Ireland during this period. The same level of storm activity is not anticipated during the period of the price control.
- 5.257 For these reasons ComReg believe that it is appropriate to allow for a lower level of operating costs in the TD model than is evident in the 2014 HCAs, i.e., Eircom's Actual Costs Adjusted for Efficiencies.
- 5.258 Similar to the approach in the BU model, the TD model also uses staff numbers / headcount and line / network data as cost drivers to attribute costs to an MDF level so that costs can be analysed on a regional basis.
- 5.259 ComReg considers that wage inflation should not be incorporated into the model as any such inflation should be negated by productivity gains over the price control period.
- 5.260 In reviewing the operating costs associated with SB WLR in Eircom's 2014 HCAs, ComReg noted approximately €3K related to Service Level Agreement ('SLA') penalties paid by Eircom to OAOs. ComReg considers that such penalties should not be included in the projection of actual efficient costs used to inform the SB WLR price. ComReg has based the projection of Eircom's future operating costs on the staffing levels that Eircom have identified in relation to the service assurance and development of its copper access network. Therefore, ComReg is of the view that the level of staff allowed for in the Revised CAM should be sufficient to enable Eircom to comply with its SLAs. In addition, setting

targets and the enforcement of SLA penalties is intended to provide Eircom with incentives to improve the quality of service in its access network. ComReg considers that if it was to allow Eircom to recover the costs of SLA penalties it pays to OAOs from wholesale charges it levies on OAOs it would reduce these incentives.

3. Wholesale specific costs:

5.261 Wholesale specific costs relate to the carrier administration & billing costs associated with the access network. The wholesale specific costs in the Revised CAM are based on Eircom's 2014 HCAs. In order to determine the wholesale specific costs per line ComReg has considered two options:

- Option 1: Divide by the number of wholesale lines; or
- Option 2: Divide by the total number of retail and wholesale lines and apply the same value to all services.

5.262 ComReg considers that Option 2 is more appropriate as it is consistent with the former approach used to determine the Line Share incremental costs and which ensures non-discrimination between retail and wholesale users.

Q. 5 Do you agree with the proposed principles, inputs and assumptions of the Revised CAM, as set out above in Chapter 5? Please provide reasons for your response.

5.6 Network Cost Allocation

5.6.1 Step 8: Cost per line

5.263 This step determines the costs associated with the provision of LLU, SLU, SB-WLR, SABB, CEI services and dark fibre from the Revised CAM.

5.264 The unit cost of each of the services that use the access network is derived by allocating each services proportion of the total annual costs (based on utilisation of assets and volumes of the service) and then by adding relevant specific costs (e.g. the wholesale costs).

5.265 For LLU, the cost per line is derived by:

- Summing the LLU annual cost i.e., the network annual cost and the operating costs) and the specific costs (e.g. the wholesale costs); and
- Then dividing by the number of active lines.

5.266 For SLU, the cost per line is derived by:

- Summing the cost of the D-Side network (excluding the cost of lines longer than 1km from the cabinet); and
- Then dividing by the number of active lines.

5.267 ComReg considers that the effectiveness of SLU services is limited by the length of the line as longer lines are unlikely to be technically capable of supporting the required standard of broadband services. Therefore, ComReg is of the preliminary view that the cost of SLU lines longer than 1km should be excluded from the national average price calculation.

5.268 For SB-WLR, the cost per line is derived by:

- Summing the local loop annual cost (i.e., the network annual cost and the operating costs), the line card cost and the specific costs (e.g. the wholesale carrier administration and billing costs); and
- Then dividing by the number of active lines.

5.269 For SABB, the cost per line is derived by:

- Summing the local loop annual cost (i.e., the network annual cost and the operating costs), the DSLAM and BRAS cost and the specific costs (e.g. the wholesale carrier administration and billing costs); and
- Then dividing by the number of active lines.

5.270 The remainder of this subsection is discussed under the following headings:

1. Line volumes:
2. Determination of the price.

1. Line volumes:

5.271 Line volumes in the BU model approach should remain constant (stable) over the proposed price control period. The BU model is based on the costs and volumes of a hypothetical operator in the Irish market therefore the volumes do not necessarily need to move in line with Eircom's forecasted volumes.

5.272 The BU model approach is consistent with the 2013 Recommendation. In the 2013 Recommendation the European Commission makes reference (in

subsection 41⁹²) to the fact that the inflationary volume effect generated by the number of copper lines decreasing should be neutralised. Therefore, ComReg considers that it seems appropriate to assume stable line volumes in the BU model approach.

- 5.273 If a TD approach is preferred for the entire network for some products (to prevent under/over recovery of costs as explained earlier), then line volumes should be based on Eircom's actual number of customers. Eircom predict that these numbers are likely to continue to decrease. However, this trend is difficult to forecast accurately over the price control period. ComReg considers that the NBP rollout and the SIRO⁹³ rollout is unlikely to have a significant impact over the price control period given the timescale of deployment and launch in the market.
- 5.274 ComReg has assessed the impact of falling volumes with regard to the local loop costs over the three year price control period. As discussed in Chapter 12 on the price control period, we propose that Eircom should conduct an annual review of the Revised CAM to assess if there are any material changes. While we have taken into account projected declining volumes for SB-WLR, we consider that if volumes for other access services change significantly over the price control period then we may have to consider whether these changes should be adopted in the model with revised prices. Please refer to Chapter 12 for further details.
- 5.275 ComReg is of the preliminary view that for the purpose of setting LLU prices the line volumes in the BU model should remain constant over the price control period for the reasons set out above. However, in the context of SB-WLR in the TD model, we have taken account of projected future decreases in line volumes over the price control period.

Q. 6 Do you agree with ComReg's assumption that the volumes in the BU model should remain stable over the proposed price control period while the volumes in the TD model (for SB-WLR) should reflect projected volume decline? Please provide reasons for your response.

2. Determination of the price:

- 5.276 ComReg considers that there are three options in terms of setting the price for each service as follows:
- Option 1: Determine a price per year for each service;

⁹² ".....Under this approach, the inflationary volume effect would be neutralised for civil engineering assets because the modelled copper and fibre networks would share civil engineering assets.....".

⁹³ ESB/Vodafone joint venture company.

- Option 2: Determine one average price for each service over the price control period; and

Option 3: Determine the price for the first year of the control period and use a glide path based on CPI for subsequent years.

Option 1: Price per year for each service

5.277 Option 1 means determining the price for each service each year from the Revised CAM.

5.278 This Option would mean that the price would change every year over the price control period.

5.279 ComReg considers that there may be an administration cost associated with this Option in terms of changes to billing systems.

5.280 ComReg is of the preliminary view that a price per year for each service is likely to create additional administration costs and is not generally consistent with the approach to date in terms of setting wholesale prices.

Option 2: Average price for each service

5.281 Option 2 means determining an average price for each service over the price control period (over the period 2016 to 2018).

5.282 This Option would be more straightforward and may avoid the administration burden and cost associated with changes to billing systems each year. This Option is generally consistent with the way the wholesale rental prices have been set in the past.

Option 3: Determine the price for the first year of the control period and use a glide path based on CPI for subsequent years

5.283 Option 3 would mean using a glide path to set prices for services over time. When a new price control is set the price cap is set to attempt to align prices with costs over the price control period. Generally, the price cap is set on the basis of CPI-X control.

- 5.284 ComReg consider that this Option may create a divergence between revenues and actual costs incurred as the prices over the control period are not set by reference to the actual costs derived from the model but rather based on costs adjusted by CPI. In addition, this approach is more difficult to implement as a price adjustment may be required at the end of the price control period given over / under recovery of costs over the control period – prices are set by reference to costs adjusted by CPI rather than actual costs derived from the model. This may also create price instability / uncertainty for OAOs.
- 5.285 ComReg is of the preliminary view that on balance the average price for each service is the appropriate way to set the wholesale access prices over the price control period. The price control period is discussed in Chapter 12.

Q. 7 Do you agree with ComReg's preliminary view that an average price per service over the price control period is appropriate? Please provide reasons for your response.

- 5.286 The pricing options considered by ComReg in order to set the appropriate price for each of the wholesale services are discussed in the following chapters:
- Chapter 6: Pricing approach for LLU, SLU and SB-WLR;
 - Chapter 7: Pricing approach for SABB; and
 - Chapter 8: Pricing approach for CEI and dark fibre.

Chapter 6

6 Pricing approach: LLU, SLU, SB-WLR

6.1 Overview

- 6.1 In this chapter we assess the options and the preferred approach for setting the prices for LLU, SLU and SB-WLR.
- 6.2 In Chapter 4, ComReg assessed the various costing methodology options for LLU, SLU, SB-WLR, SABB, CEI and dark fibre. As set out in Chapter 4, in line with the 2013 Recommendation, ComReg is of the preliminary view that in general Eircom's Indexed RAB should be applied to Reusable Assets while the BU-LRAIC+ methodology should be applied to Non-reusable Assets.
- 6.3 In Chapter 5, ComReg sets out the proposed approach for determining the access network costs in the Revised CAM.
- 6.4 This chapter combines ComReg's preliminary views on the appropriate costing methodologies (Chapter 4) and dimensioning the Revised CAM model (Chapter 5) to determine the draft output price(s) for LLU, SLU and SB-WLR. In particular, we consider how the costing methodology in Chapter 4 should be applied in order to set the prices for LLU, SLU and SB-WLR taking into account the likely prospects of investment by alternative infrastructure as well as the assurance of cost recovery by Eircom i.e., Eircom's Actual Costs Adjusted for Efficiencies which may be more appropriate where the risk of under/over recovery is more important for certain services.
- 6.5 The remainder of this chapter is discussed under the following headings:
1. Market developments: LEA and Outside the LEA;
 2. Points to consider when setting wholesale access prices;
 3. Options for setting the LLU price;
 4. Options for setting the SLU price;
 5. Options for setting the SB-WLR price; and
 6. Pricing principles for SB-WLR ISDN PRA/FRA prices.

6.2 Market developments: LEA and Outside the LEA

- 6.6 The WBA Market Decision found evidence of structural change arising in certain overlapping geographic areas. In the Bundles Decision⁹⁴ two areas were defined with varying prospective competitive conditions namely the LEA and Outside the LEA.
- 6.7 The Decision Instrument in the Bundles Decision includes inter alia the definition of LEA and the relevant criteria are described and justified at length in the main body of the Bundles Decision.
- 6.8 In the Bundles Decision, ComReg identified criteria which could be used to identify areas where uptake of unbundled services, whether LLU and / or virtual unbundling in NGA, is likely to be viable, and the potential for future other alternative infrastructure providers of high-speed broadband at a fixed location ('AIP') — which is currently only UPC — which prospectively are more likely to permit a greater degree of competition and where regulation should be responsive to any prospective changes. ComReg identified individual qualifying areas/exchanges based on the criteria whose total geographic area was defined as the LEA. The criteria were fully consulted with industry as part of the consultation process which concluded with ComReg publishing the Bundles Decision.
- 6.9 As part of the consultation process to the Bundles Decision, ComReg assessed in detail the status of competition across all of Eircom's exchanges on an exchange-by-exchange basis to assess the appropriateness of their inclusion in the LEA. In determining the actual exchanges which qualify under each criterion, a detailed database was constructed which allows ComReg to assess the actual number of homes and premises in that exchange (area); the actual number of customers connected on the Eircom wholesale platform; the relative share of OAO customers on the Eircom platform (i.e., through Line Share or LLU); the cable operators' (UPC) footprint; and the number of broadband customers in that exchange area. Detailed information (which is commercially sensitive) has been received from the cable company (UPC) to enable this analysis.
- 6.10 ComReg notes that some concerns were recently expressed in submissions received to a separate consultation in respect to the proposed future regulation of bundles (ComReg Document 14/90) in respect of the criteria used to determine

⁹⁴ ComReg Document No. 13/14: Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4 dated 8 February 2013 ('**Bundles Decision**').

whether an exchange area is part of the Larger Exchange Area ('LEA'), and in particular with regard to Criterion 4.⁹⁵

- 6.11 ComReg notes that since publication of the ComReg Document 14/90 there have been a number of developments in the market. For example, Eircom has announced plans to offer fibre-to-the-home ('FTTH') services,⁹⁶ SIRO⁹⁷ has commenced trialling its proposed FTTH services⁹⁸ and Sky has now commenced offering its superfast broadband service.⁹⁹ ComReg is also aware that there have been some price increases in the market at both a retail and wholesale level. Furthermore, while ComReg is aware that the uptake of Eircom's Virtual Unbundled Access ('VUA') product remains nascent, we note Eircom's launch of Bitstream Ethernet Connection Services ('BECS') over Wholesale Ethernet Interconnect Link ('WEIL') in May 2015. In addition, we note that BT has requested Eircom to provide regional handover of their backhaul — which would allow BT to utilise its own infrastructure investment to manage its traffic. ComReg considers that these developments may potentially make the provision of VUA more attractive in a greater number of NGA exchanges.
- 6.12 Therefore, at this point ComReg considers it prudent to keep these developments under review, rather than reviewing the LEA criterion at this time. In any event and as already set out in the Bundles Decision, ComReg will continue to monitor the competitive conditions within the LEA and those exchanges that qualify under Criterion 4 as the use of NGA services evolve over time.
- 6.13 In terms of developments in the WPNIA market, please see Chapter 3 and Annex 10 of this Draft Decision.
- 6.14 The main points are summarised under the following headings:
- Market developments in the LEA; and
 - Market developments Outside the LEA.

⁹⁵ Criterion 4 as per the Bundles Decision states that: *An exchange area in respect of which Eircom has provided at least six months prior notification (or such shorter period as may be agreed by ComReg) on its publicly available Wholesale website (in accordance with Section 9.13(i) of the Decision Instrument contained in Annex 1 of ComReg Decision D03/13 and/or Section 9.13(i) of the Decision Instrument contained in Annex 2 of ComReg Decision D03/13) regarding the launch of NGA services by Eircom in cabinets in the relevant exchange area, subject to the condition that those proposed NGA-enabled cabinets must serve at least a reasonable number of lines in that exchange area.*

⁹⁶ http://www.eircomwholesale.ie/news/FTTH_Pricing/

⁹⁷ ESB/Vodafone joint venture company.

⁹⁸ <http://www.irishtimes.com/business/first-10-towns-on-new-superfast-broadband-plan-announced-1.2212503>

⁹⁹ <http://www.businessandleadership.com/marketing/item/48730-sky-ireland-announces-intro>.

6.2.1 Market developments in the LEA

- 6.15 The LEA is typically an exchange area being served with Eircom's current generation retail broadband products, NGA services as well as services from an alternative infrastructure-based provider or LLU-based services. The technical considerations used when determining whether an exchange is in the LEA, or not, are set out in the Bundles Decision. The criteria have been reproduced in Annex 9 of this Draft Decision for ease of reference.
- 6.16 In the LEA Eircom faces some competitive pressure at the retail level where UPC has rolled out its bidirectional cable network and where Eircom also faces retail and wholesale competition from OAOs that have unbundled Eircom's exchanges.
- 6.17 As already established in the context of the NGA Decision, there is evidence to suggest that Eircom's NGA wholesale and retail pricing is likely to be constrained by LLU operators and UPC in the LEA.
- 6.18 Retail competition between Eircom and UPC in the LEA generally occurs between bundled offers of telephone calls, high-speed broadband access and television content. While Eircom has not tended to make reductions to the headline prices of its current generation bundled offers over the last three years, the strategy has been to increase the value of existing packages with a mixture of 'free' upgrades, time-limited promotions and customer-specific offers.
- 6.19 Similar to Eircom, UPC tends to increase the value of its bundles with free upgrades for existing customers or limited-period discounts for new customers (this is discussed further below). The main alternative operator, Vodafone, also offers bundles of broadband and calls which ultimately rely on Eircom for wholesale network inputs. Therefore, the retail strategy in the LEA, in particular for Eircom and UPC, appears to focus on increasing the value of bundles, rather than offering a lower retail headline price.
- 6.20 Further to the retail competition between Eircom and UPC, Eircom's retail prices in the LEA are also constrained by OAOs' offers. This is more so the case where operators have deployed their own active equipment and use LLU. Alternative providers that rely on LLU-based inputs from Eircom may also be able to compete with Eircom's retail broadband offerings. Where an operator has control over the technical specifications of the infrastructure i.e., bandwidth and contention they have scope to offer a service that is differentiated from the Incumbent's. Access to the physical wholesale inputs (LLU) also gives the alternative operators greater control over the value chain, thus allowing them more flexibility in retail pricing. A significant difference between simple Bitstream reselling is the upfront and sunk investment of unbundling an exchange. For an operator using LLU in the LEA the marginal cost of

connecting an additional retail customer is low, since all the necessary investment has been made. These factors are also likely to help constrain Eircom's pricing power within the areas where these alternative operators are active i.e., usually within a particular exchange area where they have invested in unbundling capability.

- 6.21 At the end of Q4 2014¹⁰⁰, the total number of LLU lines was 84,089 of which 70,778 were Line Share and 13,311 were fully unbundled lines.
- 6.22 While unbundling has been relatively limited in Ireland so far, an important development has been the entry of Sky to the Irish retail broadband market with very competitive retail offers. BT Ireland, the most significant LLU provider in Ireland, is providing a wholesale Bitstream access service to Sky.
- 6.23 In addition, the Electricity Supply Board ('**ESB**') and Vodafone joint venture ('**JV**') (known as '**SIRO**') plans to bring FTTH to circa 500,000 homes (outside Dublin and Cork) which have not been covered by either the Eircom or UPC rollout. ESB / Vodafone should be present in the LEA in the medium term by leveraging from their own access network and backhaul network. Prospectively, therefore further competition in the retail broadband market may come from offers that are not reliant on Eircom's active access services in the WBA market.
- 6.24 With regard to publically available data on retail broadband market shares, the data does not reflect competition in the national markets but it is apparent that consumers are responding to UPC's relatively attractive product offering, putting pressure on both Eircom and Eircom's wholesale customers to provide competitive offerings to those who have the ability to access the UPC cable network in the LEA.
- 6.25 At the retail level, Eircom's fixed-line broadband market share (in terms of subscriptions) decreased from circa 37.9% in Q4 2013 to around 36.5% in Q4 2014¹⁰¹. UPC increased its share from around 28.5% in Q4 2013 to approximately 28.9% in Q4 2014. Vodafone also increased its share of the fixed broadband market from 16.6% in Q4 2013 to 17.2% in Q4 2014 while Sky increased its share from 4.8% to 7.4% over the same period. The remaining market share relates to Imagine, Digiweb and OAOs.
- 6.26 As these figures are national, they mask the extent of the shifts in retail broadband market shares occurring within the footprint of UPC's cable network. Recent market data suggests that in the LEA UPC is a significant competitor. It is also important to note that the decline in Eircom's retail broadband market share (and UPC's market share gain) is more significant in urban areas than

¹⁰⁰ Please refer to ComReg Document No 15/27: Quarterly Key Data Report (Data as of Q4 2014); 12 March 2015.

¹⁰¹ *ibid*

the national figures suggest. The pattern suggests that UPC is able to attract churning subscribers from Eircom retail (and wholesale) products, as well new broadband subscribers, while Eircom is losing subscribers in a growing retail market.

- 6.27 Based on the fixed retail market (comprising narrowband, broadband, leased line, managed and other data revenues) data for Q4 2014¹⁰², Eircom continues to have the highest retail revenue share in the fixed retail market with 46.4% market share, nationally. UPC had 13.2%, followed by Vodafone (fixed only) with 13.1%, BT (6.4%), Sky Ireland (3.0%) and Verizon (2.7%). Other OAOs accounted for the remaining 15.1%.
- 6.28 For SB-WLR, OAOs continue to purchase SB-WLR services nationally from Eircom to provide retail services directly to retail customers, while others do so for the purpose of reselling services as part of a broader suite of their own wholesale services which are made available to other OAOs.
- 6.29 As set out in the 2014 FACO Consultation, Eircom has a high market share of over 80% of the low level FACO market, nationally and around 80% of the high level FACO market, nationally.
- 6.30 At the retail level, for retail fixed telephony services ('**RFTS**') in the FACO market at the end of Q4 2014¹⁰³ there were 1,587,261 fixed voice subscriptions (an increase of 3.8% on Q4 2013). Eircom had 47.2% of all fixed voice subscriptions followed by UPC (21.7%), Vodafone (15.8%) and Sky (6.4%). ComReg notes that Vodafone's and Sky's provision of RFTS subscriptions is predominantly based on the purchase (directly or indirectly) of upstream SB-WLR based FACO services from Eircom. At Q4 2014 there were a total of 493,419 indirect access lines comprised of standalone CPS (16,602), SB-WLR (377,649) and While Label Access (99,168).

6.2.2 Market developments Outside the LEA

- 6.31 The area Outside the LEA corresponds to those exchanges which are in the more sub-urban, rural and remote areas of Ireland. This area has typically higher costs for potential entrants due to longer local loop lengths, greater distance to provide backhaul, and fewer economies of aggregation. Outside the LEA the prospects for entry by a further LLU operator may be limited.
- 6.32 DSL is an important access medium Outside the LEA. However, alternative DSL-based operators are almost entirely reliant on Bitstream from Eircom in order to provide their retail offering, with only a very small proportion of DSL-based

¹⁰² Please refer to ComReg Document No 15/27: Quarterly Key Data Report (Data as of Q4 2014); 12 March 2015.

¹⁰³ *ibid.*

subscribers using line share. Eircom is the main provider of wholesale fixed broadband services Outside the LEA. This highlights a key structural difference compared to the LEA, as there are fewer access alternatives available Outside the LEA. The operators that do offer services Outside the LEA have less scope for product and cost differentiation compared to other suppliers in the retail broadband market. Hence, this provides only a limited competitive constraint on Eircom.

- 6.33 In terms of entry prospects Outside the LEA, ComReg consider that they are limited — largely due to the less favourable cost and scale characteristics. It seems that UPC's current investment plans focus on upgrading its existing network rather than expanding its footprint. Further plans by Eircom to roll out NGA networks appears to be limited to LEA while the prospect of future LLU unbundling in these areas is also remote (as take-up to date of LLU access has been limited).
- 6.34 Therefore, currently Outside the LEA there is realistically only one fixed broadband provider, Eircom. This is unlikely to change absent state intervention.
- 6.35 OAOs continue to purchase SB-WLR services nationally from Eircom to provide retail services directly to retail customers, while others do so for the purpose of reselling services as part of a broader suite of their own wholesale services which are made available to other OAOs. Please refer to paragraphs 6.29 and 6.30 for recent national market data associated with the FACO market.
- 6.36 As noted above, SIRO plans to bring FTTH to areas not covered by either the Eircom or UPC rollout. However, the SIRO rollout is more of a 'regional'¹⁰⁴ rollout rather than a rollout of fibre to rural parts of Ireland and is more likely to form part of the LEA. ComReg will keep these developments under review.
- 6.37 The NBP is envisaged to cover a significant proportion of the exchanges Outside the LEA. The NBP proposes broadband speeds of at least 30Mbps to circa 700,000 remote rural homes and businesses, which is due to start rolling out by the end of next year and is to be completed by the end of 2020.

6.3 Points to consider when setting wholesale access prices

- 6.38 There are two main options when setting wholesale prices; a single price for the entire country or a price that varies depending on the costs and competitive conditions in different areas i.e., LEA and Outside the LEA.

¹⁰⁴ <http://www.independent.ie/business/technology/news/broadband-firm-to-bring-superfast-1000mbs-service-to-300-more-towns-31139923.html>

- 6.39 Even if the geographic markets defined in ComReg's market analysis decisions are national in scope, ComReg may consider regulatory remedies that reflect varying prospective competitive conditions and network deployment that prevail in different areas. This is especially relevant for the access network in Ireland, where there are material differences between the LEA and Outside the LEA in terms of population density and distribution.
- 6.40 The high proportion of isolated dwellings Outside the LEA requires the deployment of access cable routes that are less dense (i.e., serve fewer customers) with average line lengths that are considerably longer. The consequent lower economies of scale in the access network Outside the LEA results in an average line cost that is higher than the corresponding cost in the LEA. The high cost of network deployment Outside the LEA also results in significantly less opportunities for infrastructure-based competition.
- 6.41 ComReg considers that the differences in average cost profiles and the varying prospective competitive conditions evident between the LEA and Outside the LEA may provide some justification for access prices to be tailored to reflect these factors.
- 6.42 ComReg considers that the decision by OAOs to invest in an area is dependent on their ability to exploit sufficient economics of scale and scope to generate a commercial return and so the existence or prospect of infrastructure-based competition would appear to be a key characteristic to consider when defining the relevant geographic areas. A number of options are considered in the TERA Report on how to set wholesale prices based on geographic areas. Please refer to section 5 of the TERA Report for further details.
- 6.43 The priority between short-term and long-term investments may vary depending on the specific conditions of each wholesale product and geographical area (competition level, technical and economic viability of using or installing competing facilities).
- 6.44 Where the average per-customer cost of constructing a network is high¹⁰⁵, neither infrastructure-based competition nor LLU-based competition is likely to develop as it takes too much time for a private investor to make a profit on the investment in the network knowing that prices at the retail level may be constrained by customers' willingness to pay. In this case, the local loop represents a bottleneck; service-based competition based on SB-WLR and SABB should be the main priority (no build-or-buy signal is needed). This is often the case in rural areas.

¹⁰⁵ Which is the case in remote areas where there are few customers linked to an exchange.

- 6.45 In urban areas and large exchanges that are more profitable, alternative operators are more likely to invest in the infrastructure. Consequently, such it is important to maximise viable infrastructure investment in these areas.
- 6.46 ComReg considers that the pricing methodology may need to distinguish between areas where alternative investment in wired access network infrastructure by OAOs is likely and areas it is not. ComReg is of the preliminary view that the most relevant geographic representative footprint of those exchange areas is captured by the LEA and Outside the LEA concept.

6.4 Options for setting the LLU price

- 6.47 The current LLU monthly rental price is a maximum national averaged price. In 2010 the LLU price was set at a maximum of €12.41 but this was reduced by Eircom in 2013 to €9.91. Please refer to Chapter 3 for further details.
- 6.48 The key pricing principle established by ComReg in the LLU Pricing Decision in 2010 for LLU was based on the premise that OAOs should only pay for the lines that were likely to unbundled. By adopting this principle the maximum LLU monthly rental charge was calculated with reference to the BU LRAIC+ costs associated with exchanges that OAOs were likely to unbundle during the price control period. ComReg also excluded the cost of lines longer than 5km as these lines were unlikely to be technically capable of carrying broadband. In both cases ComReg allowed for a small proportion of the cost of excluded lines in order to cater for the possibility of exceptions so that the derived price was a weighted average cost of small and large exchanges and as well as shorter and longer lines. Therefore, the LLU price was mainly informed by the costs associated with the more economic exchanges. Please refer to Chapter 5 of the LLU Pricing Decision for further details.
- 6.49 In the context of this Draft Decision, ComReg has considered the following options with regarding to determining the monthly rental price for LLU:
- Option 1: National price based on the cost of LLU nationally ;
 - Option 2: National price based on the cost of LLU in the LEA ; and
 - Option 3: De-averaged prices based on the cost of LLU in the LEA and Outside the LEA.

Figure 36: Draft output rental prices for LLU

Options	€ - LLU
Option 1 - National cost (TD and BU)	15.35*
Option 2 - LEA cost (TD and BU)	10.19*
Option 3 - LEA and Outside the LEA (TD and BU)	10.19* (LEA), 25.96* (Outside the LEA)

*Excluding fault repair (€0.96 cent) and provisioning costs

6.50 In Chapter 13 we have set out the various monthly charges associated with LLU, i.e., monthly rental charges, monthly fault repair charge and monthly provisioning charge. Please refer to Figure 43 in Chapter 13 for the details.

6.51 Each of the three options at paragraph 6.49 are discussed in turn below.

6.4.1 Option 1: National price based on the cost of LLU nationally

6.52 Option 1 means establishing the national cost of each asset associated with LLU. Based on the costing methodology proposed in Chapter 4 this option calculates the national price of LLU implementing a BU-LRAIC+ methodology for Non-reusable Assets and Eircom’s Indexed RAB for Reusable Assets. The price derived is based on the average cost of a line in the whole country i.e., in the LEA and Outside the LEA.

6.53 For Reusable Assets i.e., poles and ducts, we have considered in Chapter 4 in paragraphs 4.123 to 4.134 that some of these assets cannot be reused for NGA services and therefore must be replaced. As described in Chapter 4, we have made assumptions in the Revised CAM regarding the replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. For poles and ducts that need to be replaced, we propose that these should be based on BU-LRAIC+ costs while poles and ducts that can be reused should be based on Eircom’s Indexed RAB. The proposed approach described in Chapter 4 (paragraphs 4.123 to 4.134) is relevant in terms of setting the price for LLU.

6.54 ComReg considers that Option 1 is consistent with the 2013 Recommendation. The BU-LRAIC+ methodology for Non-reusable Assets ensures that the price for Full LLU transmits the correct ‘build or buy’ signals to inform investors’ decisions. For Reusable Assets it would be inefficient for operators to build new civil infrastructure such as duct and poles when it is possible to re-use the existing assets by buying access to them from Eircom.

6.55 By using Eircom’s Indexed RAB for Reusable Assets we should ensure that Eircom recovers its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today. The proposed treatment of poles and ducts in Chapter 4 (paragraphs 4.123 to 4.134)

- should send the correct investment signals to Eircom with regard to the replacement of ducts and poles in Eircom's existing network. In summary, where the pole is being reused it is based on Eircom's Indexed RAB so Eircom can recover the original investment cost but if it is necessary to replace the pole then the element of cost should be based on BU-LRAIC+ costs — to ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner.
- 6.56 Option 1 minimises the risk of a digital divide by setting the same price across the whole country.
- 6.57 As this option is based on the average cost of a line in the LEA and Outside the LEA, it assumes that exchanges Outside the LEA are also likely to be unbundled. However, given the lack of economies of scale and scope Outside the LEA it is highly unlikely that lines Outside the LEA will be unbundled and therefore ComReg considers that the 'build-or-buy signals' are not relevant Outside the LEA for LLU. ComReg believes that the LLU price should be reflective of the cost of those exchanges where LLU is likely to be unbundled.
- 6.58 In addition, the investment in alternative local loop infrastructure for private operators is unlikely given the high cost of lines Outside LEA. This is reflected by the fact that subsidies are needed for very high speed access networks to be deployed in remote areas. 'Build-or-buy' signals are again less relevant Outside the LEA.
- 6.59 Given that the take-up of LLU is only likely to be in the LEA, ComReg considers this option could raise the LLU price to a non-competitive level in particular in those areas where LLU may be viable (i.e., in the LEA). Ireland has a specific demographic and geographic spread which means that the local loop national average cost is higher compared to other European countries.
- 6.60 ComReg considers that Option 1 is not consistent with the objectives of encouraging competition and incentivising investment.
- 6.61 For Option 1, the Revised CAM has derived a preliminary maximum rental price for LLU of €15.35 (excluding faults and provisioning costs) over the price control period.
- 6.62 ComReg is of the preliminary view that a national LLU price based on the national BU-LRAIC+ costs for Non-reusable Assets and Eircom's Indexed RAB may not be appropriate given that this may lead to over recovery of costs by Eircom. Furthermore, given that the take-up of LLU is only likely to be in the LEA, ComReg considers this option could raise the LLU price to a non-competitive level in particular in those areas where LLU may be viable (i.e., in the LEA).

6.4.2 Option 2: National price based on the cost of LLU in the LEA

- 6.63 Option 2 means establishing the LEA cost for each asset associated with LLU. Based on the costing methodology proposed in Chapter 4 this option calculates the national price of LLU implementing a BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets. The price derived is based on the average cost of a line in the LEA.
- 6.64 For Reusable Assets, i.e. poles and ducts, please refer to paragraph 6.53 above and more particularly Chapter 4 (paragraphs 4.123 to 4.134) regarding the proposed adjustments in the Revised CAM to account for replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. The proposed approach described in Chapter 4 (paragraphs 4.123 to 4.134) is relevant in terms of setting the price for LLU.
- 6.65 ComReg considers that Option 2 is consistent with the 2013 Recommendation. In the LEA the BU-LRAIC+ methodology for Non-reusable Assets ensures that where competition is developing and where copper is likely to be replaced by private investors that the correct 'build or buy' signals to inform investors' decisions are in place. The FTTC network is continually expanding in the LEA, as such the copper cables (E-side) between an exchange and the street cabinet are likely to be replaced by fibre cables. A correct build or buy signal needs to be sent to incentivise the investment on the E-side. On the D-side the cables are likely only to be replaced if FTTH technology is deployed. Even though this technology may not be used in the short term, it may develop in the long term and therefore it is important to set the correct build-or-buy signals in advance.
- 6.66 In addition, it would be inefficient for operators to build new civil infrastructure such as duct and poles when it is possible to re-use the existing assets by buying access to them from Eircom. By using Eircom's Indexed RAB for the Re-usable Assets Eircom should recover its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today. The proposed treatment of poles and ducts in Chapter 4 (paragraphs 4.123 to 4.134) should send the correct investment signals to Eircom with regard to the replacement of ducts and poles in Eircom's existing network. Therefore, while the pole is being reused it is based on Eircom's Indexed RAB. This means Eircom can recover the original investment cost but if it is necessary to replace the pole, then the element of cost should be based on BU-LRAIC+ costs to ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner.

- 6.67 This Option is based on the average cost of a line in the LEA, with lines Outside the LEA not being considered in the price calculations. This approach relies on the unbundling probability of a line and is based on the assumption that lines Outside the LEA are unlikely to be unbundled¹⁰⁶. In addition, this Option assumes that build-or-buy signals for viable alternative infrastructure investment purposes are only relevant in LEA areas.
- 6.68 While the current monthly LLU price (of €9.91) is based on a smaller LLU footprint of exchanges (c.100 exchanges), we consider that in the interests of incentivising more long-term infrastructure investment in the LEA that the LLU price should be based on the LEA footprint of exchanges — given that the LLU footprint encompasses those exchanges already unbundled. In any event, ComReg considers that the difference in cost between the current LLU footprint and the current LEA footprint should not be material — as the costs associated with the larger exchanges are already included in the current LLU footprint which derived the national maximum monthly price of €9.91.
- 6.69 In addition, in the 2010 LLU Pricing Decision ComReg excluded LLU lines in excess of 5kms from the LLU exchange in determining the LLU rental price. However, ComReg considers that the 5km line length limit is not considered appropriate in this Draft Decision. In 2010 the 5km radius was used mainly to identify those exchanges likely to be unbundled for LLU. However, given the developments around the concept of the LEA footprint ComReg considers that the LEA footprint of exchanges now establishes those exchanges likely to be unbundled for LLU. Therefore, ComReg proposes that an adjustment to exclude LLU lines in excess of 5kms from the exchange is not deemed necessary. In any event, the impact of excluding LLU lines that are 5kms from the exchange is immaterial to the LLU price per line per month as there is only a small percentage of LLU lines in excess of 5kms in the LEA.
- 6.70 ComReg considers that in the context of this Draft Decision, the current LEA footprint¹⁰⁷ will remain fixed at 252 exchanges for the purposes of setting the LLU price for the proposed price control period. In essence, it is proposed that the LLU price would not fluctuate with movements in the number of exchanges in the LEA during the price control period in order to provide certainty and price stability to operators in terms of infrastructure investment over the next few years.
- 6.71 Another alternative to the LEA footprint is a more extended or broader definition of the LEA which would include potential areas where investment in network infrastructure from private operators is likely (for the purpose of this discussion

¹⁰⁶ See also paragraphs 6.57-6.59.

¹⁰⁷ While ComReg's preferred approach is to lock the current LEA footprint for the purpose of setting the LLU price, ComReg considers that as the LEA footprint expands we could consider limiting the radius of lines (i.e., limit the LLU line length used in the price calculation) in smaller exchanges which should result in an immaterial difference to the LLU price.

referred to as the 'Large LEA'). The Large LEA footprint may include those exchanges where SIRO (Vodafone/ESB) are planning to build their fibre network. Given the current uncertainty regarding the defined footprint of the Large LEA we consider that where the current LEA footprint expands as a result of further infrastructure investment ComReg would consider the materiality of this in terms of wholesale access prices going forward. Therefore, ComReg intends to keep this under review.

- 6.72 For Option 2, the Revised CAM has derived a preliminary maximum monthly rental price for LLU of €10.19 (excluding faults and provisioning costs) over the price control period.
- 6.73 ComReg is of the preliminary view that a national LLU price based on the BU-LRAIC+ costs for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets for the provision of LLU in the LEA is appropriate.
- 6.74 The maximum monthly LLU rental charge proposed would not prevent Eircom from charging lower prices for LLU monthly rental, when appropriate, provided that any proposed lower charges are subject to ComReg's prior review and approval and that Eircom is in compliance with its regulatory obligations and other laws. Eircom has access to the entire cost model (including costing data) and the associated assumptions used in the modelling process in determining the current maximum charges. In addition, during the price control period, Eircom should be aware of the actual level of unbundling of operators at large and small exchanges (or at cabinets) as well as the actual length of lines being unbundled by operators at those exchanges. Depending on the actual level of unbundling, Eircom may have an opportunity to charge LLU monthly rental prices below the maximum charges set by ComReg in this decision which would still allow for the full recovery of the efficient costs of providing LLU.
- 6.75 Similarly, in the unlikely event that an exchange is proposed to be unbundled by an OAO which is currently Outside the LEA the maximum national monthly rental would still apply. ComReg considers that it is unlikely that all the exchanges in the current LEA footprint would be unbundled even in the long-term, consequently, the proposed exchange to be unbundled should have a close proxy of an exchange which is not currently unbundled but is within the LEA footprint. As such, ComReg considers that the pricing signals of a national monthly maximum price based on a specific geographic area is consistent with the existing regulatory framework as to how LLU is priced nationally and provides a practical and fair solution to LLU pricing that takes in to account the interests of Eircom, industry and consumers.
- 6.76 Pursuant to the NGA Decision, Eircom is obliged to maintain a link between copper and fibre prices. The link between copper and fibre is established where the SLU cost oriented price is the key input to the cost stack for VUA (which

currently resides in Market 5), given that it reflects the costs from the home to the cabinet. ComReg imposed a margin squeeze test between the VUA service in Market 5 and the SLU service in Market 4. This should ensure that VUA is not priced so low that it would dis-incentivise investment by alternative infrastructure operators during the transition to NGA. The NGA Decision provided that if a reduction to the SLU price is required under this test so also would a reduction be required to the LLU price, as appropriate. ComReg considers that this continues to be appropriate and the prices for LLU and SLU should continue to reflect the linkage with the VUA price in Market 5.

6.4.3 Option 3: De-averaged prices based on the cost of LLU within the LEA and Outside the LEA

- 6.77 Option 3 means establishing different LLU prices for the LEA and Outside the LEA.
- 6.78 Based on the costing methodology proposed in Chapter 4 this option calculates the national cost for LLU implementing a BU-LRAIC+ methodology for Non-reusable Assets and by using Eircom's Indexed RAB for Reusable Assets within the LEA. This cost is subsequently used to set the LLU price in the LEA based on the average cost of a line in the LEA.
- 6.79 Similarly, the LLU price Outside the LEA would be based on the BU-LRAIC+ methodology for Non-reusable Assets and by using Eircom's Indexed RAB for Reusable Assets Outside the LEA. This cost is subsequently used to set the LLU price Outside the LEA based on the average cost of a line Outside the LEA.
- 6.80 Similar to Option 1 and 2, for Reusable Assets i.e., poles and ducts please refer to paragraph 6.53 above and more particularly Chapter 4 (paragraphs 4.123 to 4.134) regarding the proposed adjustments in the Revised CAM to account for replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. The proposed approach described in Chapter 4 (paragraphs 4.123 to 4.134) is relevant in terms of setting the price for LLU.
- 6.81 ComReg considers that Option 3 is consistent with the 2013 Recommendation. The BU-LRAIC+ methodology for Non-reusable Assets ensures that where competition is developing and where copper is likely to be replaced by private investors that the correct 'build or buy' signals to inform investors' decisions are in place. By using Eircom's Indexed RAB for the Reusable Assets should ensure that Eircom recovers its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today. The proposed treatment of poles and ducts in Chapter 4 (paragraphs 4.123 to 4.134) should send the correct investment signals to Eircom with regard to the replacement of ducts and poles in Eircom's existing network. Therefore, while

the pole is being reused it is based on Eircom's Indexed RAB. This means Eircom can recover the original investment cost but if it is necessary to replace the pole then the element of cost should be based on BU-LRAIC+ costs — to ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner.

- 6.82 ComReg considers that with Option 3 there is a risk that geographically de-averaged prices could lead to a digital-divide if the prices of access services prove prohibitively expensive Outside the LEA. ComReg considers that the mitigation of such outcomes are addressed by Option 2. In addition, it is noteworthy that in the United Kingdom, Ofcom shares the opinion that de-averaged prices could provide better signals for investment decision-making but it also chooses to use geographically averaged prices for LLU because of “*consumer affordability issues and significant practicality issues*”:

“While de-averaged charges can more precisely reflect the costs incurred in providing LLU services in each area and can provide better signals for investment decision making, there are consumer affordability and significant practicality issues associated with de-averaging charges¹⁰⁸.”

- 6.83 For Option 3, the Revised CAM has derived a preliminary maximum rental price for LLU of €10.19 (excluding faults and provisioning costs) for the LEA and €25.96 (excluding faults and provisioning costs) for Outside the LEA, over the price control period.
- 6.84 ComReg is of the preliminary view that de-averaged prices for LLU may not be appropriate given the risk of a digital divide and given that LLU is not likely Outside LEA.

ComReg's Preliminary View:

- 6.85 For LLU, the maximum monthly rental charge should be derived based on the BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets in the LEA.
- 6.86 The LEA Footprint for the purposes of setting the LLU price is set at 252¹⁰⁹ exchanges.
- 6.87 Eircom should charge no more than the following for the LLU monthly rental charge, whichever is the lower:

¹⁰⁸ Ofcom. Local loop unbundling: setting the fully unbundled rental charge ceiling and minor amendment to SMP conditions FA6 and FB6. Statement. 30 November 2005 <http://stakeholders.ofcom.org.uk/consultations/llu/>

¹⁰⁹ Please note that we use 248 exchanges (instead of 252) for price setting purposes given that there are 4 cabinets included in the 252 exchanges which overlap with exchanges / MDFs in the LEA.

(a) €10.19 (excluding faults and provisioning costs) per line per month nationally as determined by ComReg Decision D[XX/YY]; or

(b) The LLU monthly rental charge as amended by changes made by Eircom in line with the Revised Copper Access Model under ComReg Decision D[XX/YY] and subject to prior review by ComReg.

6.88 Eircom should ensure that any reduction to the SLU monthly rental charge is consistently applied to the LLU monthly rental charge, where appropriate, using the Revised Copper Access Model.

Q. 8 Do you agree with ComReg's preliminary view that the monthly rental charge for LLU should be based on the BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets in the LEA? Please provide reasons for your response.

Q. 9 Do you agree with ComReg's preliminary view that the LEA footprint should be locked-in for the purposes of setting the LLU monthly rental price? Please provide reasons for your response.

6.5 Options for setting the SLU price

6.89 The current SLU monthly rental price is a maximum national average price. In the LLU Pricing Decision in 2010 the SLU price was set at a maximum of €10.53. In January 2013, Eircom reduced the rental price for SLU from €10.53 to €9.03 as set out in ComReg Information Notice 13/01 and as discussed previously in subsection 6.4.

6.90 The key pricing principle established by ComReg in the LLU Pricing Decision in 2010 was based on the premise that OAOs should only pay for the lines that were likely to unbundled. Therefore, the SLU price in 2010 was mainly informed by the costs associated with the more economic cabinets. Please refer to Chapter 5 of the LLU Pricing Decision for further details.

6.91 In the NGA Decision ComReg specified that SLU is available on a reasonable request basis outside areas which have been deemed susceptible to a state subsidy scheme. This Draft Decision does not amend that NGA Decision. As such, where FTTC is deployed and vectoring is in place, imminent or credibly scheduled, the obligation to provide SLU on a mandatory basis is removed to ensure that any investment in vectoring can be facilitated to facilitate higher speed services. In place of mandatory SLU, access is available where it is deemed as reasonable according to the criteria set out in Chapter 4 of the NGA Decision. An important exception to the rule is contemplated for non-commercial

areas susceptible to a government subsidy scheme, where SLU continues to be mandatory. The objective of the conditionality around SLU is to incentivise credible investment; timely deployment; and management of competing demands. As set out in the NGA Decision, the “reasonable” request criteria for SLU are as follows:

- The request for SLU is at a cabinet or in an exchange area where NGA roll out and vectoring enablement has not already taken place and is not imminent or credibly scheduled;
- There is a commitment to open access by the SLU operator; and
- There is a commitment by the access seeker to bandwidth enhancing technology (BET), where it is possible.

6.92 In the context of this Draft Decision, ComReg has considered the following options with regard to determining the monthly rental price for SLU:

- Option A: National price based on the cost of SLU nationally;
- Option B: National price based on the cost of SLU in the LEA; and
- Option C: De-averaged prices based on the cost of SLU in the LEA and Outside the LEA.

Figure 37: Draft output rental prices for SLU

Options	€ - SLU
Option A - National costs (TD and BU)	5.88*
Option B - LEA costs (TD and BU)	5.78*
Option C - LEA and Outside the LEA (TD and BU)	5.78* (LEA), 6.08* Outside the LEA

*Including fault repair costs

6.93 Each of the three options at paragraph 6.92 is discussed in turn below.

6.5.1 Option A: National price based on the cost of SLU nationally

6.94 Option A means establishing the national cost of each asset associated with SLU. Based on the costing methodology proposed in Chapter 4 this option calculates the national price of SLU implementing a BU-LRAIC+ methodology for Non-reusable Assets and by using Eircom’s Indexed RAB for Reusable Assets nationally. This cost is subsequently used to set the SLU price nationally based on the average cost of a line in the whole country i.e., in the LEA and Outside the LEA.

6.95 For Reusable Assets i.e., poles and ducts, we have considered in Chapter 4 in paragraphs 4.123 to 4.134 that some of these assets cannot be reused for NGA services and therefore must be replaced. As described in Chapter 4, we have

made assumptions in the Revised CAM regarding the replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. For poles and ducts that need to be replaced, we propose that these should be based on BU-LRAIC+ costs while poles and ducts that can be reused should be based on Eircom's Indexed RAB. The proposed approach described in Chapter 4 (paragraphs 4.123 to 4.134) is relevant in terms of setting the price for SLU.

- 6.96 ComReg considers that this Option is consistent with the 2013 Recommendation. The BU-LRAIC+ methodology for Non-reusable Assets ensures that the national price for SLU transmits the correct 'build or buy' signals to inform investors' decisions. For Reusable Assets it would be inefficient for operators to build new civil infrastructure such as duct and poles when it is possible to re-use the existing assets by buying access to them from Eircom.
- 6.97 By using Eircom's Indexed RAB for the Reusable Assets Eircom should recover its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today. The proposed treatment of poles and ducts in Chapter 4 (paragraphs 4.123 to 4.134) should send the correct signals with regard to the replacement of ducts and poles in Eircom's existing network. Therefore, while the pole is being reused it is based on Eircom's Indexed RAB. This means Eircom can recover the original investment cost but if it is necessary to replace the pole then the element of cost should be based on BU-LRAIC+ costs — to ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner.
- 6.98 Similar to LLU, ComReg is of the preliminary view that the monthly rental price for SLU should be based on the costs of those lines that an OAO is likely to unbundle. However, the areas where OAOs might unbundle SLU lines may not necessarily align with the areas where OAOs might unbundle LLU. ComReg considers that there is the possibility that OAOs could unbundle SLU lines in the less economic exchanges (i.e., Outside the LEA). The demand for SLU may emerge Outside the LEA where NGA is unlikely to be deployed by Eircom but where an OAO may require SLU to deliver broadband services as part of the NBP.
- 6.99 In addition, ComReg considers that a national SLU price is more appropriate given that SLU is a direct input into the VUA price in the LEA. To set the price based on costs Outside the LEA would be inconsistent with the current pricing principle applied in the context of VUA.
- 6.100 ComReg is of the preliminary view that the price for SLU should reflect the nationally averaged costs across all exchanges.

- 6.101 As longer lines are unlikely to be technically capable of supporting the required standard of broadband services, ComReg considers that the effectiveness of SLU services is limited by the length of the line. Similar to the approach adopted in the LLU Pricing Decision in 2010, ComReg is of the preliminary view that the cost of SLU lines longer than 1km should be excluded from the national price calculation under Option A.
- 6.102 For Option A, the Revised CAM has derived a preliminary maximum rental price for SLU of €5.88 (including fault repair costs) nationally, over the price control period.
- 6.103 ComReg is of the preliminary view that a national SLU price based on the national BU-LRAIC+ costs for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets may be appropriate given that the SLU price reflects the possibility of SLU being unbundled nationally.
- 6.104 The maximum monthly SLU rental charge proposed would not prevent Eircom from charging lower prices for SLU monthly rental, when appropriate, provided that any proposed lower charges are subject to ComReg's prior review and approval and that Eircom is in compliance with its regulatory obligations and other laws. Similar, to deriving maximum monthly LLU prices, Eircom has access to the entire cost model (including costing data) and the associated assumptions used in the modelling process in determining the current maximum charges. In addition, during the price control period, Eircom should be aware of the actual level of unbundling of operators at cabinets as well as the actual length of lines being unbundled by operators in those exchange areas. Depending on the actual level of unbundling, Eircom may have an opportunity to charge SLU monthly rental prices below the maximum charges set by ComReg in this decision which would still allow for the full recovery of the efficient costs of providing SLU.
- 6.105 As set out in paragraph 6.76 on LLU, pursuant to the NGA Decision, Eircom is obliged to maintain a link between copper and fibre prices. The link between copper and fibre is established where the SLU cost oriented price is the key input to the cost stack for VUA (which currently resides in Market 5), given that it reflects the costs from the home to the cabinet. ComReg imposed a margin squeeze test between the VUA service in Market 5 and the SLU service in Market 4. This should ensure that VUA is not priced so low that it would dis-incentivise investment by alternative infrastructure operators during the transition to NGA. ComReg considers that this continues to be appropriate and the prices for LLU and SLU should continue to reflect the linkage with the VUA price in Market 5.

6.5.2 Option B: National price based on the cost of SLU in the LEA

- 6.106 Option B means establishing the LEA cost of each asset associated with SLU. Based on the costing methodology proposed in Chapter 4 this option calculates

the national price of SLU implementing a BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets. This cost is subsequently used to set the SLU price based on the average cost of a line in the LEA.

- 6.107 For Reusable Assets, i.e. poles and ducts, please refer to paragraph 6.95 above and more particularly Chapter 4 (paragraphs 4.123 to 4.134) regarding the proposed adjustments in the Revised CAM to account for replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. The proposed approach described in Chapter 4 (paragraphs 4.123 to 4.134) is relevant in terms of setting the price for SLU.
- 6.108 ComReg considers that Option B is consistent with the 2013 Recommendation. In the LEA the BU-LRAIC+ methodology for Non-reusable Assets ensures that where competition is developing and where copper is likely to be replaced by private investors that the correct 'build or buy' signals to inform investors' decisions are in place. The FTTC network is continually expanding in the LEA, as such, the copper cables (E-side) between an exchange and the street cabinet are likely to be replaced by fibre cables. A correct build or buy signal needs to be sent to incentivise the investment on the E-side. On the D-side the cables are likely only to be replaced if FTTH technology is deployed. Even though this technology may not be used in the short term, it may develop in the long term and therefore it is important to set the correct build-or-buy signals in advance.
- 6.109 By using Eircom's Indexed RAB for Reusable Assets should ensure that Eircom recovers its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today. The proposed approach set out in Chapter 4 (paragraphs 4.123 to 4.134) should send the correct investment signals to Eircom with regard to the replacement of ducts and poles in Eircom's existing network. Therefore, while the pole is being reused it is based on Eircom's Indexed RAB. This means Eircom can recover the original investment cost but if it is necessary to replace the pole, then the element of cost should be based on BU-LRAIC+ costs to ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner.
- 6.110 With this option the national price for SLU is based on the average cost of a line in the LEA, with lines Outside the LEA not being considered. However, unlike LLU which is only likely to be unbundled in exchanges in the LEA, OAOs may unbundle SLU lines in the less economic exchanges.
- 6.111 Similar to the amendment for long lines in Option A (see paragraph 6.101), ComReg considers that the cost of SLU lines longer than 1km should also be excluded from the SLU price calculation under Option B.

- 6.112 For Option B, the Revised CAM has derived a preliminary maximum rental price for SLU of €5.78 (including fault repair costs) nationally, over the price control period.
- 6.113 ComReg is of the preliminary view that a national SLU price based on the LEA BU-LRAIC+ costs for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets may not be appropriate given that SLU is likely to be unbundled nationally.

6.5.3 Option C: De-averaged prices based on the cost of SLU in the LEA and Outside the LEA

- 6.114 Option C means establishing different SLU prices for the LEA and Outside the LEA.
- 6.115 Based on the costing methodology proposed in Chapter 4 this option calculates the price of SLU within the LEA implementing a BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets. This cost is subsequently used to set the SLU price in the LEA based on the average cost of a line in the LEA.
- 6.116 Similarly, Outside the LEA the cost of each asset associated with SLU is based on the BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets. This cost is subsequently used to set the SLU price Outside the LEA based on the average cost of a line Outside the LEA.
- 6.117 For Reusable Assets, i.e. poles and ducts, please refer to paragraph 6.95 above and more particularly Chapter 4 (paragraphs 4.123 to 4.134) regarding the proposed adjustments in the Revised CAM to account for replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. The proposed approach described in Chapter 4 (paragraphs 4.123 to 4.134) is relevant in terms of setting the price for SLU.
- 6.118 ComReg considers that Option C is consistent with the 2013 Recommendation. Please see paragraph 6.96 and 6.97.
- 6.119 Similar to the amendment for long lines in Option A and Option B (see paragraph 6.101), ComReg considers that the cost of SLU lines longer than 1km should also be excluded from the SLU price calculation under Option C.
- 6.120 For Option C, the Revised CAM has derived a preliminary maximum rental price for SLU of €5.78 (including fault repair costs) in the LEA and €6.08 Outside the LEA (including fault repair costs), over the price control period.
- 6.121 ComReg considers that de-averaged prices for SLU may be appropriate as SLU is likely to be required nationally. However, SLU may potentially be required for

purposes such as NBP and coupled with the fact that: (i) due to the limiting of line length for costing purposes that there is no material difference between the national price (Option A) and the de-averaged prices provided under this Option; and (ii) as provided for by the NGA Decision, SLU requests may not always be considered reasonable — ComReg is of the preliminary view that such pricing complexity (both from an Eircom and OAO perspective) is currently mitigated by Option A. Consequently, ComReg is of the preliminary view that Option C may not be as advantageous as Option A.

ComReg's Preliminary View:

- 6.122 The maximum monthly rental charge for SLU should be derived based on the BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets nationally.
- 6.123 The cost of SLU lines longer than 1km should be excluded from the SLU price calculation.
- 6.124 Eircom should charge no more than the following for the SLU monthly rental charge whichever is the lower:
- (a) €5.88 per line per month nationally as determined by ComReg Decision D[XX/YY];
 - (b) The SLU monthly rental charge as amended by changes made by Eircom in line with the Revised Copper Access Model under ComReg Decision D[XX/YY] and subject to prior review by ComReg; or
 - (c) A revised SLU monthly rental charges based on the margin squeeze test between SLU and VUA and subject to prior review by ComReg.

Q. 10 Do you agree with ComReg's preliminary view that the maximum monthly rental charge for SLU should be based on the BU-LRAIC+ methodology for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets nationally, while lines longer than 1km should be excluded from the calculation? Please provide reasons for your response.

6.6 Options for setting the SB-WLR price

- 6.125 Currently the SB-WLR price is based on a retail minus price control. In this Draft Decision we propose to withdraw the retail minus price control on Eircom and to impose a cost orientation obligation (see Chapter 4).

- 6.126 The current national monthly rental price for SB-WLR is €18.02, based on a retail minus percentage of at least 14%.
- 6.127 ComReg considers that SB-WLR requires many of the same network inputs as LLU. SB-WLR should include the costs of the local loop as well as the cost of the line card in the exchange. However, the SB-WLR service is national in scope while the uptake of LLU currently and prospectively is in LEA exchanges only (see paragraphs 6.67 and 6.68).
- 6.128 In determining the appropriate cost based rental price for SB-WLR, it is also important to ensure that there is sufficient margin between the SB-WLR price and the LLU price so that OAOs are encouraged to climb the ladder of investment and OAOs using the LLU service are not foreclosed from the broadband market.
- 6.129 While the 2013 Recommendation is not specifically relevant to Market 2 (SB-WLR) ComReg considers that the objectives of the 2013 Recommendation are equally important in the context of SB-WLR i.e., to ensure that “*operators can cover costs that are efficiently incurred and receive an appropriate return on invested Capital*”¹¹⁰ and also to ensure that “*the appropriate ‘build-or-buy’ signal strikes an appropriate balance between ensuring efficient entry and sufficient incentives to invest*”¹¹¹. ComReg considers that it is also important that there is regulatory consistency regarding the choice of costing methodology for all access services provided across the access network. Consequently, ComReg has assessed the various options detailed below using the 2013 Recommendation.
- 6.130 ComReg has considered the following options for determining the monthly rental price for SB-WLR:
- Option A: National price based on the cost of SB-WLR nationally;
 - Option B: De-averaged prices based on the costs of SB-WLR in the LEA and Outside the LEA; and
 - Option C: National price based on the higher of Eircom’s Actual Costs Adjusted for Efficiencies nationally (with BU-LRAIC+ for active equipment) or a combination of Eircom’s Indexed RAB for Reusable Assets and the BU-LRAIC+ for Non-reusable Assets and active equipment in the LEA.

¹¹⁰ Subsection (26) of the 2013 Recommendation.

¹¹¹ Subsection (27) of the 2013 Recommendation.

Figure 38: Draft output rental prices for SB-WLR

Options	€ - SB-WLR
Option A - National costs (TD and BU)	17.68*
Option B - LEA and Outside the LEA (TD and BU)	12.51* (LEA), 28.29* (Outside the LEA)
Option C – National costs (Eircom’s Actual Costs Adjusted for Efficiencies) or LEA costs (TD and BU)	16.72** (National) or 12.51* (LEA)

*Including fault repair costs

** Including fault repair and provisioning costs

- 6.131 The current SB-WLR monthly rental charge of €18.02 includes fault repair costs. We propose that the SB-WLR monthly charge should include the cost of fault repair and the cost of provisioning (which is discussed at Chapter 11 in subsection 11.3.4).
- 6.132 In Chapter 13 we set out the proposed SB-WLR charge which includes the SB-WLR rental costs, the SB-WLR fault repair costs and the SB-WLR provisioning costs. Please refer to Figure 44 in Chapter 13 for the details.

6.6.1 Option A: National price based on cost of SB-WLR nationally

- 6.133 Option A means establishing the national cost of each asset associated with SB-WLR based on the BU-LRAIC+ methodology for Non-reusable Assets and active equipment (i.e., line card) with Eircom’s Indexed RAB applied to Reusable Assets, as set out in Chapter 4. This cost is subsequently used to set the SB-WLR price nationally based on the average cost of a line in the whole country i.e., in the LEA and Outside the LEA.
- 6.134 This Option would reflect the proposed adjustment for Reusable Assets i.e., poles and ducts, to take account of the fact that some of these assets cannot be reused for NGA services and therefore must be replaced. As described in Chapter 4 in paragraphs 4.123 to 4.134 we have made assumptions in the Revised CAM regarding the replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. For poles and ducts that need to be replaced, we propose that these should be based on BU-LRAIC+ costs while poles and ducts that can be reused should be based on Eircom’s Indexed RAB.
- 6.135 ComReg considers that this Option is consistent with the 2013 Recommendation. The BU-LRAIC+ methodology for Non-reusable Assets ensures that the national price transmits the correct ‘build or buy’ signals to inform investors’ decisions. For Reusable Assets it would be inefficient for operators to build new civil infrastructure such as duct and poles when it is possible to re-use the existing assets by buying access to them from Eircom. By using Eircom’s Indexed RAB

for the Reusable Assets Eircom should recover its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today.

- 6.136 However, ComReg considers that while the correct build-or-buy signals are important to maximise viable alternative infrastructure investment in the more economic areas of the country (i.e., in the LEA), for SB-WLR, ComReg considers that the objective is not to stimulate alternative operator investment where it is clear no commercial operator might invest, but to ensure Eircom do not materially over or under recover their efficient costs nationally.
- 6.137 Option A would allow Eircom to recover the BU-LRAIC+ costs for Non-reusable Assets nationally. Eircom's Actual Costs Adjusted for Efficiencies may be more pragmatic and practical especially where there are limited prospects of investment by alternative infrastructure. This is discussed in more detail under Option 3 below.
- 6.138 As such, the derived monthly rental price nationally under Option A using the BU-LRAIC+ approach costing methodology is inflated due to the lower economies of scale and scope as a result of those exchanges Outside the LEA. Consequently, ComReg considers that this approach derives a higher national price than is required for appropriate build or buy signals and in particular in the LEA. In addition, relative to the actual costs Eircom incurs nationally such a pricing signal would result in Eircom over-recovering its actual efficiently incurred costs (plus a reasonable rate of return). Consequently, ComReg considers that this approach may not be appropriate in this case.
- 6.139 As noted in the *Arcor* case (see paragraphs 4.82-4.86), investment signals should not be set so high as to deter the very investment to which it is seeking to promote. In this case, ComReg considers that the BU-LRAIC+ costing methodology to derive prices nationally based on areas where such investment is highly unlikely would not be appropriate. Such position is also consistent with ComReg's preliminary view in regards to LLU and SLU (see paragraphs 6.57-6.59 and 6.98-6.99 respectively).
- 6.140 For Option A, the Revised CAM has derived a preliminary monthly rental price for SB-WLR of €17.68 (including fault repair costs) nationally over the price control period.
- 6.141 ComReg is of the preliminary view that a national price based on a combination of the national BU-LRAIC+ costs for Non-Reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets may not be appropriate as it may lead to the over recovery of costs by Eircom.

6.6.2 Option B: De-averaged prices based on cost of SB-WLR in the LEA and Outside the LEA

- 6.142 Option B means establishing different SB-WLR prices for the LEA and Outside the LEA.
- 6.143 Based on the costing methodology proposed in Chapter 4 this option calculates the price of WLR within the LEA implementing a BU-LRAIC+ methodology for Non-reusable Assets and active equipment (i.e., line card) with Eircom's Indexed RAB applied to Reusable Assets, as set out in Chapter 4. This cost is subsequently used to set the SB-WLR price in the LEA based on the average cost of a line in the LEA.
- 6.144 Similarly, Outside the LEA the cost of each asset associated with SB-WLR is based on the BU-LRAIC+ methodology for Non-reusable Assets and active equipment (i.e., line card) with Eircom's Indexed RAB applied to Reusable Assets. This cost is subsequently used to set the SB-WLR price Outside the LEA based on the average cost of a line Outside the LEA.
- 6.145 This Option would reflect the proposed adjustment for Reusable Assets i.e., poles and ducts, to take account of the fact that some of these assets cannot be reused for NGA services and therefore must be replaced. As described in Chapter 4 in paragraphs 4.123 to 4.134 we have made assumptions in the Revised CAM regarding the replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. For poles and ducts that need to be replaced, we propose that these should be based on BU-LRAIC+ costs while poles and ducts that can be reused should be based on Eircom's Indexed RAB.
- 6.146 ComReg considers that this Option is consistent with the 2013 Recommendation. The BU-LRAIC+ methodology for Non-reusable Assets ensures that where competition is developing and where copper is likely to be replaced by private investors that the correct 'build or buy' signals to inform investors' decisions are in place. For Reusable Assets, Eircom's Indexed RAB ensures Eircom should recover its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today.
- 6.147 However, as noted in our assessment of Option A (see paragraph 6.138), ComReg considers that this approach derives a higher price than is required for appropriate build or buy signals and in particular in the context of the appropriateness or need for such signals Outside the LEA. In addition, relative to the actual costs Eircom incurs nationally such a pricing signal would result in Eircom over-recovering its actual efficiently incurred costs (plus a reasonable rate of return). Consequently, ComReg considers that this approach may not be appropriate in this case.

- 6.148 As noted in the *Arcor* case (see paragraphs 4.82-4.86), investment signals should not be set so high as to deter the very investment to which it is seeking to promote. In this case, ComReg considers that the BU-LRAIC+ costing methodology to derive separate prices for inside the LEA and Outside the LEA there is a risk that geographically de-averaged prices could lead to a digital-divide if the prices of access services prove prohibitively expensive Outside the LEA. ComReg considers that the mitigation of such outcomes are addressed by Option C.
- 6.149 For Option B, the Revised CAM has derived a preliminary rental price for SB-WLR of €12.51 (including fault repair costs) in the LEA and €28.29 (including fault repair costs) Outside the LEA.
- 6.150 ComReg is of the preliminary view that de-averaged prices based on the BU-LRAIC+ costs for Non-reusable Assets and Eircom's Indexed RAB for Reusable Assets in the LEA and Outside the LEA is not appropriate as it may lead to over recovery of costs (especially for the area Outside the LEA).

6.6.3 Option C: National price based on the higher of Eircom's Actual Costs Adjusted for Efficiencies nationally or combination of BU-LRAIC+ costs and Eircom's Indexed RAB in the LEA

- 6.151 Option C addresses the issues identified in Option A and Option B. In particular, providing an appropriate 'build or buy' signal while at the same time ensuring that nationally Eircom does not over or under recover its actual incurred costs adjusted for efficiency plus a reasonable rate of return and prices remain geographically averaged.
- 6.152 Option C means that the national monthly price for SB-WLR is either the higher of:
- (i) the monthly derived price based on the national cost for SB-WLR using Eircom's Actual Costs Adjusted for Efficiencies for Reusable Assets and Non-reusable Assets nationally (with the BU-LRAIC+ costs for the active equipment i.e., line card); or
 - (ii) the monthly derived price based on the LEA costs for SB-WLR using BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets.
- 6.153 ComReg considers that as this Option provides a national SB-WLR price based on the higher of Eircom's Actual Costs Adjusted for Efficiencies for providing SB-WLR nationally (with the BU-LRAIC+ costs for active equipment i.e., line card) or the combined BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets for the provision of

SB-WLR inside the LEA, it maintains the correct build-or-buy signals in the LEA (where it is most relevant and where NGA is likely to be rolled out) and ensures that Eircom does not over / under recover its actual efficiently incurred costs (plus a reasonable rate of return) nationally for SB-WLR.

- 6.154 The SB-WLR price based on the BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets in the LEA would reflect the proposed adjustment for Reusable Assets i.e., poles and ducts, to take account of the fact that some of these assets cannot be reused for NGA services and therefore must be replaced. As described in Chapter 4 in paragraphs 4.123 to 4.134 we have made assumptions in the Revised CAM regarding the replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. For poles and ducts that need to be replaced, we propose that these should be based on BU-LRAIC+ costs while poles and ducts that can be reused should be based on Eircom's Indexed RAB – this approach is reflected in the LEA cost for SB-WLR. This approach provides the appropriate build or buy signals in the LEA and it supports NGA investment in the area where it is most likely to be rolled out.
- 6.155 However, the SB-WLR price based on the Eircom's Actual Costs Adjusted for Efficiencies nationally (with BU-LRAIC+ costs applied to the active equipment) would not reflect the provision for replacement of non-reusable assets i.e., additional 8% replacement of the \times pole base or additional 5% replacement of ducts. Instead the SB-WLR price based on Eircom's Actual Costs Adjusted for Efficiencies nationally would only reflect Eircom's reinvestment in poles of € \times (or \times) each year over the three year price control period (per TD valuation in paragraph 4.126 and 4.133). However, if it were the case that Eircom invested significantly more in its copper access network, the materiality of this investment would have to be considered in terms of the SB-WLR price. This approach should allow Eircom to recover any money invested in maintaining or upgrading its copper access network on the basis that Eircom will have the assurance that what it spends can be recovered via the prices it can charge for SB WLR services by means of reconciliation to Eircom's HCAs.
- 6.156 For SB-WLR, it is important to achieve an appropriate balance between setting the necessary build / buy signals in the relevant areas (LEA) while at the same time ensuring that Eircom does not over / under recover its actual efficient costs nationally. If the access price is too high in areas where infrastructure investment is also unlikely to develop (as the deployment cost for each line is high i.e., in rural areas), this would not be desirable due to the detrimental long-term impact on consumers arising from a lack of competition, as competition from operators acting as resellers may also be dampened. On the other hand the access price should not be too low, especially in the LEA, as it could deter investments in the long term in infrastructure-based competition.

- 6.157 ComReg considers that these objectives are consistent with those set out by the European Commission in the 2013 Recommendation. Please refer to paragraph 6.129 above.
- 6.158 ComReg considers that if there is no prospect of a competitor replicating the service in question (or bypassing the bottleneck with an alternative platform), it is reasonable to base the regulatory price on Eircom's Actual Costs Adjusted for Efficiencies. There may be limited rationale to allow the Incumbent to base its prices of unreplicable infrastructure on replacement costs if this means that the Incumbent recovers more than the cost it actually incurred. The concept of asset replicability means that if there is actual investment the Incumbent will recover the cost of the asset, if there is no investment and assets are "sweated" to get the maximum value from them then the Incumbent will not be compensated over and above the initial gross book value. Therefore, this creates the appropriate investment signals for the Incumbent. Our objectives in setting the appropriate price for SB-WLR is not to incentivise investment in areas where it is unlikely that a commercial operator would invest (i.e., build), absent state funding, but instead to ensure that the objective of cost recovery is met.
- 6.159 Using Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally may be more pragmatic and practical for SB-WLR especially where there are limited prospects of investment by alternative infrastructure. ComReg considers that Eircom's Actual Costs Adjusted for Efficiencies may be more appropriate especially with regard to the area Outside the LEA rather than the MEA approach or BU-LRAIC+ approach adopted in the LEA where competing infrastructures exist. As noted in paragraph 4.81, the MEA / BU-LRAIC+ approach calculates the cost of a new network being built today and not the actual costs incurred by Eircom. The BU-LRAIC+ approach could result in prices which over-compensate Eircom relative to its actual investment in attempting to set the appropriate "build or buy" signal in the knowledge that due to the lack of economies of scale or scope it is unlikely that a commercial operator would invest (i.e., build) and compete with the incumbent using infrastructure-based competition.
- 6.160 Furthermore, as the national monthly price for SB-WLR is not inflated by the BU-LRAIC+ costs for Non-reusable Assets from lack of economies of scale and scope as a result of exchanges Outside the LEA (as set out in paragraph 6.147), the national derived price does not result in Eircom over-recovering its actual efficiently incurred costs (plus a rate of return).

- 6.161 In the case where Eircom invests significantly in new access network assets over the price control period Eircom's Actual Costs Adjusted for Efficiencies should ensure that any money invested in maintaining or upgrading its network should be recouped by Eircom in line with its annual HCAs. Therefore, ComReg considers that Eircom's investment incentives are not negatively affected by our proposal for SB-WLR and it may in fact encourage investment.
- 6.162 Similarly, if the derived national price based on the BU-LRAIC+ for Non-reusable Assets and active equipment with Eircom's Indexed RAB applied to Reusable assets (consistent with the 2013 Recommendation) inside the LEA is higher than Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally with active equipment based on the BU-LRAIC+ costs then the appropriate build or buy signals are provided. ComReg considers that this approach is also consistent with Advocate General's opinion in the *Arcor* case (see paragraphs 4.82-4.86).
- 6.163 This Option is consistent with Regulation 13(2) of Access Regulations, which specifies that the regulator should "... *Take into account the investment made by the operator which the Regulatory considers relevant and also the operator a reasonable rate of return on adequate capital employed...*". The Revised CAM includes the actual costs which have been adjusted for efficiencies and uplifted for the rate of return based on the fixed line telecoms WACC of 8.18%, associated with the provision of SB-WLR nationally.
- 6.164 ComReg considers that in the LEA the objective is to maximise viable infrastructure investment. Therefore, there should be a sufficient space between the price of SB-WLR and LLU (or SLU) in the LEA. This has been addressed by the price floor obligation set out in the Bundles Decision.
- 6.165 For Option C, the Revised CAM has derived a monthly rental price for SB-WLR of €16.72 (including fault repair costs and provisioning costs) nationally and €12.51 (including fault repair costs) for SB-WLR in the LEA.
- 6.166 ComReg is of the preliminary view that in order to ensure overall cost recovery by Eircom and to ensure that LLU operators' investments are protected in the LEA the rental price for SB-WLR should be based on the higher of:
- a) €16.72 or
 - b) €12.51 (LEA costs).

ComReg's Preliminary View:

- 6.167 For SB-WLR, the monthly rental charge should be derived based on the higher of:

- (i) Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally with the BU-LRAIC+ costs applied to the active equipment; or
- (ii) BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets for the provision of SB-WLR in the LEA.

6.168 Eircom should charge a monthly rental for SB-WLR which is the higher of:

- a) €16.72; or
- b) €12.51.

Q. 11 Do you agree with ComReg's preliminary view that the monthly rental price for SB-WLR should be based on the higher of the Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally (with active equipment based on BU-LRAIC+ costs) or the BU-LRAIC+ costs for Non-reusable Assets and active equipment with Eircom's Indexed RAB applied to Reusable Assets for the provision of SB-WLR in the LEA? Please provide reasons for your response.

6.7 Pricing principles for SB-WLR ISDN PRA / FRA

6.169 The discussion at subsection 6.6 focuses on copper access delivery of SB-WLR (including ISDN BRA¹¹²). In this subsection we consider delivery of SB-WLR by ISDN via primary rate access ('PRA') and fractional rate access ('FRA'). The PRA and FRA services deliver between 15 and 30 voice channels over a 2 Mbps bearer that may be delivered over two copper pairs using high bit rate digital subscriber line ('HDSL') modems, or may be delivered over fibre optic cable using the Eircom martis (leased line) platform. While these costs have not been captured to date in the model we consider that the pricing principles established in subsection 6.6 would also apply in this context.

6.170 ComReg considers that for SB-WLR ISDN PRA and FRA, Eircom would be required to charge no more than the higher of:

- Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR ISDN nationally with the BU-LRAIC+ costs applied to the active equipment; or
- BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets for the provision of SB-WLR ISDN FRA and PRA services in the LEA.

¹¹² Basic rate access.

6.171 We will continue to review these costs as part of the consultation process.

Q. 12 Do you agree with ComReg's preliminary view that the monthly rental price for SB-WLR ISDN PRA and FRA services should be based on the higher of the Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR ISDN FRA and PRA nationally (with active equipment based on BU-LRAIC+ costs) or the BU-LRAIC+ costs for Non-reusable Assets and active equipment with Eircom's Indexed RAB applied to Reusable Assets for the provision of SB-WLR ISDN FRA and PRA services in the LEA? Please provide a reason for your response.

Chapter 7

7 Pricing approach for SABB

7.1 Introduction

- 7.1 In this chapter we assess the options and the preferred approach for setting the price for SABB Outside the LEA.
- 7.2 In Chapter 4, ComReg assessed the various costing methodology options for LLU, SLU, SB-WLR, SABB, CEI and dark fibre. As set out in Chapter 4 ComReg is of the preliminary view that in general Eircom's Indexed RAB should be applied to the Reusable Assets in the access network while the BU-LRAIC+ methodology should be applied to Non-reusable Assets, in line with the 2013 Recommendation.
- 7.3 In Chapter 5, ComReg sets out the proposed approach for determining the access network costs in the Revised CAM.
- 7.4 This chapter combines ComReg's preliminary views on the appropriate costing methodologies (Chapter 4) and dimensioning the Revised CAM model (Chapter 5) to determine the draft output price for SABB. In particular, how the costing methodology in Chapter 4 should be applied in order to set the SABB price taking into account the likely prospects of investment by alternative infrastructure as well as the assurance of cost recovery by Eircom.
- 7.5 This Chapter is discussed under the following headings:
- Background on SABB; and
 - Pricing options for SABB.

7.2 Background on SABB

- 7.6 Up until 1 July 2013 the wholesale Bitstream service provided by Eircom could only be purchased with a POTs based Bitstream service — where the voice and the ADSL / ADSL2plus service was integrated over the same 2-wire copper pair.
- 7.7 Since July 2013, Eircom offers a SABB (also commonly referred to as Naked DSL) service which allows an ADSL / ADSL2plus service to be delivered over a 2-wire copper pair without a voice telephony or POTs service.
- 7.8 SABB is a WBA product purchased without SB-WLR and Eircom launched the SABB service as the wholesale equivalent of their retail standalone broadband / SABB offer.

- 7.9 The current margin squeeze test between WPNIA and WBA (which determine the minimum price floor for SABB) in the Bundles Decision uses the LLU price as the key input into the SABB price floor to ensure an OAO using the LLU service is in a position to profitably replicate the Eircom wholesale and retail standalone broadband service.
- 7.10 In the WBA Pricing Decision, ComReg imposed a national cost orientation obligation (with a sub-national cost orientation obligation Outside the LEA) in the WBA market. The cost orientation obligation Outside the LEA for Bitstream and bitstream managed backhaul ('**BMB**') services specifies that Eircom should recover no more than its actual incurred costs, adjusted for efficiency (plus a reasonable rate of return) associated with the provision of these services and in line with the Bitstream cost model.
- 7.11 For SABB, ComReg imposed the obligation of cost orientation with regard to the provision of SABB Outside the LEA. ComReg considered that Outside the LEA, Eircom may price excessively for SABB services, given that there is little or no alternative infrastructure competition in this area. Outside the LEA there are fewer access alternatives available and Eircom's prices do not appear to be constrained at a wholesale or retail level in this area to a similar extent to the LEA. Therefore, ComReg's objective is to protect those operators and, ultimately, consumers in rural areas from excessive prices where they decide to purchase a broadband only service from Eircom.
- 7.12 As set out in the WBA Pricing Decision, SABB is also subject to a retail margin squeeze test. This test should ensure that Eircom cannot offer or price its SABB retail product below the relevant retail and wholesale costs of providing SABB in either the LEA or Outside the LEA in line with the current DCF model. Eircom is also subject to a minimum price floor with regard to the price that it can charge for SABB (see paragraph 7.9).
- 7.13 The WBA Pricing Decision noted that in the absence of a cost model to determine the appropriate cost oriented price Outside the LEA for SABB, ComReg considered that the price for SABB in the interim period should be based on no more than the SB-WLR price less the costs avoided by not providing a voice service.
- 7.14 In this Draft Decision we are further specifying the obligation of cost orientation with regard to the provision of SABB Outside the LEA only.

7.3 Pricing options for SABB

- 7.15 In determining the cost oriented SABB price Outside the LEA ComReg considered the costs associated with the provision of SABB. ComReg considers that the following costs are relevant to SABB:

- LLU;
- Digital Subscriber Line Access Multiplexers (**'DSLAMs'**); and
- Broadband Remote Access Servers (**'BRAS'**).

7.16 It is important to note that backhaul costs have been excluded from the proposed cost stack for SABB given that Eircom charges for traffic/usage separately.

7.17 ComReg considers that the key difference between SABB and legacy Bitstream is the fact that SABB includes the cost of local loop access while local loop access must be purchased separately with legacy Bitstream, e.g., through SB-WLR PSTN access or its retail equivalent product.

7.18 The local loop is the key constituent / cost of the LLU price. ComReg considers that demand for SABB may arise in exchanges where LLU is not envisaged and therefore the average copper pair costs relevant to SABB may not be the same as the average copper pair costs relevant to LLU.

7.19 Instead, given the similarities between SABB and legacy Bitstream, ComReg considers that the SABB price should be expected to recover the equivalent local loop costs as the SB-WLR PSTN product, which shares the local loop with legacy Bitstream. This should ensure that the SABB price allows Eircom to recover its costs while it also encourages OAOs to climb the ladder of investment when it is economically efficient to do so.

7.20 ComReg is of the preliminary view that there are two options for setting the cost oriented price for SABB Outside the LEA as follows:

- Option 1: Eircom's Actual Costs Adjusted for Efficiencies for the provision of SABB Outside the LEA (with active equipment based on BU-LRAIC+ costs); and
- Option 2: BU-LRAIC+ and Eircom's Indexed RAB for the provision of SABB Outside the LEA i.e., a BU-LRAIC+ approach for Non-reusable Assets and active assets and Eircom's Indexed RAB for Reusable Assets for the provision of SABB Outside the LEA.

Figure 39: Draft output rental prices for SABB Outside the LEA

Options	€ - SABB Outside the LEA
Option 1 – Outside the LEA costs (Eircom’s Actual Costs Adjusted for Efficiencies)	22.16*
Option 2 – Outside the LEA costs (TD and BU)	31.09**

*Including fault repair and provisioning costs

** Including fault repair costs

7.3.1 Option 1: Eircom’s Actual Costs Adjusted for Efficiencies for the provision of SABB Outside the LEA with active equipment based on BU-LRAIC+ costs

7.21 Option 1 means establishing the costs for all assets associated with the provision of SABB Outside the LEA based on Eircom’s Actual Costs Adjusted for Efficiencies while the BU-LRAIC+ methodology is used for the active equipment (i.e., line card, DSLAMs and BRAS). This cost is subsequently used to set the SABB price Outside the LEA based on the average cost of a line Outside the LEA.

7.22 This Option would not reflect the provision for replacement of Non-reusable Assets, as set out in Chapter 4 in paragraphs 4.128 to 4.132 i.e., this Option would not include the additional 8% replacement of the \times pole base. Instead under this Option the SABB price Outside the LEA would only reflect Eircom’s reinvestment of $\text{€}\times$ (or \times poles) each year over the three year price control period (as adjusted by price trends), as described in Chapter 4 in paragraphs 4.126 and 4.133. However, if it were the case that Eircom invested significantly more in its copper access network, the materiality of this investment would have to be considered in terms of the SABB price Outside the LEA. This should allow Eircom to recover any money invested in maintaining or upgrading its copper access network on the basis that Eircom will have the assurance that what it spends can be recovered via the prices it can charge for SABB services Outside the LEA.

7.23 ComReg considers that if there is no prospect of a competitor replicating the service in question (or bypassing the bottleneck with an alternative platform), it is reasonable to base the regulatory price on Eircom’s Actual Costs Adjusted for Efficiencies. There may be limited rationale to allow the Incumbent to base its prices of unreplicable infrastructure on replacement costs if this means that the Incumbent recovers more than the cost it actually incurred. The concept of asset replicability means that if there is actual investment the Incumbent will recover the cost of the asset, if there is no investment and assets are “sweated” to get the maximum value from them then the Incumbent will not be compensated over

and above the initial gross book value. Therefore, this creates the appropriate investment signals for the Incumbent.

- 7.24 Using Eircom's Actual Costs Adjusted for Efficiencies for the provision of SABB Outside the LEA may be more pragmatic and practical especially where there are limited prospects of investment in alternative infrastructure. ComReg considers that Eircom's Actual Costs Adjusted for Efficiencies may be more appropriate especially with regard to the area Outside the LEA rather than the MEA approach or BU-LRAIC+ approach for Non-reusable Assets Outside the LEA adopted in the LEA where competing infrastructures exist. The risk of using the MEA / BU-LRAIC+ approach for Non-Reusable Assets is that it could calculate the cost of a new network being built today and not the actual costs incurred by Eircom and therefore could reward Eircom for investments that did not / may not take place.
- 7.25 The reason for choosing Eircom's Actual Costs Adjusted for Efficiencies as opposed to the BU-LRAIC+ for Non-reusable Assets is mainly due to the fact that in the absence of alternative network competition the BU-LRAIC+ approach may result in excessive pricing Outside the LEA as it facilitates the recovery of hypothetical costs which may not have been actually incurred. Given the extent of depreciated assets in Eircom's network and the fact that these assets may not be replaced by Eircom, the BU-LRAIC+ methodology could give rise to significant increases in prices Outside the LEA. This would be detrimental to end-users and OAOs that have no alternatives. While BU-LRAIC+ may be useful in setting the appropriate build-or buy signals for other networks this consideration is less relevant Outside the LEA.
- 7.26 Using Eircom's Actual Costs Adjusted for Efficiencies (combined with the BU-LRAIC+ cost for active equipment) should allow Eircom to recover any money invested in maintaining or upgrading its network on the basis that Eircom will have the assurance that what it spends can be recouped. Therefore, ComReg considers that Eircom's investment incentives are not negatively affected by our proposal for SABB and it may in fact encourage investment Outside the LEA.
- 7.27 This Option is consistent with Regulation 13(2) of Access Regulations, which specifies that the regulator should "*.... take into account the investment made by the operator which the Regulatory considers relevant and allow the operator a reasonable rate of return on adequate capital employed....*". The Revised CAM includes the actual efficient costs (plus a reasonable rate of return based on the fixed line telecoms WACC of 8.18%) associated with the provision of SABB Outside the LEA.
- 7.28 ComReg considers that this Option may not be entirely consistent with the 2013 Recommendation, especially with regard to the treatment of Non-reusable Assets. According to the 2013 Recommendation, Non-reusable Assets should

be based on BU-LRAIC+ in order to send the correct build-or-buy signals for infrastructure investment. However, given that the objective is not to stimulate alternative operator investment where it is clear no commercial operator might invest, the need for build-or-buy signals are less relevant in this area. Instead Eircom's Actual Costs Adjusted for Efficiencies (combined with the BU-LRAIC+ costs for active equipment) for the provision of SABB Outside the LEA ensures that there is no over or under recovery of costs by Eircom. In addition, this approach is consistent with the WBA Pricing Decision¹¹³.

- 7.29 For Option 1, the Revised CAM has derived a preliminary maximum rental price for SABB Outside the LEA of €22.16 (including fault repair costs and provisioning costs but excluding traffic/usage costs).
- 7.30 ComReg is of the preliminary view that the price for SABB Outside the LEA should be based on Eircom's Actual Costs Adjusted for Efficiencies for the provision of SABB Outside the LEA with the active equipment based on the BU-LRAIC+ costs. ComReg consider that this approach ensures cost recovery by Eircom.
- 7.31 The SABB rental price of €22.16 Outside the LEA is a maximum price which allows Eircom to charge a lower price so long as it complies with the WBA Price Floors Decision (ComReg Decision D06/12) and the WBA Pricing Decision (ComReg Decision D11/14). Given that SABB is sold in the LEA and Outside the LEA Eircom can set the same price in both areas so long as it complies with the various pricing decisions i.e., the WBA price floor, the national cost orientation obligation specified in the WBA Pricing Decision and the proposed obligation relating to SABB Outside the LEA. The WBA Pricing Decision specified that nationally Eircom should recover no more than its actual incurred costs adjusted for efficiency plus a reasonable rate of return for the provision of current generation Bitstream services.

7.3.2 Option 2: BU-LRAIC+ costs and Eircom's Indexed RAB for the provision of SABB Outside the LEA

- 7.32 Option 2 means establishing the costs for the assets associated with the provision of SABB Outside the LEA based on the BU-LRAIC+ methodology for Non-reusable Assets and active equipment (i.e., line card, DSLAMs and BRAS) and using Eircom's Indexed RAB for Reusable Assets. This cost is subsequently

¹¹³ For the purposes of this draft decision the active equipment (line card, DSLAMs and BRAS) is based on the BU-LRAIC+ costs to ensure that our approach is consistent with the 'build or buy' signals required.

used to set the SABB price Outside the LEA based on the average cost of a line Outside the LEA.

- 7.33 ComReg considers that this Option would be consistent with the 2013 Recommendation. The BU-LRAIC+ methodology for Non-reusable Assets ensures that the price transmits the correct 'build or buy' signals to inform investors' decisions. For Reusable Assets it would be inefficient for operators to build new civil infrastructure such as duct and poles when it is possible to re-use the existing assets by buying access to them from Eircom. By using Eircom's Indexed RAB the Reusable Assets Eircom should recover its actual efficient investment in these assets rather than the higher costs that would be required to build such infrastructure today.
- 7.34 This Option would reflect the proposed adjustment to Reusable Assets i.e., poles and ducts, to take account of the fact that some of these assets cannot be reused for NGA services and therefore must be replaced. As described in Chapter 4 in paragraphs 4.123 to 4.134 we have made assumptions in the Revised CAM regarding the replacement and reinvestment in poles and ducts as well as assumptions regarding the reuse of existing poles and ducts. For poles and ducts that need to be replaced, we propose that these should be based on BU-LRAIC+ costs while poles and ducts that can be reused should be based on Eircom's Indexed RAB.
- 7.35 ComReg considers that given that the objective is not to stimulate alternative operator investment where it is clear no commercial operator might invest, the need for build-or-buy signals are less relevant in this area. Instead Eircom's Actual Costs Adjusted for Efficiencies ensures that there is no over or under recovery of costs by Eircom.
- 7.36 If there is no prospect of a competitor replicating the service in question (or bypassing the bottleneck with an alternative platform), it is reasonable to base the regulatory pricing on historical costs. This is discussed at paragraphs 7.23 – 7.25.
- 7.37 The BU-LRAIC+ methodology for Non-reusable Assets could give rise to increases in wholesale (and retail) broadband prices Outside the LEA in the medium term which would be detrimental to end-users and wholesale operators that have no alternative options for broadband provision. While BU-LRAIC+ may be useful in setting the appropriate build-or buy signals for other networks this consideration is less relevant Outside the LEA.
- 7.38 Using Eircom's Actual Costs Adjusted for Efficiencies may be more pragmatic and practical especially where there are limited prospects of investment by alternative infrastructure. Please refer to paragraphs 7.23 – 7.27 for a further discussion on the use of Eircom's Actual Costs Adjusted for Efficiencies.

- 7.39 For Option 2, the Revised CAM has derived a preliminary maximum rental price for SABB of €31.09 (including fault repair costs and excluding traffic/usage costs).
- 7.40 Furthermore, the maximum rental price under this Option is greater than the national price of SB-WLR plus the costs of BMB (including port charge) meaning that there may be little or no incentive for an OAO to purchase SABB Outside the LEA.
- 7.41 ComReg is of the preliminary view that a price for SABB Outside the LEA based on the BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets for the provision of SABB Outside the LEA is not appropriate as it may lead to over recovery of costs by Eircom.

ComReg's Preliminary View:

- 7.42 For SABB Outside the LEA, the maximum monthly rental charge should be derived based on Eircom's Actual Costs Adjusted for Efficiencies and with the BU-LRAIC+ methodology for active equipment for the provision of SABB Outside the LEA.
- 7.43 The maximum monthly rental charge for SABB Outside the LEA should be no more than €22.16 (including fault repair and provisioning costs but excluding traffic / usage costs).

Q. 13 Do you agree with ComReg's preliminary view that the monthly rental price for SABB Outside the LEA should be based on Eircom's Actual Costs Adjusted for Efficiencies with the active equipment based on the BU-LRAIC+ methodology for the provision of SABB Outside the LEA? Please provide reasons for your response.

Chapter 8

8 Pricing approach for Civil Engineering Infrastructure and Dark Fibre

8.1 Introduction

- 8.1 In this chapter we assess the options and the preferred approach for setting the prices for CEI (duct access and pole access) and dark fibre.
- 8.2 In Chapter 4, ComReg assessed the various costing methodology options for LLU, SLU, SB-WLR, SABB, CEI and dark fibre. As set out in Chapter 4, ComReg is of the preliminary view that in general Eircom's Indexed RAB should be applied to the Reusable Assets in the access network while the BU-LRAIC+ methodology should be applied to Non-reusable Assets, in line with the 2013 Recommendation.
- 8.3 In Chapter 5, ComReg sets out the proposed approach for determining the access network costs in the Revised CAM.
- 8.4 This chapter combines ComReg's preliminary views on the appropriate costing methodologies (Chapter 4) and dimensioning the Revised CAM model (Chapter 5) to determine the draft output price(s) for CEI and dark fibre. In particular, this chapter considers how the costing methodology in Chapter 4 should be applied in order to set the CEI and dark fibre prices taking into account the likely prospects of investment by alternative infrastructure as well as the assurance of cost recovery by Eircom.
- 8.5 The remainder of this chapter is discussed under the following headings:
- Background;
 - Pricing of pole access;
 - Pricing of duct access; and
 - Pricing of dark fibre.

8.2 Background

- 8.6 ComReg recognises that access to CEI, in particular duct and poles, facilitates investment at the deepest level of the network. The deployment of NGA networks involving FTTH or FTTC requires the deployment of fibre cables. If existing CEI can be reused to deploy these fibre cables the most efficient outcome requires

that this re-use is encouraged as having to build new ducts/trenches or poles to accommodate the fibre cables would lead to inefficient network duplication and inhibit NGA deployment by OAOs.

- 8.7 Therefore, where a NGA network is deployed by an alternative operator, access to CEI is considered necessary and proportionate.
- 8.8 In the NGA Decision, ComReg imposed an obligation on Eircom to provide access to CEI on an Equivalence of Output¹¹⁴ ('EoO') basis where it is technically feasible and economically viable to do so. Where access to CEI is not viable for economic, technical or capacity reasons, Eircom is obliged to provide access to dark fibre, where it is available. Please refer to Chapter 4 of the NGA Decision for further details. This Draft Decision does not affect this obligation and access requirements.
- 8.9 An important consideration for ComReg and Eircom in the coming years is the potential of copper withdrawal by Eircom Outside the LEA (or more particularly in the NBP intervention area). In a separate review, ComReg published a Call for Input in December 2014 in ComReg Document No 14/126 "*National Broadband Plan – Call for Input on Regulatory Implications*" ('Call for Input')¹¹⁵.
- 8.10 Eircom in its response to the Call for Input stated that "*An emerging hypothesis is that all or a majority of the services delivered under the NBP intervention will be based on fibre access technology. To ensure maximum value for the Government intervention, the provision of a future-proof solution will need to be provided as cost-effectively as possible. The current obligation on eircom as the USP is to not withdraw any service on its technology platform for a period of time approved by ComReg. If a long transition period is determined by ComReg the USO costs of maintaining a parallel network will extend over a longer period. Consequently it is in the interests of all stakeholders such as other operators who would have to contribute to the USO costs, and ultimately to end user customers who would fund these costs through their payments for service, that the parallel operation of both a copper and fibre network should be for as limited a period as practicable.*"
- 8.11 For the avoidance of doubt, currently Eircom may not withdraw access already provided to other operators without ComReg's permission. It also has various USO obligations. ComReg has published, in ComReg Document 15/57¹¹⁶, its response to the Call for Input regarding the NBP. Please refer to Section 2.4 of

¹¹⁴ EoO means that Eircom shall provide all wholesale access products to access seekers in a manner which is comparable or identical to those it provides to itself in terms of functionality and price, albeit potentially using different systems and processes.

¹¹⁵ http://www.comreg.ie/_fileupload/publications/ComReg14126.pdf

¹¹⁶ http://www.comreg.ie/_fileupload/publications/ComReg1557.pdf

ComReg Document 15/57 for further discussion on the transition from copper to fibre access networks.

- 8.12 While the potential withdrawal of copper in the NBP intervention area requires further consideration and assessment from ComReg, the proposed pricing assumption of two cables per pole (subsection 8.3.1 below) and the derived price per annum would mean that in circumstances where copper were withdrawn that the cost per pole would increase.
- 8.13 The proposed approach for setting pole access prices is discussed below.

8.3 Pricing of pole access

- 8.14 The annual price of pole access is based solely on the cost of poles.
- 8.15 The cost of pole access in the Revised CAM consists of such cost categories as depreciation, operating costs, common costs and wholesale specific costs (carrier administration and billing costs).
- 8.16 As set out in Chapter 4 (paragraphs 4.123 to 4.134) the pole costs are based on a combination of TD costs (Eircom's Indexed RAB) and BU-LRAIC+ costs. Eircom's Indexed RAB is used for those poles that can be reused for NGA and the BU-LRAIC+ costs are applied to poles that need replacement. In the Revised CAM we account for pole replacement at 8% of Eircom's pole base of $\text{€} \times$ based on BU-LRAIC+ costs / replacement costs, which means that the model assumes an extra $\text{€} \times$ poles based on replacement costs.
- 8.17 In the TD valuation we have taken into account Eircom's committed capital investment in poles for 2015 (at $\text{€} \times$ poles at a cost of circa $\text{€} \times$). We have assumed the same level of investment ($\text{€} \times$ poles) over the three year price control period (adjusted for annual price trends) which means an additional $\text{€} \times$ poles based on TD costs. The TD costs are adjusted to a reutilisation level of 92%. The details are contained in Chapter 4 (paragraphs 4.123 to 4.143).
- 8.18 As set out in Chapter 4 (paragraph 4.142), Eircom would be required to provide an annual comparison of the actual number of poles installed on its network with the quantity of new and replacement poles allowed for in the Revised CAM. ComReg considers that this valuation approach supports cost recovery and continued investment by Eircom in its existing access network, where appropriate¹¹⁷. This should allow Eircom to recover any money invested in maintaining or upgrading its network on the basis that Eircom will have the assurance that what it spends can be recouped. Therefore, if Eircom's investment in poles is significantly different to the volumes of poles provisioned

¹¹⁷ Note that 8% replacement of poles for NGA purposes is a long term view and therefore any reconciliation to Eircom's actual investment may not reconcile.

in the Revised CAM over the next three years ComReg may have to revisit the price per pole.

8.19 The remainder of this subsection looks at the pricing options for pole access.

8.3.1 Pricing options for pole access

8.20 The methodology described in Chapter 4 (paragraphs 4.123 to 4.134) determines the level of cost associated with pole access in the Revised CAM. We now consider the options available in order to determine a per unit price for pole access.

8.21 ComReg has considered the following pricing options with regard to pole access:

- Option 1: Price per meter of cable; and
- Option 2: Price per pole.

8.22 Each option is discussed in turn.

Option 1: Price per meter of cable

8.23 Option 1 means dividing the cost of pole access by the total length of overhead cables. The total length of overhead cable is derived by the BU LRAIC+ model in the absence of robust information from Eircom.

8.24 In the case of pole access the total annual cost of poles reflect the number of poles deployed in the D-Side access network.

8.25 While it would be possible to translate this total cost into a cost per metre of cable supported on poles this Option is not in line with the real cost driver borne by Eircom.

8.26 ComReg is of the preliminary view that the price per meter of cable is not appropriate given the distance between poles can vary and as some poles may not be suitable for reuse.

Option 2: Price per pole

8.27 Option 2 means dividing the total cost of pole access by the total number of poles and by the pole capacity in terms of number of cables.

8.28 In the Revised CAM we assume that there are on average 2 cables per pole. Figure 40 shows the pole access price based on 2 cables per pole and in addition where a single cable may be deployed per pole (in case of copper being removed for example) Figure 40 also shows how the pole access price would increase

pro-rata. ComReg would welcome any views from the Industry with regard to cable fill (2 cables) on poles.

- 8.29 The total number of poles in the Revised CAM is based on Eircom's pole base of 8.
- 8.30 The dimensioning rules for pole access in the Revised CAM are as follows:
- A pole can carry on average 2 cables¹¹⁸, otherwise the network is buried;
 - If the existing network has no cables then no pole is required;
 - If the existing network deploys 2 cables then the pole is considered at full capacity so pole access is not available;
 - If there is a single cable on the pole then the pole can be accessed / rented;
 - If at a later stage the original cable is removed then the pole will hold only one cable therefore the cost of the pole should then be recovered over a single cable.
- 8.31 ComReg considers that an OAO can access/rent Eircom's poles for those poles that currently exist in the network and which can support the burden of a new cable.
- 8.32 An OAO may require a brand new pole where there is no existing Eircom pole in place to distribute services to the OAOs retail customer. In this case ComReg considers that the OAO should support the cost of installing the new pole itself either through its own procurement process or it should pay Eircom for the new pole.
- 8.33 In the case where the existing pole has no capacity for new cables, this scenario should be already covered by the 8% replacement cost, which is reflected in the proposed pole price below.
- 8.34 ComReg considers that Option 2 is simple to apply and it adheres to the principle of cost causation.
- 8.35 ComReg is of the preliminary view that a price per pole is appropriate for setting pole access prices. Similar to the approach for setting the LLU price, ComReg proposes that the current footprint of the "LEA" will remain fixed at 252¹¹⁹

¹¹⁸Poles can also support one or several final drops. However, ComReg do not propose to allocate any pole costs to these final drop cables because they generate minimal load on the pole as they tend to be in a star configuration.

¹¹⁹Please note that we use 248 exchanges (instead of 252) for price setting purposes given that there are 4 cabinets included in the 252 exchanges which overlap with exchanges / MDFs in the LEA.

exchanges for the purposes of setting the price for pole access over the proposed price control period. This should ensure price stability and certainty for operators.

- 8.36 As poles may be required in the LEA and Outside the LEA we consider that in order to send the appropriate investment signals to each area that the proposed price per pole should reflect the cost per pole in the LEA and Outside the LEA.

Figure 40: Preliminary annual price per pole:

Description	National	LEA	Outside the LEA
Price per pole (2 cables)	€9.87	€11.58	€9.53
Price per pole (1 cable)	€19.74	€23.16	€19.06

ComReg’s Preliminary View:

- 8.37 The price per pole is appropriate for setting pole access prices. The price per pole should reflect the cost per pole in the LEA and Outside the LEA.
- 8.38 The annual price for pole access should be based on the assumption that there are two cables per pole, as set out in Figure 40.

Q. 14 Do you agree with ComReg’s proposed approach for setting the price per pole? Please provide reasons for your response. If respondents have any alternative views regarding any of the assumptions used for setting pole access prices please substantiate your response with evidence, where appropriate.

8.4 Pricing of duct access

- 8.39 In the Revised CAM duct access is the sum of the annual cost of: trenches; ducts; and chambers.
- 8.40 In the Revised CAM, ducts are used by the following cables: D-Side and E-Side cable; NGA fibre links; and leased line fibre links. In the Revised CAM we have assumed that core cables use separate ducts.
- 8.41 In determining the annual cost of duct access the Revised CAM takes into account depreciation; operating costs; common costs; and wholesale specific costs i.e., carrier administration and billing costs.

8.42 As set out in Chapter 4 (paragraphs 4.134), ducts that are reusable should be based on Eircom's Indexed RAB while ducts that are non-reusable and which require replacement should be based on the BU-LRAIC+ costs. In the Revised CAM we account for duct replacement at 5% of Eircom's duct base based on BU-LRAIC+ costs / replacement costs, while we assume 95% of reuse of existing ducts based on Eircom's Indexed RAB. Please refer to Chapter 4 paragraphs 4.123 to 4.134 for further details.

8.43 This remainder of this subsection relates to pricing options for duct access.

8.4.1 Pricing options for duct access

8.44 The methodology described in Chapter 4 (paragraph 4.134) determines the level of cost associated with duct access in the Revised CAM. We now consider the options available in order to determine a per unit price for duct access.

8.45 ComReg has considered the following pricing options with regard to duct access:

- Option 1: Price per meter of cable or sub-duct;
- Option 2: Price per meter.cm²; and
- Option 3: Price per active customer².

8.46 Each option is discussed in turn.

Option 1: Price per meter of cable or sub-duct

8.47 Option 1 entails dividing the total cost relating to duct access by the total length of underground cables or sub-ducts to derive a cost per metre. The total length of underground cable is derived by the BU LRAIC+ model in absence of robust information from Eircom.

8.48 If the duct access service includes sub-duct this approach is reasonable as it respects the principles of cost causation. However, if there is no sub-duct in the offer this approach does not take into account the share of duct capacity occupied by the operators — which is a significant driver of underground CEI costs.

8.49 The cost of trenches is sensitive to the size of the trench, which in turn is driven by the volume occupied by the sub-ducts (when available) or by cables. Under this approach the unit cost of duct is dependent on the total amount of copper and fibre cables hosted on Eircom's network. Sub ducts tend to be of a similar size so pricing on the basis of sub duct is consistent with cost causation due to the cm² size of the trench.

- 8.50 ComReg is of the preliminary view that as Eircom provides sub-ducts for duct access the price per meter of sub-duct may be the more appropriate approach as it recognises the main cost driver for ducts.

Option 2: Price per meter.cm²

- 8.51 Option 2 entails dividing the total costs of duct access by the total volume (in cm²) of cables to derive a cost per meter.cm². The total volume of underground cable is derived by the BU LRAIC+ model in the absence of robust information from Eircom.
- 8.52 If the duct access product does not include the provision of sub-ducts then this approach respects the cost causation principle because the number of ducts is driven by the volume occupied by cables. This provides the right incentives to OAOs to minimise the size of cables it deploys within Eircom's ducts. However, if sub-ducts are included then this approach is less relevant as all sub ducts have a similar size and a price per metre is a more practical solution.
- 8.53 ComReg is of the preliminary view that price per meter.cm² is not appropriate as the duct access product includes sub-ducts which means that this approach would be more complex than Option 1.

Option 3: Price per active customer²

- 8.54 Option 3 entails pricing for duct access on the basis of the relative share of active customers provided with service on the cable route.
- 8.55 This Option facilitates the deployment of FTTH as the cost allocation of duct access to fibre cables will be sensitive to the number of customers taking-up the service — the cost per customer will not be prohibitive in the early years of network deployment of FTTH due to the number of active legacy technology customers. This is the approach followed by ARCEP in France.
- 8.56 However, this Option is quite complicated to implement when two technologies co-exist along the duct route and it is less useful for FTTC deployment scenarios.
- 8.57 ComReg is of the preliminary view that price per active customer² is not appropriate given its complexity and on the basis that it is less useful for FTTC deployment.

ComReg's Preliminary View:

- 8.58 The price per meter of sub-duct should be used to set duct access prices.

Q. 15 Do you agree with ComReg's preliminary view that price per meter of sub-duct should be used for setting duct access prices? Please provide reasons for your response.

8.4.2 Duct access pricing: surface type

8.59 Two other factors that influence the costs associated with duct access are the surface type in which the duct is deployed and whether the duct is deployed in Dublin or outside Dublin ("Provincial").

8.60 The cost of trench excavation and surface re-instatement will differ depending on the surface type while contractor charges are higher in Dublin than in other areas.

8.61 The Revised CAM considers three surface types for duct, as follows:

- Carriageway: this refers to duct that is laid beneath the road surface and is the most expensive duct — as the cost of excavation is higher as well as the cost of surface re-instatement;
- Footway: this refers to duct that is laid beneath the footpath and is less expensive than carriageway; and
- Verge: this refers to duct that is laid by the road side and is the least expensive to deploy.

8.62 ComReg considers that the cost differentials are sufficient to warrant a different price depending on the surface type as this is reflective of the way contractors typically charge for their services and in particular it is the method which contractors are currently charging Eircom.

8.63 ComReg is of the preliminary view that the duct access prices should reflect the cost differences that arise between Dublin exchanges and provincial areas. At Annex 13 we have provided a list of the exchanges which are subject to "Dublin" duct access prices. All other exchanges are subject to "Provincial" duct access prices.

ComReg's Preliminary View:

8.64 The duct access prices should reflect the cost differences between Dublin and provincial areas.

8.65 The Revised CAM has derived the following preliminary annual prices for duct access:

Figure 41: Preliminary annual price per metre of sub-duct for duct access

Description	Dublin - €	Provincial - €
Carriageway	2.78	1.55
Footway	2.13	1.25
Verge	1.30	0.93

Q. 16 Do you agree with ComReg’s preliminary view that duct access prices should reflect the cost differences between Dublin and provincial areas? Please provide reasons for your response.

8.5 Pricing of dark fibre

8.66 For dark fibre the total annual cost of fibre cables reflect the quantity of fibre cables deployed in the access network including NGA fibre links (to connect street cabinets with DSLAMs) and Leased Line access links¹²⁰.

8.67 The relevant costs for dark fibre include costs associated with trench, chambers, duct and sub-duct, poles and fibre cables (including joints).

8.68 The annual costs in the Revised CAM comprise associated depreciation charges and relevant operating costs, common costs and process charges (or wholesale specific costs).

8.69 As set out in Chapter 4, in general Reusable Assets should be based on Eircom’s Indexed RAB while Non-reusable Assets should be based on the BU-LRAIC+ methodology. The provision of dark fibre is based on a combination of Reusable Assets and Non-reusable Assets. Therefore, in line with our proposed approach set out in Chapter 4 the price for dark fibre should be derived based on Eircom’s Indexed RAB for Reusable Assets and the BU-LRAIC+ methodology for Non-reusable Assets.

8.70 The remainder of this subsection relates to pricing options for dark fibre.

8.5.1 Pricing options for dark fibre

8.71 The methodology described in subsection 8.5 determines the level of cost associated with dark fibre in the Revised CAM. We now consider the options available in order to determine a per unit price for dark fibre.

¹²⁰ Core cables are not included as dark fibre is taken to mean “unlit fibre in Eircom’s access network”.

8.72 ComReg has considered the following options with regard to the pricing approach for dark fibre:

- Option 1: Price per metre of fibre; and
- Option 2: Price per link

Option 1: Price per metre of fibre

8.73 Option 1 entails dividing the total annual cost of fibre by the total length of fibres.

8.74 This Option is straightforward to implement once the annual cost and quantity of fibre is known and both these values can be derived from the Revised CAM. When sub-ducts are included in the offer it also has the advantage that it respects the principle of cost causality.

8.75 ComReg is of the preliminary view that the price per metre of fibre is the more appropriate approach for setting dark fibre prices as distance is the main driver of costs.

Option 2: Price per link

8.76 Option 2 means dividing the total annual cost of dark fibre by the total number of links (one link equals one fibre leased line customer site or one street cabinet with a DSLAM).

8.77 This Option means that the price per link will be the same regardless of the length or location of the link.

8.78 This Option does not respect the cost causation principle.

8.79 ComReg is of the preliminary view that the price per link is not appropriate for setting dark fibre prices for the reasons set out above.

8.80 The Revised CAM has derived the following preliminary annual prices for dark fibre:

Figure 42: Preliminary annual price per meter for dark fibre:

Description	National	LEA	Outside the LEA
Price per metre of fibre	€0.19	€0.19	€0.17

ComReg's Preliminary View:

- 8.81 The price per meter of fibre is appropriate for setting dark fibre prices.
- 8.82 The annual price per meter for dark fibre should be no more than €0.19 nationally. It is important to note that the pricing obligation for dark fibre is only relevant where duct access is at full capacity and where dark fibre is available.

Q. 17 Do you agree with ComReg's preliminary view that national price per meter is appropriate for setting dark fibre prices? Please provide reasons for your response.

Chapter 9

9 Pricing approach for Line Share

9.1 Introduction

- 9.1 In this chapter we assess whether the incremental cost approach for setting the monthly rental charge for Line Share should be maintained over the proposed price control period.
- 9.2 Unlike the other wholesale access services (of LLU, SLU, SABB, SB-WLR, CEI and dark fibre), Line Share is not derived from the outputs of the Revised CAM. Instead the current monthly rental price for Line Share is based on the incremental cost of supporting a broadband service on a line that is also used to support narrowband services.
- 9.3 In 2009, ComReg published the Line Share Decision whereby it set the maximum monthly rental charge of €0.77 for Line Share. The Line Share price is based on the incremental cost (excluding fault clearance) of supporting broadband services on a line that is also used to support narrowband services. Therefore, the maximum charge of €0.77 for Line Share does not include the costs of the local loop as this cost is already reflected in retail and wholesale narrowband prices.

9.2 Pricing approach for Line Share

- 9.4 As 100% of the costs of the local loop are already recovered through the price charged for retail and wholesale narrowband access, the incremental cost approach for Line Share ensures that Eircom does not over recover its costs with regard to the Line Share monthly rental price.
- 9.5 The incremental costing methodology adopted in the Line Share Decision solely considered those costs relevant to the ongoing day-to-day running of the Line Share service. These incremental costs included the following:
- Remedial costs associated with pair gain removal; and
 - Carrier administration and billing costs.
- 9.6 The remedial costs associated with pair gain systems removal related to a number of lines on which Eircom had previously deployed multi-channel customer carriers¹²¹ so as to allow more than one customer to receive service over a copper pair. However, while such lines were suitable for narrowband voice

¹²¹ Also referred to as telephone pair gain systems.

services they could not support broadband services and the carriers had to be removed to ensure that, going forward, those lines would be suitable for delivering broadband services.

- 9.7 As a result Eircom undertook a programme of carrier removal to ensure these lines were suitable for broadband and ComReg decided that these costs were relevant to the Line Share service.
- 9.8 For pricing purposes the costs associated with this programme were considered as a capital cost. Once the capital cost of the pair gain system was determined, this cost was depreciated over a period of time and the monthly depreciation charge represented an incremental cost towards the cost of providing the Line Share service. ComReg applied a 10 year depreciation period and the return on capital was also included as part of the annual cost associated with this programme.
- 9.9 Other costs that were deemed to be relevant to the Line Share Decision related to carrier administration and billing costs associated with managing and billing the Line Share product.
- 9.10 As part of this review, ComReg received cost projections from Eircom for the categories of costs discussed above for the purposes of determining the relevant unit cost for the period of the current proposed price control. An analysis of these costs, together with the projected broadband volumes, enabled ComReg to update the unit cost data for the period of the price control.
- 9.11 The outcome of our review indicates that although costs have fallen as a result of increased efficiencies and a lower WACC (from 10.21% to 8.18%), volumes have also fallen with the result that the cost oriented maximum monthly rental charges for Line Share should remain at €0.77.
- 9.12 ComReg is of the preliminary view that the monthly rental price for Line Share should continue to be based on the incremental cost methodology, at a maximum monthly rental charge of €0.77.

ComReg's preliminary view:

- 9.13 The monthly rental charge for Line Share should continue to be based on the incremental cost methodology as set out in the Line Share Decision (ComReg Decision D04/09).
- 9.14 For Line Share, Eircom should continue to charge no more than the maximum monthly rental charge of €0.77.

Q. 18 Do you agree with ComReg's preliminary views that the incremental cost methodology should remain in place for determining the appropriate monthly rental price for Line Share? Please provide reasons for your response.

Chapter 10

10 Margin squeeze tests

10.1 Introduction

- 10.1 In this chapter we discuss the proposal to further specify the obligation not to cause a margin squeeze as proposed in the 2014 FACO Consultation Document.
- 10.2 This Draft Decision proposes to further specify the margin squeeze between WLR and retail line rental. In addition, we propose to further specify the proposed margin squeeze obligation such that an appropriate economic space is maintained between the price of POTS based VUA against the price for standalone VUA / NGA Bitstream (including a contribution towards Managed VOB costs).
- 10.3 The rest of this chapter is discussed under the following headings:
- Retail margin squeeze test between SB-WLR and retail line rental; and
 - Wholesale margin squeeze test – POTS based VUA.

10.2 Retail margin squeeze test between SB-WLR and retail line rental

10.2.1 Background

- 10.4 In Chapter 4 ComReg has proposed that Eircom should be subject to the obligation of cost orientation with regard to the rental charge for SB-WLR nationally.
- 10.5 As set out at paragraphs 3.37 to 3.39 Eircom is also subject to a RPC pursuant to the **RFVA Decision**. The retail price control is in the form of a RPI-X cap, that is, CPI-0.¹²² The retail price cap is currently set at €20.96. Eircom is subject to the cap but it has flexibility to price below this price cap or the retail line rental price currently at €20.96 to the benefit of consumers should it wish to do so. As set out at paragraphs 3.47 to 3.48 pursuant to the USO Decision, Eircom is subject to geographic average pricing with regard to AFL USO. Therefore, Eircom must charge all subscribers irrespective of their geographic location the same AFL price, particularly for retail line rental.

¹²² Price caps are subject to an increase depending on the inflation rate.

- 10.6 Downward pressure in retail prices is in general to the benefit of consumers. Nevertheless, this perhaps would need to be balanced with any risk to sustainable competition. Essentially, to be able to compete with Eircom in the RFVA markets (whether sold standalone or as part of a bundle), OAOs not only require access to the various wholesale inputs but do so on a basis which does not force them to sell their services at a loss. ComReg is concerned that even if the cost oriented SB-WLR national price would prevent Eircom from increasing its wholesale charge it can, by reducing the retail price, reduce the retail margin available to OAOs such that an OAO cannot replicate Eircom's retail prices either on a standalone basis or in a bundle.
- 10.7 Therefore, even if the SB-WLR price is set on the basis of cost orientation, some form of a margin squeeze test may be required to ensure that alternative operators can continue to compete in the retail market using SB-WLR.

10.2.2 Competition concerns

- 10.8 As set out in the RFVA Decision, ComReg considers that absent regulation Eircom would have close to 100% share of the standalone lower level voice access ('LLVA') market and around 80% of the higher level voice access ('HLVA') market. If carrier pre-select ('CPS') and SB-WLR services are taken into account, Eircom market share is around 53% of the retail HLVA market (at Q4 2013) as set out the RFVA Decision.
- 10.9 In the RFVA Decision, ComReg recognises that absent regulation Eircom would have the ability and incentive to leverage market power into or from both horizontally and vertically related markets. By doing so, Eircom could strengthen its position in those related markets and potentially also reinforce its existing market power in the LLVA market and the HLVA market. For example, Eircom could impose a margin squeeze on SB-WLR by offering discounted non-replicable retail product bundles, thereby undermining the effectiveness of those upstream inputs and impeding the ability of access seekers to effectively replicate the entire retail bundle. Vertical and horizontal leveraging could have the effect of (i) reinforcing its SMP in the LLVA and HLVA markets and / or (ii) leveraging that SMP into related markets since other FSPs (except UPC) are unable to replicate the access part of the bundle.
- 10.10 Such concerns were also identified in the 2014 FACO Consultation Document. In the 2014 FACO Consultation, ComReg stated that a margin squeeze between FACO and downstream prices could undermine the effectiveness of a FACO product offering and, in doing so, could harm competition in downstream markets by eliminating competing service providers, distorting competition or indeed discouraging the entry of new service providers.

10.11 Consequently, ComReg considers that a margin squeeze test is required between the price of retail line rental and the price of wholesale line rental. Retail line rental means standalone lower level voice access services (known as '**Standalone LLVA**'), bundled LLVA (known as '**Bundled LLVA**') and higher level voice access ('**HLVA**'), as specified in the RFVA Decision.

10.12 Set out below are the proposed principles that ComReg considers should apply with regard to the retail margin squeeze test.

10.13 This subsection is discussed under the following headings:

- Retail cost assumptions;
- Operator cost base;
- Appropriate cost standard;
- National or regional basis (i.e., separate margin squeeze tests in the LEA and Outside the LEA); and
- Retail price notification and compliance procedures.

10.2.3 Retail costs and assumptions

10.14 As a starting point, ComReg considers that Eircom's HCAs should be used to determine the level of retail costs associated with retail line rental.

10.15 The proposed retail costs used are the costs of those activities required to provide a retail line rental service that are not required to deliver the wholesale service.

10.16 ComReg considers that the following retail costs are relevant in the context of the provision of retail line rental:

- Product management;
- Marketing and sales;
- Billings costs; and
- Fault reporting costs, and costs associated with customer facing activities during the fault repair process (for example, customer care).

10.17 ComReg also considers that where connection charges are charged separately by Eircom (see Chapter 11 (subsection 11.3.3)), such costs (appropriately discounted over a 42 month customer lifetime) should be included in the cost stack for the purposes of the proposed margin squeeze test, as an alternative

operator would incur a connection charge in order to replicate the retail line rental service.

- 10.18 ComReg is of the preliminary view that the retail costs in the retail margin squeeze test should include product management costs, marketing and sales, billing costs, fault reporting costs and connection costs (where appropriate).

10.2.4 Operator cost base

- 10.19 ComReg considers that there are three options for determining an operator cost base for the retail margin squeeze test, these include:

- Equally efficient operator ('**EEO**')
- Reasonably efficient operator ('**REO**')
- Similarly efficient operator ('**SEO**').

- 10.20 The EEO test is generally based on the Incumbent costs i.e., Eircom's costs while the SEO test is based on the Incumbents costs adjusted for the fact that other operators do not yet enjoy the same economies of scale and scope as Eircom. The REO test is based on a typical entrant operator costs.

- 10.21 The EEO test therefore assumes the efficient costs based on the volumes of the Incumbent. The EEO approach recognises that in a competitive situation, an effective alternative operator will be able to compete only if it is as efficient as the SMP operator. An EEO test would result in a less strict margin squeeze test; consequently Eircom could pass these lower retail costs as a lower price to its retail customers without cutting wholesale prices.

- 10.22 ComReg considers that the consistent growth in demand for SB-WLR since 2008 indicates that the 2008 SB-WLR Price Decision, which is based on an EEO cost standard, is delivering benefits to consumers in terms of contributing to competition in the provision of WLR (see Chapter 6, subsection 6.6). Furthermore, in this case, ComReg considers that in this circumstance the EEO approach may be more consistent with the cost orientation obligation as it would ensure cost recovery for the Incumbent.

- 10.23 A SEO means an operator which shares the same basic cost function as Eircom but does not yet enjoy the same economies of scale and scope as Eircom. The REO is similar to the SEO standard given that they both reflect the fact that OAOs have not achieved the same economies of scope and scale as the SMP operator and this needs to be reflected in the margin squeeze test. In practice, accurate verifiable OAO data is difficult to obtain. Consequently, ComReg has historically estimated a hypothetically efficient operator's appropriate costs by taking Eircom's costs as a starting point as the information available to us in respect of

these costs is more reliable and robust, especially given Eircom's regulatory accounting obligations. Eircom's costs are then adjusted to reflect the lower level of economies of scale and scope available to a hypothetical entrant with a retail broadband market share of 25%. ComReg believes that there is no material difference between the value of cost inputs based on REO and SEO.

- 10.24 ComReg is of the preliminary view that the EEO cost standard should be applied for the proposed margin squeeze test for line rental as it is designed to allow an access seeker to compete with Eircom in the provision of retail line rental, by ensuring that the access seeker can recover the same efficiently incurred retail costs faced by Eircom, while at the same time remaining price competitive in the retail market. Furthermore, SB-WLR is predominantly a building block to launch other products and services such as broadband. In such cases, for example, with respect to current generation WBA the cost standard set out in the WBA Decision allows for smaller economies of scale and scope (e.g., the underlying discounted cash flow ('DCF') of the retail cost of a SEO providing CGA broadband services Outside the LEA. Inside the LEA, the WBA Decision uses a combined approach of SEO and EEO to determine the retail costs of providing CGA broadband services).
- 10.25 The EEO approach would essentially take Eircom's own retail costs associated with the provision of a retail line rental service, on the basis that this represents the margin that would allow Eircom to trade profitably in the retail market on the basis of the margin between its retail price and the wholesale charges its competitors would face.
- 10.26 In other words this parameter has not been adjusted to take account of issues such as access seekers' potentially lower economies of scale and scope.
- 10.27 ComReg is of the preliminary view that the EEO cost standard should be applied to the retail costs in the retail margin squeeze test between retail line rental and wholesale line rental.

10.2.5 Appropriate cost standard

- 10.28 ComReg has considered the following options for the appropriate cost standard in the retail margin squeeze tests:
- Average variable cost ('AVC')
 - Average avoidable cost ('AAC')
 - LRAIC
 - LRAIC plus

- Average total costs ('**ATC**').

- 10.29 In summary, the AVC standard is based on the variable cost of producing an additional unit of output. AVC does not include an allocation of fixed costs, which are the major cost component faced by telecom operators. AAC represent the short-run avoidable variable and incremental fixed costs of the additional sales of the product in question. This standard is distinct from AVC insofar as it includes fixed costs which would otherwise be avoided if the incremental output were no longer produced.
- 10.30 The remaining three options presented above all include a fixed cost allocation. LRAIC is the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run. This approach does not include an apportionment for common costs. 'LRAIC plus' is the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run, plus a mark-up for joint and common costs. ATC is the average total cost and includes variable, fixed, joint and common costs based on historical cost data but with no adjustments for efficiencies.
- 10.31 We consider that to apply an AAC cost rule in an ex-ante context could lead to sub-optimal entry conditions with little entry occurring. This would be to the detriment of competition and, ultimately, consumers. In addition, the avoidable costs is the relevant measure when assessing whether there are concerns around future exclusion or exit of current efficient competitors from the retail market. Given that this is not the issue, we consider that the ATC approach is the appropriate cost standard for the retail margin squeeze test.
- 10.32 The use of ATC ensures that the incumbent recovers all efficiently incurred costs.
- 10.33 ATC requires an operator with SMP to price at levels that include appropriate amounts of variable, fixed and common costs, which is the calculus faced by any operator when deciding to enter or expand. ComReg believes that, under the present market conditions in Ireland, this cost measure is the most appropriate way to promote competition under regulation, and to avoid further deterioration in the already weak state of competition in SMP markets.
- 10.34 ComReg is of the preliminary view that the retail margin squeeze test between retail line rental and wholesale line rental should be based on the ATC costs of Eircom.

10.2.6 National or regional basis (i.e., a separate margin squeeze test in the LEA and Outside the LEA)

- 10.35 ComReg considers that the retail margin squeeze test should be conducted either on:

- a national basis; or
- A separate test inside the LEA and Outside the LEA.

10.36 The national approach would mean that Eircom should ensure that the average of Eircom's retail revenues for its retail line rental product recovers the average total retail and wholesale costs. ComReg considers that the national approach is appropriate given that retail line rental is a national product and Eircom may face different competitive constraints in the LEA and Outside the LEA meaning that there are sound economic reasons in this case to allow some efficient price differentiation¹²³ and hence cost recovery on a national basis.

10.37 ComReg proposes that the retail margin squeeze test should be based on a national basis where Eircom should recover the ATC costs for line rental nationally.

ComReg's Preliminary View

10.38 Eircom should ensure that it does not cause a retail margin squeeze between retail line rental and wholesale line rental where the retail costs are based on the EEO cost standard and where Eircom should recover its ATC costs for line rental nationally.

Q. 19 Do you agree with ComReg's preliminary views regarding the retail margin squeeze test between retail line rental and wholesale line rental and the associated inputs of the test? Please provide reasons for your response.

10.2.7 Retail price notification and compliance procedures

10.39 Similar to the transparency obligations and compliance measures adopted in other pricing decisions (i.e., Bundles Decision, NGA Decision, WBA Pricing Decision), ComReg proposes that the retail margin squeeze test for SB-WLR should follow pre-notification and pre-clearance procedures. In circumstances, where there is a proposed change to the retail line rental price, these procedures ensure a product offering either about to be launched by Eircom or a change to an offer already launched in the retail market is not anti-competitive and is in compliance with the price control obligations imposed on Eircom. The obligations allow ComReg to take action where appropriate and to ensure that products launched by Eircom can be effectively replicated by other operators, where appropriate, and are beneficial to consumers and the marketplace.

10.40 ComReg proposes that Eircom should notify ComReg (by email) of all retail prices for new retail products and for retail price amendments to existing retail

¹²³ As set out in paragraphs 3.37-3.39 the USO requires Eircom to have geographically averaged prices nationally for Retail line rental.

products (in circumstances where there is a proposed change in the retail line rental price) no later than 5 working days prior to the date that the new or revised price is to become operative. If the new or amended retail price being notified gives rise to a wholesale adjustment then the wholesale price notification obligations shall apply.

10.41 For the purposes of a new or revised price and for amendments to existing retail products, Eircom should furnish to ComReg, at the same time as it notifies ComReg, a detailed written statement of compliance demonstrating Eircom's compliance and proposed compliance with the price control obligation. The statement of compliance should include the following:

- (i) A full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control and the retail margin squeeze test based on the Retail Line Rental Margin Squeeze Model.
- (ii) All relevant supporting documentation for the purpose of demonstrating compliance with the price control and the retail margin squeeze test based on the Retail Line Rental Margin Squeeze Model.

10.42 Upon receipt of the statement of compliance ComReg will review it. Within the 5 working day period ComReg may do one or more of the following things:

- (i) Provide Eircom with both (a) an appropriate written view, insofar as possible based on the available information provided by Eircom at that point in time, in relation to the statement of compliance and (b) written confirmation that the making available or offering for sale of the new or existing retail product appears to be in compliance with the retail margin squeeze test. However, any such written view or confirmation provided by ComReg is a *prima facie* view and does not fetter ComReg's future discretion in relation to its statutory powers;
- (ii) Request any further information from Eircom and set a deadline by which such information shall be provided. Eircom should provide the requested information by the deadline and in such format and to the level of detail as stipulated by ComReg. Upon receipt of the requested information from Eircom and within the 5 working day period above, ComReg may do one or more of the things referred to in sub-sections (i), (iii), (iv) or (v).
- (iii) Inform Eircom in writing that the amendment(s) to either the new or existing retail product would in ComReg's view, not be in compliance with the price control and the retail margin squeeze test. This written notification would include reasoning for ComReg's view and would also inform Eircom that the amendment or change will or could result in the issuing of a notification of non-compliance;

- (iv) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the retail margin squeeze test, issue a direction or directions to Eircom, to refrain from making operative the corresponding amendment(s) to the equivalent wholesale offering of any new or existing product, service or facility; or
- (v) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the retail margin squeeze test(s), issue a direction or directions to Eircom, to refrain from making available or offering for sale, the equivalent wholesale offering of any new product, service or facility.

10.43 For the purposes of promotions, discounts and bundles, the obligations above should apply to new and existing retail product(s) and any equivalent wholesale product(s). In this regard see also section 12.5.

10.44 Subject to a final decision, if appropriate, following this consultation, it would be incumbent on Eircom to ensure that it remains compliant with the obligations set out therein. For the avoidance of doubt, approval in this context means that ComReg is of the view (based on the information provided to it by Eircom) that the notified price does not appear to breach those obligations. The granting of approval does not amount to a definitive finding by ComReg that the product is compliant, or will remain compliant in the future, with the margin squeeze obligations. It should be noted that the granting of approval would be strictly without prejudice to ComReg's right to take action (whether pursuant to a final decision and/or pursuant to any of its relevant statutory enforcement powers) in respect of any SB-WLR product that it believes may be non-compliant with Eircom's regulatory or competition law obligations.

10.45 ComReg considers that there may be an alternative approach which may merit further consideration. ComReg is interested in receiving views from interested parties regarding an alternative requirement which would merely require Eircom to demonstrate it has undertaken a form of self-compliance - to ensure ahead of launching a new or revised retail price for retail line rental that it meets its obligations not to cause a margin squeeze.

10.46 ComReg considers that it may be sufficient to require Eircom to simply notify ComReg of new or revised retail prices for retail line rental products. In other words, Eircom would simply be required to provide the details of the retail amendment of the new or revised retail price for the retail line rental product to ComReg. Such notifications would not require ComReg's pre-clearance for launch. However, notifications would need to include a unique reference such that the retail line rental product could be monitored ex-post.

- 10.47 Under this potential approach, ComReg proposes that Eircom would be required to demonstrate its ongoing compliance in respect of at least one retail amendment (chosen by ComReg) every three months. Where there appears to be issues with such retail amendments, as determined by ComReg, ComReg may require Eircom to revert to a five-day pre-notification and pre-clearance requirement.
- 10.48 For the avoidance of doubt, Eircom would be required to maintain records which demonstrated that a margin squeeze test assessment was undertaken prior to launch and that based on the reasonable assumptions used that no margin squeeze issues were raised.

ComReg's Preliminary View

- 10.49 The pre-clearance requirement is appropriate - Eircom should notify ComReg of all new and revised retail prices for retail line rental at least five working days before launch and obtain prima facie approval from ComReg for their launch.

Q. 20 Do you agree with ComReg's preliminary views that pre-notification and pre-clearance is appropriate for the retail margin squeeze test between retail line rental and SB-WLR? Please provide reasons for your response. We welcome the views of industry regarding the alternative approach of self-compliance as discussed above at paragraphs 10.45 to 10.48.

10.3 Wholesale margin squeeze test - POTS based VUA

10.3.1 Background

- 10.50 In order to ensure that operators' incentives to move to alternative technologies (i.e., Managed VoB) are not diminished we propose to further specify the obligation not to cause a margin squeeze in Market 2.
- 10.51 The proposed wholesale margin squeeze test should ensure that there is a sufficient margin / economic space between the price of POTS based VUA (SB-WLR price plus port costs) and the price for standalone VUA / NGA Bitstream (including a contribution towards Managed VoB investment) so that an OAO is encouraged to invest in their own Managed VoB platform either currently or prospectively.
- 10.52 It is important to note that the pricing remedy for VUA is set in Market 5 by virtue of the NGA Decision. Eircom has some pricing flexibility in relation to the price for VUA subject to the wholesale margin squeeze tests specified in the NGA Decision. Our proposal with regard to the wholesale margin squeeze test in Market 2 does not consider changes to the current pricing regime for NGA services.

10.3.2 Competition concerns

- 10.53 As noted in Chapter 3 (paragraphs 3.19 to 3.22) and as set out in the 2014 FACO Consultation Eircom has SMP in Market 2.
- 10.54 Given Eircom's dominance in Market 2 there are concerns that it could leverage its market power into adjacent vertically or horizontally related markets through price and non-price means with the effect of foreclosing or excluding competitors in downstream retail and/or upstream wholesale markets. Eircom, as a vertically-integrated operator and SMP undertaking, has the incentive to use its market power in upstream markets to affect the competitive conditions in downstream wholesale and/or retail markets, in particular, through its ability to control the key inputs used by wholesale customers — which compete against Eircom in such markets. This could result in a distortion of or restriction in competition in these downstream markets, ultimately resulting in harm to consumers, potentially in the form of higher prices, lower output/sales, reduced quality or consumer choice.
- 10.55 ComReg considers that it is important to provide the certainty that would encourage migration by OAOs to more efficient technologies as and when appropriate. In this regard, the margin between POTS based VUA (SB-WLR plus the port costs) and standalone VUA / NGA Bitstream plus a contribution towards Managed VoB costs is important so as to ensure that OAOs are not

disincentivised from implementing or investing in their own Managed VoB platform.

10.3.3 Wholesale margin squeeze test

10.56 ComReg considers that it is appropriate to ensure that there is an adequate economic space between POTS based VUA and standalone VUA / NGA Bitstream plus a contribution towards Managed VoB costs. As Managed VoB requires considerable investment in infrastructure it is important to protect operators currently using Managed VoB and in addition to encourage other operators to invest in their own Managed VoB platform prospectively.

10.57 If the price for standalone VUA / NGA Bitstream price (plus the cost of Managed VoB investment) is high relative to the price for POTS based VUA there may be little or no incentive for an OAO to invest in a Managed VoB platform.

10.58 In the proposed margin squeeze test the VoB contribution is based on a hypothetical investment in a Managed VoB platform. In deriving the monthly Managed VoB contribution per line we have assumed the following:

- a) A Managed VoB hypothetical investment by an OAO of €10m;
- b) A Managed VoB asset life of 5 years;
- c) A mark-up for operating costs associated with the Managed VoB service of 10%;
- d) Customer lifetime of 42 months consistent with other wholesale margin squeeze tests;
- e) Wholesale connection cost appropriately discounted over a 42 month customer lifetime.

10.59 The remainder of this subsection is discussed under the following headings:

- Operator cost base; and
- Operator volume base.

10.3.4 Operator cost base

10.60 As set out in paragraph 10.19 there are three options for determining the appropriate cost base where a margin squeeze test is applied, as follows:

- EEO;
- REO; and

- SEO.

10.61 Please refer to paragraphs 10.20 to 10.23 for the details of each option.

10.62 In the context of the proposed wholesale margin squeeze test in this Draft Decision we propose that the REO cost base should be used. The Managed VoB investment of €10m is based on hypothetical capital costs of an efficient entrant and not the actual costs of the Incumbent. Such investment would reflect the IT platform cost, the network spend and the likely capitalised labour cost in developing and implementing a Managed VOB service.

10.3.5 Operator volume base

10.63 ComReg considers that there are three options to account for differences in economies of scale between Eircom and access seekers. These options are:

- 10% market share;
- 15% market share; and
- 25% market share.

10.64 In order to avoid inefficient entry to the market ComReg considers that a 25% market share appears reasonable but we welcome the views of industry. This is consistent with the market share assumed in other margin squeeze tests in the context of NGA and for current generation WBA.

10.65 ComReg is of the preliminary view that a hypothetical operator with a market share of 25% may be the relevant volume base to apply in context of the wholesale margin squeeze test.

ComReg's Preliminary View:

10.66 Eircom should be subject to a wholesale margin squeeze test between POTS based VUA and standalone VUA / NGA Bitstream plus a contribution towards Managed VoB costs based on the REO cost standard with an assumed OAO market share of 25%.

Q. 21 Do you agree with ComReg's preliminary views regarding the wholesale margin squeeze test between POTS based VUA and standalone VUA / NGA Bitstream (including a contribution towards Managed VoB costs) and the associated inputs of the test? Please provide reasons for your response.

Chapter 11

11 Review of Ancillary Charges

11.1 Overview

- 11.1 In earlier chapters of the Draft Decision we discussed the appropriate costing and pricing methodologies for setting the rental charges for LLU, SLU, SB-WLR, SABB Outside the LEA, CEI and dark fibre.
- 11.2 In this chapter we outline our review of the **main** charges for a number of Eircom's ancillary services associated with SB-WLR and Market 4. Some of these services are difficult for an OAO to replicate but remain necessary in order to provide a competitive retail service. The ancillary services for SB-WLR are contained in Eircom's RIO price list while the ancillary services for Market 4 are contained in the Eircom's ARO price list, on Eircom's Wholesale website.
- 11.3 A number of OAOs have expressed concerns to ComReg about the level of charges applied to some of the ancillary services and surmised that Eircom could use excessive margins earned on some ancillary services to distort competition. ComReg considers that if ancillary prices are set at an inappropriate level it could inhibit OAOs from migrating to another access service and climbing the ladder of investment.
- 11.4 While the current SB-WLR ancillary services are based on a retail minus approach, more recently in the 2014 FACO Consultation Document, ComReg has proposed that Eircom's ancillary charges for SB-WLR should be based on the obligation of cost orientation whereby Eircom should charge no more than the actual costs adjusted for efficiencies plus a reasonable rate of return.
- 11.5 Market 4 ancillary services are already subject to the obligation of cost orientation. The practice to date for determining the various ancillary charges in Market 4 has tended to involve an analysis of costs and processes for the various services.
- 11.6 The rest of this chapter is discussed under the following headings:
- ARO ancillary charges; and
 - SB-WLR ancillary charges.

11.2 ARO ancillary charges

- 11.7 The ARO ancillary charges are subject to the obligation of cost orientation. ComReg considers that the ancillary services should be based on no more than the actual incurred costs adjusted for efficiency plus a reasonable rate of return. This is consistent with Regulation 13(2) of the Access Regulations where operators should be allowed to recover the investment made as well as a reasonable rate of return on capital employed.
- 11.8 In 2008 ComReg completed a detailed review of the charges for ancillary services on Eircom's ARO price list. The review resulted in amendments to a number of the ancillary charges. In the intervening period there has also been some further amendments to ARO ancillary charges, as updated in the ARO price list from time to time.
- 11.9 As part of the current review of the ARO ancillary services we looked a number of key parameters used in determining the relevant costs for these services as follows:
- WACC;
 - Hourly wage rate;
 - Process charge for product management; and
 - Customer lifetimes i.e., 42 months.
- 11.10 Given the recent change to the fixed line telecoms WACC from 10.21% to 8.18% ComReg considers that the updated WACC should be reflected in the updated cost analysis for the various ARO charges.
- 11.11 The hourly wage rate is applied to the manual processes that are used to deliver the ancillary service. The hourly wage rate has decreased in line with the latest labour cost data (from the 2014 HCAs) used in the Revised CAM. ComReg considers that the revised hourly wage rate should be updated for the various ARO ancillary services.
- 11.12 The process charge is a mark-up or an uplift to account for product management costs associated with the ancillary service. This mark-up has decreased and ComReg considers that it should be updated for the various ARO ancillary services.
- 11.13 In line with the customer lifetime used in other pricing decisions, we consider that 42 months (or 3.5 years) should be used to determine the appropriate per unit price for the ancillary services.

11.14 Our review of the ARO ancillary services contained in Eircom's ARO price list is discussed under the following headings:

- Co-location charges;
- Connections; and
- Fault repair.

11.15 Each one is discussed in turn below.

11.2.1 Co-location charges

11.16 Co-location services are contained in Service Schedule 101 of the ARO price list.

11.17 ComReg reviewed the following co-location charges:

- Pre-ordering charges
- Site preparation charges;
- Licence fee;
- Power charges; and
- Attendance charges.

Pre-ordering charges:

11.18 A number of the pre-ordering services (or Eircom site surveys), including initial survey, full survey and combined full survey and site offer have ceased and therefore ComReg considers that these should be removed from the ARO price list.

11.19 For the remaining two pre-ordering services i.e., site offer and site inspection, ComReg reviewed the process and associated costs. The scope of the site inspection has changed, as such, ComReg considers that the charge should be amended to reflect the current process. For the site offer, the process / activities involved in this service warrants an uplift to account for product management costs. ComReg considers that the site offer charge should be amended to reflect the costs associated with product management.

Site preparation charges:

11.20 The site preparation charges recover the cost of direct current ('**DC**') power (capital costs of the rectifier and batteries), DC plant installation, cabling and cable management system as well as alternating current ('**AC**') power connection (if is provided by Eircom).

- 11.21 Given the changes to the process charge mark-up (paragraph 11.12) and the revised hourly wage rate (paragraph 11.11) ComReg considers that the site preparation charges should be updated to reflect these changes.

Licence fee:

- 11.22 The licence fee covers the costs of the various facilities in the co-located exchange including: floor space; the cost of the main distribution frame in the exchange; air conditioning; standby generator; and the cost of batteries / rectifiers.
- 11.23 Given the changes to costs associated with process charge uplift (paragraph 11.12), the change in costs of the main distribution frame (based on recent Eircom data) as well as the change in the footprint count for each OAO ComReg considers that the licence fee charges should be updated to reflect these changes.

Power charges:

- 11.24 The ARO power charges relate to the cost of power, air-conditioning, standby generators and the cost of batteries / rectifiers (operating costs only) at the co-located exchange.
- 11.25 The power charges are set out in Service Schedule 101 (Table 3.2.2 and Table 3.4.2) in the ARO price list.
- 11.26 In 2013 a comprehensive review of the charges associated with power was carried out by ComReg with the assistance of TERA. Following that review Eircom revised the charging structure for power and this is reflected in the ARO price list.
- 11.27 As part of this review, ComReg and TERA reviewed the inputs, the formulae and the outputs of the current cost model associated with power. A number of changes were noted including the revised WACC (at paragraph 11.10), the update to the process charge (paragraph 11.12), the update to the cost per kilowatt hour of power ('KwH') based on recent values provided by Eircom, as well as an update to the asset life of standby generator (as a result of ComReg's investigation in 2013). ComReg considers that these changes should be reflected in the power charges in the ARO price list.

Attendance charges:

- 11.28 The attendance charges are the cost associated with assisting or accompanying an OAO to the Eircom exchange. There are four types of attendance charges including, planned and unplanned attendance charges as well as escorted and unescorted attendance charges.

- 11.29 These charges are primarily based on the hourly wage rate, the length of time at the exchange and whether the visit is outside normal working hours. ComReg considers that the change to the hourly wage rate (paragraph 11.11) should be reflected in the attendance charges.

11.2.2 Connections

- 11.30 The main connection charges are set out in Service Schedule 102 and 103 (in Tables 1.1, 1.8 and 1.11) in the ARO price list.
- 11.31 ComReg has reviewed the connections and migration charges associated with LLU, Line Share, SLU and GLUMP. Given the changes noted to the hourly wage cost (paragraph 11.11) and the WACC (paragraph 11.10) ComReg considers that Eircom should update the connection charges to reflect these changes.
- 11.32 For the Line Share service Eircom provides the PSTN service, and the OAO provides a DSL service. This involves some additional work (compared to LLU) to set up the connection. ComReg considers that the line share connection should reflect the extent of the tasks / processes involved.
- 11.33 For SLU, ComReg considers that as this service has not been consumed by OAOs to date it is difficult to review the cost of the activities required to deliver the service. ComReg has not proposed any changes to these charges. However, where there is demand for SLU in the future Eircom should keep these charges under review in line with their cost orientation obligation.

11.2.3 Fault clearance

- 11.34 The ARO fault clearance charges relate to the repair of a fault on the wholesale network. The main fault clearance charges are set out in Service Schedule 102 and 103 (in Tables 1.5 and 1.12) of the ARO price list.
- 11.35 While ComReg has not proposed any changes to the one-off fault repair charge or the amortised fault repair charge for LLU and Line Share Eircom should continue to keep these charges under review in line with its cost orientation obligation.

ComReg's Preliminary View:

- 11.36 The ancillary charges for Market 4 products and services should be based on no more than the actual costs incurred adjusted for efficiency plus a reasonable rate of return.
- 11.37 Eircom should continue to keep the ancillary charges under review in line with its pricing obligations.

Q. 22 Do you agree with ComReg's preliminary views regarding the ancillary charges for Market 4 products and services? Please provide reasons for your response.

11.3 SB-WLR ancillary charges

11.38 ComReg proposed in the 2014 FACO Consultation Document that the ancillary charges for SB-WLR should be subject to the obligation of cost orientation i.e., no more than the actual costs incurred adjusted for efficiency plus a reasonable rate of return. For the purposes of this Draft Decision, without prejudice to a final position, we have assumed that the obligation of cost orientation shall apply to the ancillary services for SB-WLR.

11.39 There are a number of SB-WLR ancillary charges contained in Eircom's RIO price list and, for the purposes of this review, ComReg has grouped them into the following categories:

1. SB-WLR order handling charges;
2. SB-WLR connections charges;
3. SB-WLR other charges.

11.40 Each one is discussed in turn below.

11.3.1 SB-WLR order handling charges

11.41 The order handling charges associated with SB-WLR are listed in Service Schedule 401 (Table 3) and for CPS in Service Schedule 120 of Eircom's RIO price list.

11.42 As part of our review, ComReg and Eircom reviewed the costs associated with order handling charges. The main volume sensitive costs relate to handling exceptions that arise when the automated process of transfers to or from the SB-WLR and CPS services require the intervention of call centre staff to finalise the order. Therefore, the unit charges for these services are based on the forecasts of costs consistent with the projected call centre staffing levels and the expected volume of transactions.

11.43 As a result, during our review price reductions in the region of 30% were implemented by Eircom on the 1 September 2014.

11.3.2 SB-WLR connection charges

11.44 The SB-WLR connection charges are listed in Service Schedule 401 (Table 2) of Eircom's RIO price list. The SB-WLR connection charges reviewed by ComReg include the following:

- Public switched telephone network ('**PSTN**') In-situ connections
- PSTN pre-cabled connections
- Integrated services digital network ('**ISDN**') connections

11.45 ComReg has considered that there are two pricing approaches to recover such connection charges. These are discussed under the following headings:

- Option 1: SB-WLR connection and rental charged separately; and
- Option 2: Increase to SB-WLR rental charge to account for connection costs.

11.46 Each one is discussed in turn below.

11.3.3 Option 1: SB-WLR connection and rentals charged separately

11.47 Option 1 entails setting separate connection and rental charges.

11.48 The proposed SB-WLR rental charge is discussed in Chapter 6 (subsection 6.6.).

11.49 In terms of connections, Eircom's HCAs for 2014 indicate that the fully allocated cost ('**FAC**') for SB-WLR PSTN and ISDN connections was circa €8. However, this is a FAC and it includes allocations of indirect and general overheads and not just the costs of the activities directly associated with providing connections.

11.50 The derived SB-WLR rental charge of €16.72 (Chapter 6) now recovers the indirect and general overheads and therefore the average variable cost associated with a new connection can be fully isolated to determine an appropriate connection cost/price.

11.51 Consequently, further analysis of the Eircom's HCA accounts associated with the connection activities for SB-WLR indicates that the average direct/incremental cost (excluding indirect costs and corporate overheads) associated with providing a new PSTN connection is circa €102.

11.52 Therefore, under Option 1 the one-off price Eircom could charge for a new connection is €102.

11.3.4 Option 2: Increase to SB-WLR rental charge to account for connection costs

11.53 Option 2 means that Eircom Wholesale could recover the SB-WLR connection costs across all WLR lines as part of the SB-WLR rental charge and hence there would be no separate connection charge.

- 11.54 There are a number of reasons why such an approach might be considered appropriate. A significant percentage of the existing line base did not incur a connection charge due to the practice of free connection charges that prevailed during the retail-minus price control. Such an approach would also remove the uncertainty for OAOs' business case planning regarding potential timing of an Eircom promotion offering free connections (see also Chapter 12, subsection 12.5). There is also the consideration that all WLR users benefit from lower rental charges as a result of a higher customer line base — which may arise as a result of stimulating demand arising from “free” wholesale connections.
- 11.55 Furthermore, in the event that a retail customer churns from an OAO the once-off connection charge as proposed under Option 1 may represent a high up-front sunk cost. ComReg considers that this is militated under Option 2, it also recognises that while a retail customer may churn from an OAO the customer may still be retained at the wholesale level on Eircom's platform — therefore the connection cost would still be recovered through the SB-WLR rental.
- 11.56 Based on our calculations (see paragraph 11.51) Eircom incur variable costs of €3.50 per connection. Consequently, using Eircom's forecast of expected new connections (provided to ComReg bi-laterally as part of the cost modelling exercise) on average per year then the annual connection costs associated with SB-WLR PSTN services is €3.50. Recovering the annual connection cost through the SB-WLR rental charge over all SB-WLR lines would require an increase of approximately €0.50 to the SB-WLR monthly line rental charge (already included in current proposed price for SB-WLR of €16.72 in Chapter 6).
- 11.57 Based on the reasons set out in paragraphs 11.54 - 11.55, ComReg considers that it may be more appropriate to recover the annual connection cost as part of the SB-WLR rental. Consequently, the SB-WLR rental charge now includes approximately €0.50 per line per month for connections. Hence, we consider that there should be a zero charge for new connections.
- 11.58 ComReg has discussed SB-WLR promotions and discounts in Chapter 12 (subsection 12.5).

ComReg's Preliminary view

- 11.59 An uplift of €0.50 per line per month is included in the SB-WLR rental charge (of €16.72 in Chapter 6) to account for SB-WLR connection costs.

Q. 23 Do you agree with ComReg's preliminary view that circa €0.50 per line per month is appropriate to take account of SB-WLR connection costs in the SB-WLR rental charge? Please provide a reason for your response.

11.3.5 SB-WLR other charges

- 11.60 In addition, to the review of the SB-WLR PSTN connection at subsection 11.3.2 above, we also reviewed primary rate access ('PRA') connections, basic rate access ('BRA') connections and fractional rate access ('FRA') connections.
- 11.61 Regarding the time to perform the necessary tasks associated with PRA, FRA and BRA connections we used the task times for the PSTN connection charge. Therefore, the connection charges for PRA, FRA and BRA have been calculated on a pro rata basis from the "PSTN new connection" charge. This has resulted in revised charges.
- 11.62 For all other SB-WLR related ancillary charges, including direct dial inwards¹²⁴ ('DDI'), mail box services¹²⁵, wholesale low value customer premises equipment ('CPE') rental services¹²⁶ and alarm clock services¹²⁷ ComReg considers that Eircom should keep these under review in line with its obligations.

ComReg's Preliminary View

- 11.63 Eircom should ensure that the SB-WLR ancillary charges are line with the cost orientation obligation i.e., no more than the actual costs incurred adjusted for efficiency plus a reasonable rate of return.

¹²⁴ DDI is a facility that allows an outside caller to connect directly to an inside extension of an office without the assistance of an attendant or operator. The DDI charges are listed in Service Schedule 401 (Table 2) of Eircom's RIO price list

¹²⁵ A mailbox service is a facility which allows a caller to leave a message for the receiver. The mailbox services are listed in Service Schedule 401 in the table entitled '*Ancillary Services – Wholesale Line Rental*' in Eircom's RIO price list.

¹²⁶ Low value CPE is defined by Eircom as equipment currently costing no more than €4.23 per item, per month excluding VAT. These services are contained in Service Schedule 401 in the table entitled '*Low Value CPE*' in Eircom's RIO price list.

¹²⁷ The Alarm Clock service is facility which allows the customer to set up an alarm call on the home phone and the phone will ring at the chosen time. These services are contained in Service Schedule 401 in the table entitled '*Ancillary Services – Wholesale Line Rental*' in Eircom's RIO price list.

Chapter 12

12 Other Regulatory Measures

12.1 Introduction

12.1 There are a number of other regulatory related issues that ComReg has considered as part of this Draft Decision, which are discussed under the following headings:

1. Price control period;
2. Transparency obligations for SABB Outside the LEA and for SB-WLR nationally;
3. Regulatory approval mechanism to allow Eircom to reduce prices in certain geographic areas; and
4. SB-WLR promotions and discounts.

12.2 Each one is discussed in turn below.

12.2 Price control period

12.3 ComReg considers that the price control period should be for at least three years from the date of ComReg's decision but in any event it should remain in place until further notice by ComReg. The maximum charges for LLU, SLU, SB-WLR, SABB, CEI and dark fibre should be determined by the Revised CAM.

12.4 The proposed three year price control period should be from 2016 to 2018.

12.5 The proposed price control period should provide sufficient time for the development of the market for wholesale products and infrastructure investment by alternative operators. The three year period should also provide alternative platform providers with a degree of certainty in relation to the market development of wholesale products. A period of three years should also ensure that ComReg will have conducted a market analysis for what is now Market 4.

12.6 ComReg proposes that on an annual basis Eircom should review the inputs, costs and assumptions of the Revised CAM. The annual review is an opportunity to ensure that any exceptional changes in the model are considered.

12.7 If, as a result of this review, it is clear that there are material differences then Eircom should bring this to the attention of ComReg. ComReg may then assess these material differences and consider how any issues arising might be addressed going forward.

- 12.8 ComReg considers that the annual review of the CAM should provide the market with reasonable price certainty and stability. ComReg considers that the annual review should not be a static point in time review, but rather where issues are apparent, a more detailed dynamic assessment may be necessary with the possibility of a consultation with industry if material changes are required. It is important that any one-off reductions or increases to historic costs or volumes do not give rise to distortions in the market.

ComReg's Preliminary View:

- 12.9 The price control period should be for at least three years from the date of ComReg's decision but in any event it should remain in place until further notice by ComReg. The maximum charges for LLU, SLU, SB-WLR, SABB, CEI and dark fibre should be determined by the Revised CAM.
- 12.10 Eircom should review the inputs, costs and assumptions of the Revised CAM on an annual basis. If material changes are noted in the Revised CAM, Eircom should submit the Revised CAM to ComReg for further consideration.

Q. 24 Do you agree with ComReg's preliminary view that the price control period should be for three years but should remain in place any further notice by ComReg and that Eircom should review the inputs, costs and assumptions of the Revised CAM annually for material changes? Please provide reasons for your response.

12.3 Transparency obligations for SABB Outside the LEA and for SB-WLR nationally

- 12.11 The notification period for ComReg and industry are essential to the proper functioning of the wholesale market and are necessary in order to protect competition.

12.3.1 Wholesale price notification timelines:

- 12.12 In line with the wholesale price notification obligations for SB-WLR and SABB, Eircom should notify ComReg of any SB-WLR national price changes or SABB price changes Outside the LEA, before the new or revised price is expected to come into effect.
- 12.13 The notification timelines for SABB are already specified in the transparency obligation in the WBA Market Decision (as amended by the WBA Pricing Decision). In the WBA Market Decision, Eircom are obliged to make publically available on it wholesale website any proposed price amendments to WBA

products at least two (2) months in advance of coming into effect and to notify ComReg at least one (1) month in advance of any such publication – that it at least three (3) months in advance of a price change becoming effective. In the WBA Pricing Decision in 2014 we added wording to the transparency obligation (in the WBA Market Decision) such that Eircom are obliged to make publically available on its wholesale website any proposed price amendments resulting from a price increase to an existing current generation WBA product at least three (3) months in advance of coming into effect and to notify ComReg at least one (1) month in advance of any such publication – that is at least four (4) months in advance of a price increase becoming effective. For the avoidance of doubt this obligation relates to all current generation WBA products, including SABB Outside the LEA.

12.14 The notification timelines for SB-WLR are already specified in the transparency obligation in the 2014 FACO Consultation Document whereby Eircom is obliged to make publically available and publish on its wholesale website any proposed changes to existing RIO products at least one (1) month in advance of a new price relating to SB-WLR and to provide ComReg with at least one (1) months notice in advance of any such publication taking place – that is at least two (2) months notice to ComReg. In this Draft Decision, and similar to the notification obligations set out in the WBA Pricing Decision with regard to price increases, we propose that for SB-WLR that Eircom should make publically available on its wholesale website at least three (3) months in advance of any proposed amendments to the national SB-WLR price resulting from a price increase. Eircom should notify ComReg at least one (1) month in advance of such publication – that is at least four (4) months before any increase to the national SB-WLR price would be expected to come into effect. The main reason for the additional two months' notice in the case of SB-WLR nationally, in the event of a wholesale price increase, is to allow operators the extra time to notify its customers of the potential increase to prices, as well as an update to its budgets / business plans etc.

12.15 Therefore, Eircom should notify ComReg no later than four (4) months before it increases the national monthly rental charge(s) for SB-WLR and / or the price for SABB Outside the LEA, otherwise the normal notification timelines set out in the 2014 FACO Consultation Document and the WBA Market Decision should apply (which are summarised in paragraphs 12.13 and 12.14 above).

12.3.2 Wholesale notification procedures for revised prices and /or increased prices:

12.16 Where Eircom decides to amend the national price of SB-WLR and / or the SABB price Outside the LEA the proposed notification and approval procedures set out below should apply (for both revised prices and increased prices). This

notification approach is consistent with the approach already adopted for NGA and current generation WBA. It should be noted that the proposed notification periods may be varied with the agreement of ComReg or at ComReg's discretion.

- 12.17 The wholesale price notifications to ComReg for revised or increased prices for SABB Outside the LEA and/or SB-WLR nationally should be in the form of email communication.
- 12.18 At notification, Eircom should furnish to ComReg a detailed written submission demonstrating that the proposed new or increased charge(s) comply with the cost orientation obligation and the Revised CAM.
- 12.19 For a revised national SB-WLR price, Eircom would have to demonstrate that the cost oriented monthly rental charge is derived based on the higher of:
- i) Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally with the BU-LRAIC+ costs for active equipment; or
 - ii) BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets for the provision of SB-WLR in the LEA.
- 12.20 For a revised price for SABB Outside the LEA, Eircom would have to demonstrate that the cost oriented monthly rental charge is derived based on no more than Eircom's Actual Costs Adjusted for Efficiencies and the BU-LRAIC+ methodology for active equipment, for the provision of SABB Outside the LEA.
- 12.21 The submission from Eircom should make full and true disclosure of all material facts for the purpose of demonstrating that the proposed new or increased charge(s) comply with the cost orientation obligation. Upon receipt of the submission, ComReg should review the submission and within one (1) month, communicate to Eircom its decision whether to give or withhold approval to implement the proposed new or increased charge(s). Such approval shall not be unreasonably withheld by ComReg. Eircom should not implement any new or increased charge(s) for SB-WLR nationally and/ or for SABB Outside the LEA without having received such approval from ComReg. Prior to the expiry of the one (1) month period, ComReg may seek further information from Eircom to inform its decision as to whether approval to implement the new or increased charge(s) should be given or withheld. If such further information is not provided by Eircom within ComReg's timeline or to the standard required by ComReg, approval to implement the proposed new or increased charge(s) shall be withheld pending the required information being made available to ComReg for review and consideration. Upon receipt of the requested information, ComReg will proceed to make a decision as to whether approval for implementation of the new or increased charge(s) should be granted or withheld. The notification

periods referred to above may be varied with the agreement of ComReg or at ComReg's discretion.

- 12.22 For the avoidance of doubt, approval in this context means that ComReg is of the view (based on the information provided to it by Eircom) that the notified national price for SB-WLR and / or the price for SABB price Outside the LEA does not appear to breach the obligations set out in any final decision. The granting of approval does not amount to a definitive finding by ComReg that the national SB-WLR product and/ or the SABB product Outside the LEA is compliant, or will remain compliant in the future, with the cost orientation obligations set out in any final decision. It should be noted that the granting of approval is strictly without prejudice to ComReg's right to take action (whether pursuant to any final decision and/or pursuant to any of its relevant statutory enforcement powers) in respect of any national SB-WLR product and / or SABB product Outside the LEA that it believes may be non-compliant with Eircom's regulatory or competition law obligations. It is incumbent on Eircom to ensure that the national SB-WLR product and /or the SABB product Outside the LEA remains compliant with any final decision at all times.
- 12.23 ComReg believes that the proposed notification procedure for SB-WLR nationally and for SABB Outside the LEA are proportionate and reasonable. The proposal should allow ComReg sufficient time to understand any proposed price changes or new proposed prices and to assess whether these new / amended prices are consistent with the cost orientation obligation specified by ComReg. It also allows OAOs to assess the likely impact of the changes in terms of its business case and to allow the OAOs time to notify its customers of a price change, where appropriate. In addition, the proposed notification process is similar to that already imposed in the context of NGA, Bundles and for current generation WBA.

ComReg's Preliminary View

Wholesale price notification timelines:

- 12.24 For SABB Outside the LEA, Eircom should notify price changes in line with the price notification obligations set out in the WBA Market Decision. For any price increases to SABB Outside the LEA, Eircom should notify ComReg and industry in line with the WBA Pricing Decision¹²⁸, as summarised in paragraph 12.13 above.
- 12.25 For SB-WLR, Eircom should notify ComReg of price changes to existing RIO products in line with the 2014 FACO Consultation Document, as summarised in paragraph 12.14 above. In addition and in line with this Draft Decision Eircom

¹²⁸ Section 5.1 of the Decision Instrument contained in Chapter 11 of ComReg Decision D11/14.

should make publically available on its wholesale website at least three (3) months in advance of any proposed amendments to the national SB-WLR price resulting from a price increase. Eircom should notify ComReg at least one (1) month in advance of such publication – that is at least four (4) months before any increase to the national SB-WLR price would be expected to come into effect.

Notification procedures for revised prices and/or increased prices:

- 12.26 In the case of a new price or an increase to the national price of SB-WLR and / or the price for SABB Outside the LEA, the following notification and approval procedures should apply:
- 12.27 At notification, Eircom should furnish to ComReg a detailed written submission demonstrating that the proposed new or increased charge(s) complies with the cost orientation obligation as specified in any final decision. The submission should make full and true disclosure of all material facts for the purpose of demonstrating that the proposed new or increased charge(s) comply with the relevant cost orientation obligations specified. Upon receipt of the submission, ComReg should review the submission and within one (1) month, communicate to Eircom its decision whether to give or withhold approval to implement the proposed new or increased charge(s). Such approval should not be unreasonably withheld by ComReg. Eircom should not implement any new or increased charge(s) for SB-WLR nationally and / or for SABB Outside the LEA without having received such approval from ComReg. Prior to the expiry of the one (1) month period, ComReg may seek further information from Eircom to inform its decision as to whether approval to implement the new or increased charge(s) should be given or withheld. If such further information is not provided by Eircom within ComReg's timeline or to the standard required by ComReg, approval to implement the proposed new or increased charge(s) may be withheld pending the required information being made available to ComReg for review and consideration. Upon receipt of the requested information, ComReg would proceed to make a decision as to whether approval for implementation of the new or increased charge(s) should be granted or withheld.

Q. 25 Do you agree with ComReg's preliminary views regarding the pre-notification timelines and pre-clearance / compliance obligations for the SB-WLR price nationally and for SABB Outside the LEA? Please provide reasons for your response.

12.4 “Regulatory Approval” mechanism to allow Eircom reduce prices in certain geographic areas

- 12.28 In setting the cost oriented price for SB-WLR nationally and for SABB Outside the LEA ComReg has considered whether it might be reasonable to allow

Eircom, in some instances, to price below the regulated level. For LLU and SLU, the proposed rental prices are maximum prices which can be reduced by Eircom in line with the Revised CAM, subject to ComReg review and approval. Please refer to Chapter 6, paragraphs 6.74 and 6.104 regarding amendments to the LLU and SLU prices, respectively.

- 12.29 There may be circumstances where a price reduction below the regulated price at the wholesale level is deemed necessary to allow Eircom Retail and the OAOs that use the relevant wholesale service as an input in their retail offerings to compete with the services provided over an alternative platform. Lower prices should also benefit the interests of end-users.
- 12.30 While an *ex post* investigation could be used to determine if such a price reduction was uncompetitive ComReg considers that such a process could prove to be time consuming and could lead to a level of uncertainty that would reduce competition and dis-incentivise investment. Therefore, ComReg considers that an *ex-ante* remedy would provide industry with a level of assurance as to when and how such a price reduction below the regulated price would be acceptable for SB-WLR nationally and for SABB Outside the LEA.
- 12.31 ComReg considers that a “regulatory approval” mechanism would allow Eircom to justify a proposed wholesale price reduction to SB-WLR nationally and /or SABB Outside the LEA on the basis of an *ex-ante* margin squeeze test. However, any price reduction by Eircom would be subject to a price floor based on the BU-LRAIC+ costs of the LEA.
- 12.32 The objective of the price floor is to prevent Eircom from setting prices too low where they could foreclose economically efficient alternative investment by other operators either investing or planning to invest. Therefore, the price floor (based purely on BU-LRAIC+ costs) would prevent the risk that Eircom could set wholesale access prices too low which could be detrimental to build/buy signals and investment in networks by other operators. In the case of SABB Outside the LEA, the relevant floor would be the WBA Price Floor (ComReg Decision D06/12). This was discussed in the WBA Pricing Decision in Chapter 9.
- 12.33 The margin squeeze test would have to demonstrate that Eircom is unable to replicate the alternative platform operator’s price. Eircom’s ability to reduce prices would be limited and would only arise subject to a retail price decrease from one of the alternative operators. In essence, Eircom would have to demonstrate to ComReg, using a margin squeeze test, that the alternative platform operator’s retail price is non-replicable otherwise and that, in the absence of such a price reduction, the operators (including Eircom Retail) that rely on the wholesale access service to provide their retail offers to end users would not be able to compete effectively in a specific area.

- 12.34 This proposal is similar to the margin squeeze approach for NGA offers since it allows Eircom to lower its wholesale prices if retail prices need to be decreased. The proposed margin squeeze test under this approach would be applied in a manner consistent with the rules determined by ComReg in other pricing decisions regarding margin squeeze.
- 12.35 In addition, in order to ensure an appropriate economic space between the different steps of the ladder of investment Eircom may have to decrease the prices of related wholesale access services at the same time to ensure that there are no undue cost disadvantages for entrants in using certain wholesale services relative to others that might prevent them from climbing up the “ladder of investment”.
- 12.36 This approval mechanism should avoid situations where Eircom may decide to introduce temporary price discounts in a given geographic area in order to foreclose a competitor from the market or with a view to encourage, for example, Bitstream services at the expense of WPNIA services. Consequently, wholesale access prices should be more predictable for OAOs.
- 12.37 The approval mechanism should also provide greater assurance to those OAOs wishing to invest in alternative access network infrastructure because they know that their business plan will be affected only if their own retail prices decrease to a certain level. Such an *ex ante* approach is pro-competitive since it provides Eircom with the required pricing flexibility while encouraging competition between operators and creating more certainty for OAOs in developing their business plans.

ComReg’s Preliminary view

- 12.38 Eircom should have the flexibility, subject to ComReg’s regulatory approval, to reduce the wholesale access price for SB-WLR nationally and for SABB Outside the LEA below the regulated price subject to a price floor which should be set by reference to the BU-LRAIC+ costs in the LEA.

Q. 26 Do you agree with ComReg’s preliminary view regarding the regulatory approval mechanism and where Eircom should be allowed to reduce wholesale price for SB-WLR nationally and for SABB Outside the LEA below the regulated price so long as it does not breach the price floor set by reference to the BU-LRAIC+ costs in the LEA and subject to ComReg’s approval? Please provide reasons for your response.

12.5 SB-WLR promotions & discounts

- 12.39 At particular times in the past, Eircom has introduced promotional discounts including free connections in an effort to stimulate uptake of fixed line services. Under the current retail-minus price control any discounts introduced by Eircom Retail also applied at the wholesale level — which ensured that OAOs also benefited from these free connections during that promotional period.
- 12.40 In addition, an OAO's ability to stimulate additional demand through attractive connection promotions can mean that the overall customer base on Eircom's wholesale network is higher than it might otherwise be. Such an outcome could benefit all customers on the network as the high fixed costs associated with the access network can now be recovered over the larger customer base resulting in lower unit costs / prices per customer — in particular as SB-WLR is proposed in this Draft Decision to move to cost-orientation.
- 12.41 ComReg considers that there are two potential alternative approaches to promotions and discounts. The first approach is that as ComReg has identified the cost oriented cost/price of new connections, there should be no future promotions and/or discounts available from Eircom with respect to new connection costs. The second approach is a network operator is best placed to manage customer numbers on its networks. This suggests that there may be merit in allowing Eircom Wholesale some latitude to offer promotional discounts in a non-discriminatory manner to Eircom Retail and OAOs in an effort to ensure customer numbers across its network are maintained at a level that is as high as possible.
- 12.42 For the avoidance of doubt, the discussion regarding promotion and discounts is in the context of new connections only and does not apply to the SB-WLR rental charge. Where new connections are recovered through the monthly rental charge for all SB-WLR lines as currently proposed (see paragraph 11.57) the availability of a promotion / discount would be in the context of the €0.50 per line per month only. ComReg considers that it would not be appropriate for promotions and discounts to be available for the SB-WLR rental charge as this would lead to pricing uncertainty for OAOs regarding the timing and availability of such promotions/discounts. Furthermore, without restriction of the value of such promotions and discounts this could impact and undermine the business case current and perspective for alternative infrastructure competition based on LLU (or similar) — where the quantum or value of those connection charges may be different.
- 12.43 Under the second approach, the revenues of both SB-WLR connection and rental charges would need to be considered in aggregate to ensure overall cost recovery. The cost based SB-WLR rental charge is dependent on projected

customer volumes assumed in the Revised CAM. These figures are informed by projected customer numbers and if the actual numbers fall short of these projected numbers then the derived rental price may not be sufficient to enable Eircom to fully recover its efficiently incurred costs. Therefore, this approach could allow Eircom the pricing flexibility such that it can achieve the projected customer numbers which in turn should ensure price stability for all customers while at the same time allow for the recovery of the appropriate level of cost from connections and rental charges over the life cycle of the service. However, on an annual basis under this approach it may potentially result in an under recovery from annual connection costs.

- 12.44 ComReg considers that given the level of uncertainty that promotions and discounts present for OAOs and in the context of cost-orientation that it may be more prudent not to allow any form of promotions and discounts. Furthermore, as discussed earlier in Chapter 12 on the price control period, we propose that Eircom should conduct an annual review of the Revised CAM to assess if there are any material changes. If volumes change significantly over the price control period then we may have to consider whether these changes should be adopted in the model with revised prices.
- 12.45 ComReg is interested in receiving submissions from interested parties regarding whether industry considers it appropriate for Eircom to be able to offer promotions and discounts on new connection charges — particularly in the context of ComReg’s preliminary view that the connection charge is proposed to be recovered in the monthly SB-WLR rental charge across all the WLR line base such that there would be zero upfront or additional charges for new connections.

Q. 27 Do you agree with ComReg’s preliminary view that Eircom should not be allowed to give promotions / discounts with regard to SB-WLR connections? Please provide reasons for your response.

Chapter 13

13 Draft wholesale access prices

- 13.1 In Chapters 6, 7, 8 and 9 we discussed our preferred pricing approach with regard to the rentals for LLU, SLU, SB-WLR, SABB, Line Share, CEI and dark fibre.
- 13.2 In this chapter we summarise the proposed charging structure for LLU, SLU, SB-WLR, SABB and Line Share. We also summarise the charges for pole access, duct access and dark fibre from Chapter 8.

13.1.1 Proposed charging structure for LLU, SLU, SB-WLR, SABB and Line Share

- 13.3 Figure 43 sets out the proposed monthly rental charges for LLU, SLU, and Line Share as a result of this Draft Decision as well as the current monthly fault repair charges and the monthly connection/provisioning charges for LLU and Line Share.

Figure 43: Proposed monthly prices for LLU, SLU and Line Share

Services	LLU - €	SLU - €	Line Share - €
Monthly rental	10.19	5.88*	0.77
Monthly fault repair	0.96	n/a	0.05
Monthly connection / provisioning	0.38	n/a	0.38

* Includes fault repair costs.

- 13.4 For LLU and Line Share Figure 43 shows the separate monthly fault charges and the monthly connection charges, as per the ARO price list. We propose that the current charging regime for LLU and Line Share should continue, as updated for the revised LLU rental.
- 13.5 For SLU, the monthly rental charge includes fault repair costs.
- 13.6 Figure 44 sets out the proposed monthly charges for SB-WLR and SABB (including fault repair costs and provisioning costs).

Figure 44: Proposed monthly prices for SB-WLR nationally and SABB Outside the LEA

Services	SB-WLR - €	SABB - €
Total monthly charge	16.72**	22.16**

** Includes fault repair costs and provisioning costs

- 13.7 Currently, the SB-WLR charge of €18.02 includes fault repair costs. We are proposing in this Draft Decision that the SB-WLR rental, the SB-WLR fault repair costs and the SB-WLR connection costs be aggregated together as a single monthly SB-WLR charge, as set out in Figure 44 above.
- 13.8 For SABB Outside the LEA, we propose a single monthly charge which includes the SABB rental costs, the SABB fault costs and the SABB provisioning costs, similar to the approach for SB-WLR. The monthly charge for SABB Outside the LEA does not include traffic / usage costs.

13.1.2 Proposed charges for pole access, duct access and dark fibre

- 13.9 In summary, the proposed charges from Chapter 8 for pole access, duct access and dark fibre are as follows:

Figure 45: Draft annual prices for pole access, duct access and dark fibre

Pole access:

Description	National	LEA	Outside the LEA
Price per pole (2 cables)	€9.87	€11.58	€9.53
Price per pole (1 cable)	€19.74	€23.16	€19.06

Duct access:

Description	Dublin - €	Provincial - €
Carriageway	2.78	1.55
Footway	2.13	1.25
Verge	1.30	0.93

Dark fibre:

Description	National	LEA	Outside the LEA
Price per metre of fibre	€0.19	€0.19	€0.17

Chapter 14

14 Regulatory Impact Assessment ("RIA")

14.1 Overview

- 14.1 A Regulatory Impact Assessment ("RIA") is an analysis of the likely effect of a proposed new regulation or regulatory change. The RIA should help identify regulatory options, and should establish whether the proposed regulation is likely to have the desired impact. The RIA is a structured approach to the development of policy, and analyses the impact of regulatory options on various stakeholders.
- 14.2 ComReg's approach to the RIA is set out in the Guidelines published in August 2007 in ComReg document No. 07/56 and 07/56a. In conducting the RIA, ComReg takes into account the RIA Guidelines¹²⁹, issued by the Department of An Taoiseach in June 2009 under the Government's Better Regulation programme. Section 13(1) of the Communications Regulation Act 2002 (as amended), requires ComReg to comply with Ministerial Policy Directions. The Policy Direction of February 2003¹³⁰ requires that, before deciding to impose regulatory obligations on undertakings, ComReg shall conduct a RIA in accordance with European and International best practice and otherwise in accordance with measures that may be adapted under the Government's "Better Regulation" programme.
- 14.3 In conducting the RIA, ComReg has regard to the RIA Guidelines, while recognising that regulation by way of issuing decisions e.g. imposing obligations or specifying requirements in addition to promulgating secondary legislation may be different to regulation exclusively by way of enacting primary or secondary legislation. Our ultimate aim in conducting a RIA is to ensure that all measures are appropriate, proportionate and justified. To ensure that a RIA is proportionate and does not become overly burdensome, a common sense approach will be taken towards a RIA.
- 14.4 In the context of this Draft Decision ComReg considers that where no material changes are proposed to the underlying price control obligation then a RIA is not required. This is relevant in relation to the following wholesale access services where we propose to continue with the cost orientation obligation:

¹²⁹ See "RIA Guidelines: How to conduct a Regulatory Impact Analysis", October 2005 and revised in 2009 - see www.betterregulation.ie

¹³⁰ Ministerial Policy Direction made by the Minister for Communications, Marine and Natural Resources on 21 February 2003.

- LLU monthly rental;
- SLU monthly rental;
- Line Share monthly rental;
- CEI rental charges
- Dark fibre rental charges.

14.5 However, where we are proposing changes to the underlying price control obligation and / or further specifying an obligation for the first time we consider that a RIA is necessary. This is relevant in relation to the following wholesale access services:

- For SB-WLR we are proposing a change from the current retail minus price control to a cost orientation price control;
- For SABB Outside the LEA we are further specifying the cost orientation obligation which was set out in the WBA Pricing Decision.

14.6 In addition, to the above we are also proposing to further specify the margin squeeze obligation contained in Market 2. We are proposing a retail margin squeeze test between retail line rental and SB-WLR and in addition a wholesale margin squeeze test between POTS based VUA and standalone VUA / NGA Bitstream (including a contribution towards Managed VoB costs). We refer to these two tests as the '**margin squeeze tests**' throughout this Chapter 14. We consider that the margin squeeze tests also require assessment as part of the RIA.

14.2 Steps for assessing regulatory options

14.7 In assessing the available regulatory options, ComReg's approach to the RIA is based on the following five steps:

Step 1: describe the policy issue and identify the objectives

Step 2: identify and describe the regulatory options

Step 3: determine the likely impacts on stakeholders

Step 4: determine the likely impacts on competition

Step 5: assess the likely impacts and choose the best option

14.8 Each step is discussed in detail below.

14.3 Step 1: Describe the policy issue and identify the objectives

- 14.9 An important consideration for this RIA is the withdrawal of the retail minus price control and the imposition of the cost orientation obligation for SB-WLR in the FACO market. This Draft Decision proposes to further specify the cost orientation obligation for SABB Outside the LEA in the WBA market. ComReg also proposes to further specifying the margin squeeze obligation in Market 2 for SB-WLR as well as POTS based VUA.
- 14.10 In the LEA one of the key regulatory objectives of ComReg is to maximise viable infrastructure investment and to send appropriate 'build or buy' signals to help inform efficient investment decisions and encourage OAOs to climb the investment ladder. This objective has been addressed in Chapter 4 of this Draft Decision and more specifically in Chapter 6 with regard to the pricing approach for LLU and SB-WLR.
- 14.11 Outside the LEA and given the absence of competing infrastructure, the key regulatory objective is to prevent Eircom from over / under recovering its actual efficient costs plus a rate of return (which is based on the fixed line telecoms WACC of 8.18%). This is particularly important in the context of SABB where we propose to base the SABB price Outside the LEA on no more than Eircom's Actual Costs Adjusted for Efficiencies for the area Outside the LEA with active equipment based on BU-LRAIC+ costs. This is discussed at Chapter 7 of this Draft Decision.
- 14.12 In choosing remedies we have taken account of Section 12 of the Communications Regulation Act, Regulation 6(1) of the Access Regulations, Regulation 8(6) of the Access Regulations, Regulation 13 of the Access Regulations and Regulation 16 of the Framework Regulations. Set out below is a discussion on how each of the relevant objectives from the Access and Framework Regulations and the Communications Regulations Act are addressed in the context of the proposed pricing approach set out in this Draft Decision.

14.3.1 Section 12 of the Communications Regulations Act

- 14.13 Our objectives as set out in Section 12 of the Communications Regulations Act (as amended) aims to:
- (i) *Promote competition and in particular to encourage efficient investment in infrastructure and promoting innovation;*
 - (ii) *Contribute to the development of the internal market;*

(iii) Promote the interests of users within the Community and in particular to encourage access to the internet at a reasonable cost to end-users.

Promote Competition

- 14.14 With respect to the competition objective, we must consider the trade-off between promotion of competition in the short term, in the medium term and in the long term. While infrastructure-based competition, when each competitor constructs its own local loop, provides the OAOs with more freedom it requires significant investment to duplicate infrastructures in their entirety, thus this option will rarely be chosen by OAOs in the short to medium term. Service-based competition, when OAOs use different access services, is more likely to develop in the short and medium term. In order to promote competition in the short to medium term, ComReg should ensure that the difference between wholesale access prices and retail prices is not so small that it could create a margin squeeze. On the other hand the access price should not be set too low as it may deter investments in the long term.
- 14.15 If the price for Bitstream or SB-WLR is set too low compared to LLU, OAOs will not upgrade their network to reach those exchanges that benefit from LLU which is consistent with the ladder of investment principle. If the price for LLU/ SLU/ VUA is set too low OAOs may not have sufficient incentives to invest in NGA networks. Therefore, in choosing the appropriate pricing approach for SB-WLR nationally and for SABB Outside the LEA it is important to balance these objectives.
- 14.16 For SB-WLR we propose to set the price based on the higher of:
- (i) Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally with active equipment (line card) based on the BU-LRAIC+ methodology; or
 - (ii) the costs for SB-WLR in the LEA implementing a BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets.
- 14.17 ComReg considers that this proposed approach maintains the correct build-or-buy signals in the LEA (where there is varying prospective competitive conditions) and it ensures that Eircom does not under-recover its actual efficiently incurred costs (plus a reasonable rate of return) nationally for SB-WLR.
- 14.18 For SABB Outside the LEA, we propose that the price should be set with reference to Eircom's Actual Costs Adjusted for Efficiencies (with active equipment based on BU-LRAIC+ costs). This approach allows Eircom to recover its efficiently incurred costs and sets a wholesale price which relative to the combined price of SB-WLR and BMB would make commercial sense for OAOs to make available to end-users. In addition, without regulation, the prospects for

increased competition in current generation Bitstream (or SABB) Outside the LEA are limited, and therefore the impact on competition is minimal. The proposed pricing approach Outside the LEA should protect end-users from excessive pricing.

- 14.19 The proposed retail margin squeeze test for retail line rental (at Chapter 10) should protect operators that rely on SB-WLR. ComReg considers that competition is protected by ensuring that operators have a sufficient economic space between retail line rental and wholesale line rental so that they can compete with Eircom and still make a margin. Similarly, the proposed wholesale margin squeeze test for POTS based VUA should ensure sufficient economic space between the price for POTS based VUA and the price for standalone NGA Bitstream / VUA plus a contribution towards the cost of Managed VoB so that an OAO is encouraged to invest in their own Managed VoB platform either currently or prospectively.

Encourage efficient investment in infrastructure and promoting innovation

- 14.20 Access prices should be set in such way that OAOs are able to make an efficient decision on whether to build their own network or alternatively to use / rent the access service(s). Similarly, they should make an efficient decision on which service to use.
- 14.21 The priority between short-term and long-term investments may vary depending on the specific conditions of each wholesale product and geographical area.
- 14.22 In the LEA there is infrastructure-based competition (mainly from UPC but potentially from SIRO (Vodafone/ESB) in the future) as well as competition relying on LLU, Line Share and SLU services. There is also some service-based competition based solely on Eircom's copper local loop i.e., WBA and SB-WLR. Outside the LEA, infrastructure based competition and competition relying on LLU, Line Share and SLU are unlikely absent state funding. However, service based competition relying on SB-WLR and WBA is present Outside the LEA. Therefore, in areas where no infrastructure based competition is likely to develop there is no need to send a correct build or buy signals – cost recovery of the Incumbent in this area is more important than the costs that would be faced by a new entrant. On the other hand where infrastructure based competition has developed or is likely to develop sending the correct build or buy signal is important while also ensuring that the Incumbent does not under recover its efficient costs plus a reasonable rate of return.
- 14.23 For OAOs, visibility and certainty regarding future wholesale access prices is important so that operators can progress their investment plans. For the Incumbent it is necessary to ensure that it recovers at least its efficiently incurred costs plus a reasonable rate of return through the wholesale access prices

otherwise there is a risk that the Incumbent could stop maintaining its copper network.

- 14.24 As set out in Chapter 6, the proposed pricing approach for SB-WLR allows Eircom to recover the higher of its actual efficient costs plus a reasonable rate of return for the provision of SB-WLR nationally with active equipment (line card) costs based on the BU-LRAIC+ methodology or the the costs for SB-WLR in the LEA implementing a BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets.
- 14.25 If the SB-WLR national price based on Eircom's Actual Costs Adjusted for Efficiencies nationally (with active equipment based on BU-LRAIC+ costs) is the higher price then this price should allow Eircom to recover any money invested in maintaining or upgrading its network on that basis that Eircom will have the assurance that what is spends can be recouped over the price control period. Therefore, Eircom's investment incentives are unlikely to be affected. The BU-LRAIC+ approach for active equipment should ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner. In addition, the cost orientation price control for SB-WLR should lead to reasonable price stability for other operators' investment plans. In addition, this approach maintains the correct build-buy signals in the LEA for OAOs.
- 14.26 If the SB-WLR national price based on the BU-LRAIC+ for Non-reusable assets and active equipment and Eircom's Indexed RAB for Reusable assets inside the LEA is the higher price then the appropriate build or buy signals are provided in terms of investment in the LEA.
- 14.27 For SABB Outside the LEA, the use of Eircom's Actual Costs Adjusted for Efficiencies (with active equipment based on BU-LRAIC+ costs) means that Eircom should recover any money invested in maintaining or upgrading its network on that basis that Eircom will have the assurance that what is spends can be recouped over the price control period. The BU-LRAIC+ approach for active equipment should ensure that Eircom are incentivised to continue to invest and upgrade its network in an efficient manner. The build or buy signal is not appropriate with regard to the area Outside the LEA as discussed in paragraph 14.31.
- 14.28 The proposed retail margin squeeze test for retail line rental (at Chapter 10) should protect operators that rely on SB-WLR and ensure that they can compete with Eircom and still make a margin. The proposed wholesale margin squeeze test for POTS based VUA should encourage OAOs to invest in their own Managed VoB platform either currently or prospectively.

Contribute to the development of the internal market

- 14.29 In this Draft Decision we have taken utmost account of the 2013 Recommendation issued by the European Commission.
- 14.30 While the 2013 Recommendation is not specifically relevant to Market 2 (SB-WLR) ComReg considers that the objectives of the 2013 Recommendation are equally important in the context of SB-WLR i.e., cost recovery and appropriate build or buy signals. In addition, for all access services provided across the access network there should be regulatory consistency regarding the choice of costing methodology applied. Consequently, ComReg assessed the various pricing options for SB-WLR using the 2013 Recommendation. Please refer to Chapter 6.
- 14.31 For SABB Outside the LEA, ComReg considers that the objective is not to stimulate alternative operator investment where it is clear no commercial operator might invest, therefore the need for build-or-buy signals are less relevant in this area. Instead Eircom's Actual Costs Adjusted for Efficiencies (combined with the BU-LRAIC+ costs for active equipment) associated with the provision of SABB Outside the LEA ensures that there is no over or under recovery of costs by Eircom. This approach is consistent with the WBA Pricing Decision. Please refer to Chapter 7 for discussion on the reasons for divergence from the 2013 Recommendation.
- 14.32 Further to Regulations 13 and 14 of the Framework Regulations, the draft measures will be made accessible to the Commission, the Body of European Regulators for Electronic Communications ("**BEREC**") as well as other national regulatory authorities ("**NRAs**") in other EU Member States.
- 14.33 We will consider all responses received to this Draft Decision before proceeding to a final decision.

Promote the interests of users within the Community

- 14.34 A cost orientation price control for SB-WLR nationally and for SABB Outside the LEA should help to facilitate greater regulatory certainty for longer-term competitive entry and expansion. This should have positive implications for the price, choice and quality of services ultimately delivered to end-users.

Encourage access to the internet at a reasonable cost to end users

- 14.35 ComReg is required to take all reasonable measures to encourage access to the internet at reasonable cost to users. The cost orientation obligation for SB-WLR ensures that Eircom's level of recovery of costs is restricted to the higher of Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally with active equipment (line card) costs based on the BU-LRAIC+

methodology or the costs for SB-WLR in the LEA implementing a BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets. This should ensure that the price for SB-WLR nationally is reasonable.

- 14.36 For SABB Outside the LEA, Eircom's recovery of costs is restricted to no more than Eircom's Actual Costs Adjusted for Efficiencies (with active equipment based on BU-LRAIC+ costs) for the provision of SABB area Outside the LEA. This should ensure that end-users are prevented from excessive pricing Outside the LEA.

14.3.2 Regulation 6(1) of the Access Regulations

- 14.37 Regulation 6(1) of the Access Regulations provides that the Regulator shall acting in pursuit of its objectives set out in Section 12 of the Act of 2002 and Regulation 16 of the Framework Regulations, encourage and, where appropriate, ensure adequate access, interconnection and the interoperability of services in such a way as to:

- a) Promote efficiency;
- b) Promote sustainable competition;
- c) Promote efficient investment and innovation; and
- d) Give the maximum benefit to end-users.

- 14.38 Please refer to paragraphs 14.63 to 14.65 for discussion on promoting efficiency.

- 14.39 Please refer to paragraphs 14.14 to 14.19 for discussion on promoting competition.

- 14.40 Please refer to paragraphs 14.20 to 14.28 for discussion on investment and innovation.

- 14.41 Please refer to paragraphs 14.34 to 14.36 regarding the benefits to end-users.

14.3.3 Regulation 8(6) of the Access Regulations

- 14.42 Regulation 8(6) of the Access Regulations provides that:

Any obligations imposed in accordance with this regulation shall –

- (a) Be based on the nature of the problem identified,*
- (b) Be proportionate and justified in light of the objectives laid down in section 12 of the 2002 Act and Regulation 16 of the Framework Regulations, and*

(c) Only be imposed following consultation in accordance with Regulation 12 and 13 of the Framework Regulations.

Based on the nature of the problem identified:

- 14.43 In the WPNIA Market Decision ComReg identified the competition problems associated with the WPNIA market. The competition problems identified by ComReg as part of the WPNIA market review included exploiting customers by virtue of its SMP position e.g. excessive pricing, leveraging its market power into adjacent vertically or horizontally related markets and foreclosing or excluding competitors such as to protect its existing dominance on the market or markets in question. Please refer to Chapter 5 of the WPNIA Market Decision for further details.
- 14.44 In the WBA Market Decision ComReg identified the competition problems associated with the WBA market. ComReg considered that Eircom would have the ability and incentive to set excessive prices in Market 5 which would exploit retail broadband users and potentially harm competition from OAOs relying on Eircom's WBA inputs. In addition, ComReg identified scope and incentive for the SMP operator to engage in possible price-related leveraging through pricing its upstream and downstream services in such a way as to give rise to an insufficient wholesale/retail margin which would impede effective downstream competition.
- 14.45 In the 2014 FACO Consultation Document ComReg identified the potential competition problems associated with the FACO market. The problems identified included price related behaviours by way of excessive pricing and margin squeeze. Please refer to the 2014 FACO Consultation Document for further details.

Proportionate and justified

- 14.46 ComReg considers that the pricing approach for SB-WLR and for SABB Outside the LEA is justified based on the detail, reasoning and information provided in this Draft Decision. Please refer to Chapter 4 (subsection 4.2) for justification of the cost orientation obligation for SB-WLR and to Chapter 6 (subsection 6.6) for justification of the pricing approach for SB-WLR. In addition, please refer to Chapter 7 for justification of the pricing approach for SABB Outside the LEA.
- 14.47 ComReg considers that the proposed pricing approach for SB-WLR nationally and for SABB Outside the LEA as set out in this Draft Decision is proportionate and justified.
- 14.48 This Draft Decision should provide transparency to the industry insofar as Eircom can recover no more than the higher of its actual efficient costs plus a reasonable rate of return for the provision of SB-WLR nationally with active equipment (line card) costs based on the BU-LRAIC+ methodology or the costs for SB-WLR in

the LEA implementing a BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets. ComReg considers that this proposed approach is proportionate and justified as it maintains the correct build-or-buy signals in the LEA (where it is most relevant) and ensures that Eircom does not under-recover its actual efficiently incurred costs (plus a reasonable rate of return) nationally for SB-WLR.

- 14.49 For SABB Outside the LEA, ComReg considers that a price which is reflective of Eircom's Actual Costs Adjusted for Efficiencies for the provision of SABB Outside the LEA with active equipment costs based on the BU-LRAIC+ methodology should protect those operators, and ultimately end-users in more rural areas from excessive prices where they decide to purchase a broadband only service from Eircom.
- 14.50 In addition, this Draft Decision should provide reasonable price certainty and predictability to operators in Market 5 with regard to SABB prices Outside the LEA and also in Market 2 with regard to the monthly rental for SB-WLR. In particular, Eircom must notify ComReg before it increases or introduces a new national price for SB-WLR in Market 2 and / or for SABB Outside the LEA in Market 5. As part of the notification procedure, it is proposed that Eircom should demonstrate that the new or increased price complies with the specified cost orientation obligation set out in any final decision. This allows ComReg sufficient time to understand the proposed price changes for SB-WLR nationally and / or for SABB Outside the LEA and to ensure that the revised / new prices are in line with Eircom's pricing obligations. It also allows OAOs to assess the likely impact of the changes in terms of its business case and to allow the OAOs time to notify its customers of a price change, where appropriate.
- 14.51 The proposed retail margin squeeze test for SB-WLR is proportionate and justified given that ComReg is concerned that even if the cost oriented SB-WLR national price would prevent Eircom from increasing its wholesale charge it can, by reducing the retail price, reduce the retail margin available to OAOs such that an OAO cannot replicate Eircom's retail prices either on a standalone basis or in a bundle. Eircom's retail line rental price is subject to a price cap which means that Eircom has flexibility to price below this price cap should it wish to do so. Please refer to Chapter 10 for further details.
- 14.52 The proposed wholesale margin squeeze test for POTS based on VUA is to ensure that Eircom's price for standalone VUA / NGA Bitstream cannot go so high that it would disincentivise investment in VoB currently or prospectively. ComReg considers that this test is proportionate and justified on the basis that the SB-WLR rental and the port price combined must respect the economic space / margin determined by the wholesale margin squeeze test such that an OAO can invest in Managed VoB and still make a margin.

Only be imposed following consultation

- 14.53 ComReg will consider all responses it receives to this Draft Decision and, based upon those responses it may amend some of its views before it proceeds to a final decision.

14.3.4 Regulation 13 of the Access Regulations

- 14.54 According to Regulation 13(1) of the Access Regulations, ComReg may:

impose on an operator obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of access or interconnection in situations where a market analysis indicates that a lack of effective competition means that the operator concerned may sustain prices at an excessively high level or may apply a price squeeze to the detriment of end users.

- 14.55 The requirements set out in Regulation 13(1) of the Access Regulations have been discussed in the context of SB-WLR in Chapter 4 (subsection 4.2). For SABB Outside the LEA, the requirements under Regulation 13(1) of the Access Regulations were discussed in the WBA Pricing Decision. The requirements set out in Regulation 13(1) of the Access Regulations with regard to the proposed retail margin squeeze obligation for retail line rental and the wholesale margin squeeze test for POTS based VUA are discussed in the competition concerns set out in Chapter 10 (subsection 10.2.2 and 10.3.2) of this Draft Decision.

- 14.56 Regulation 13(2) of the Access Regulations provides that:

To encourage investments by the operator, including in next generation networks, the Regulator shall, when considering the imposition of obligations under paragraph (1), take into account the investment made by the operator which the Regulator considers relevant and allow the operator a reasonable rate of return on adequate capital employed, taking into account any risks involved specific to a particular new investment network project.

- 14.57 As set out in Chapter 6 (subsection 6.6) in the context of SB-WLR, the proposed pricing approach should allow Eircom to recover the higher of its actual efficient costs plus a reasonable rate of return for the provision of SB-WLR nationally with active equipment (line card) based on the BU-LRAIC+ costs or the costs for SB-WLR in the LEA implementing a BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets. Reference to Eircom's Actual Costs Adjusted for Efficiencies should allow Eircom to recover any money invested in maintaining or upgrading its network nationally

on the basis that Eircom will have the assurance that what it spends can be recouped over the price control period. If the SB-WLR price is higher by reference to the LEA costs (based on BU-LRAIC+ and Eircom's Indexed RAB costs) then Eircom can recover the higher replacement costs by virtue of the BU-LRAIC+ costs associated with Non-reusable Assets and Eircom's Indexed RAB associated with Reusable Assets for SB-WLR in the LEA.

- 14.58 For SABB Outside the LEA the reference to Eircom's Actual Costs Adjusted for Efficiencies should ensure that Eircom recovers any money invested in maintaining or upgrading its network on the basis that what it spends can be recouped over the price control period. The main objective in setting the price for SABB Outside the LEA is not to stimulate investment where it is clear no commercial operator might invest but to ensure Eircom do not materially over or under recover its actual efficient costs (including a reasonable rate of return).
- 14.59 The retail margin squeeze test for line rental is based on EEO costs. This is discussed in Chapter 10 (subsection 10.2.4). The EEO costs are consistent with a cost orientation obligation as they ensure cost recovery for Eircom i.e., EEO costs are based on Eircom's Actual Costs Adjusted for Efficiencies. In principle, ComReg believes that the OAOs costs should be used in the retail test but accurate verifiable OAO data is difficult to obtain. Therefore, in the absence of robust and audited OAO cost data ComReg uses Eircom's audited costs as a starting point. The fixed line telecoms WACC of 8.18% is also applied to the costs which should allow for a reasonable rate of return in line with Regulation 13(2) of the Access Regulations.
- 14.60 The proposed notification procedure for SB-WLR nationally and for SABB Outside the LEA ensures that any proposed changes by Eircom to the SB-WLR national price and / or the SABB price Outside the LEA are consistent with the specified cost orientation obligation and more generally with the requirements of Regulation 13(2) of the Access Regulations.
- 14.61 Regulation 13(3) of the Access Regulations provides that:
- The Regulator shall ensure that any cost recovery mechanism or pricing methodology that ComReg imposes under this Regulation serves to promote efficiency and sustainable competition and maximise consumer benefits. In this regard, the Regulator may also take account of prices available in comparable competitive markets.*
- 14.62 Each of these objectives are discussed below.

Promote efficiency

14.63 A cost oriented price control aims to ensure that prices do not exceed an appropriate level of efficient costs where there is a risk that competitive pressure alone would not achieve this outcome.

14.64 There are three forms of efficiency including:

- Allocative Efficiency: Where prices of different products results in an optimum allocation of resources to end-users;
- Productive Efficiency: Where the cost of producing the products is minimised;
- Dynamic Efficiency: This refers to the efficiency of investor and customer behaviour over time.

14.65 ComReg believes that any price control imposed needs to strike a balance between these three forms of efficiency. Allocative and productive efficiency are essentially static concepts taking into account the level of costs to deliver products at a particular point in time. In terms of productive efficiency, ComReg believes that the sequential nature of investment decisions, when assessing whether the level of costs reported is efficiently incurred, needs to be considered in the price control. This has been reflected in Chapter 5 (cost modelling approach) where ComReg has proposed efficiency adjustments to Eircom's Actual Costs Adjusted for Efficiencies for SB-WLR nationally and for SABB Outside the LEA. The BU-LRAIC+ approach adopted in the context of active equipment for SB-WLR and SABB already assumes a level of efficiency (as it assumes a brand new network) therefore no further adjustments are required in the context of active equipment costs.

Promote sustainable competition

14.66 Please refer to paragraphs 14.14 to 14.19.

Maximise consumer benefits

14.67 Please refer to paragraphs 14.34 to 14.36.

14.68 Regulation 13(4) of the Access Regulations provides that:

“Where an operator has an obligation under this Regulation regarding the cost orientation of its prices, the burden of proof that charges are derived from costs, including a reasonable rate of return on investment shall lie with the operator concerned.....”

14.69 In the event that Eircom proposes to increase or introduce a new price for SB-WLR nationally and / or SABB Outside the LEA, it must demonstrate to ComReg

that the new price or the increased price complies with the specified cost orientation obligation. This ensures that the onus lies with Eircom that its prices for SB-WLR nationally and for SABB Outside the LEA are set by reference to efficient costs, consistent with Regulation 13(4) of the Access Regulations

14.3.5 Regulation 16 of the Framework Regulations

14.70 While some of the main requirements / objectives of Regulation 16 of the Framework Regulations have already been addressed above as part of the discussion on Regulation 8 of the Access Regulations, Section 12 of the Communications Regulation Act and / or Regulation 13 of the Access Regulations, set out below is some other key requirements associated with Regulation 16 which have not been addressed so far as part of the discussions above.

Promoting regulatory predictability by ensuring a consistent approach over appropriate review periods:

14.71 The proposed cost orientation obligation for SB-WLR should ensure that all Wholesale Access Services are priced consistently (based on cost orientation) across Eircom's wholesale access network. This is discussed in Chapter 4 (subsection 4.2).

14.72 For SABB Outside the LEA, the proposed pricing approach is consistent with the recent WBA Pricing Decision with regard to the use of Eircom's Actual Costs Adjusted for Efficiencies for setting current generation Bitstream prices.

14.73 The proposed margin squeeze tests are consistent with similar tests imposed on Eircom in the context of NGA and current generation Bitstream.

Taking due account of the variety of conditions relating to competition and consumers that exist in the various geographic areas within the State:

14.74 As set out in detail in Chapter 6, we recognise that there may be varying structural and competitive conditions prospectively between the LEA (urban areas) and Outside the LEA (rural areas). This was established in the Bundles Decision.

14.75 Our proposed pricing approach for SB-WLR allows Eircom to recover the higher of its actual efficient costs plus a reasonable rate of return for the provision of SB-WLR nationally with active equipment (line card) based on the BU-LRAIC+ costs or the costs for SB-WLR in the LEA implementing a BU-LRAIC+ costs for Non-reusable Assets and active equipment (line card) and Eircom's Indexed RAB for Reusable Assets. We consider that this ensures that the appropriate investment signal is provided in the relevant area (in the LEA) while the proposed approach also ensures that Eircom recovers its efficient costs plus a reasonable

rate of return for SB-WLR nationally. Please refer to Chapter 6 for a further discussion on the pricing options for SB-WLR.

- 14.76 For SABB Outside the LEA we recognise that the appropriate investment signals (of build or buy) are not relevant in this area (absent state funding) and therefore the objective of cost recovery is important. We propose that the SABB price Outside the LEA should be set by reference to Eircom's Actual Costs Adjusted for Efficiencies (with active equipment based on BU-LRAIC+ costs) for the provision of SABB Outside the LEA.
- 14.77 Regulation 16(2) of the Framework Regulations requires that ComReg applies objective, transparent, non-discriminatory and proportionate regulatory principles. The obligations contained in the Draft Decision are:
- objectively justifiable, in that the obligations facilitate and encourage fair, reasonable and timely access to Eircom's network and therefore promotes competition to the benefit of end users;
 - not unduly discriminatory, in that Eircom has been found to have SMP in the relevant markets;
 - proportionate, in that the proposed obligations are targeted at addressing the market power that Eircom holds in the relevant markets and allows Eircom to recover its efficient costs (including a reasonable rate of return); and
 - transparent, in that the obligations set out in this Draft Decision are clear with regard to the pricing approach for SB-WLR nationally and for SABB Outside the LEA as well as the imposition of the margin squeeze tests.

14.4 Step 2: Identify and describe the regulatory options

- 14.78 The regulatory options considered in the context of setting the SB-WLR price, the price for SABB Outside the LEA and for the margin squeeze tests are as follows:
- Options on the form of price control for SB-WLR;
 - Options for determining appropriate costing methodology for SB-WLR nationally and for SABB Outside the LEA;
 - Options for determining the appropriate geographic scope for SB-WLR; and
 - Options for determining the appropriate principles for the retail margin squeeze test;

- Options for determining the hypothetical investment in the Managed VoB platform; and
- Options for notifying retail price changes for retail line rental.

14.4.1 Options on the form of price control for SB-WLR

14.79 As set out in paragraph 14.54, ComReg may in accordance with Regulation 13(1) of the Access Regulations impose obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of access or interconnection.

14.80 The main forms of price control that were considered in Chapter 4 were:

- Regulatory forbearance;
- Benchmarking;
- Retail minus;
- Margin squeeze test; or
- Cost orientation.

14.81 Please refer to Chapter 4 (subsection 4.1) for a detailed discussion on each of the various forms of price control listed above. In the context of the RIA we propose to focus on the retail minus option and the cost orientation option for SB-WLR.

14.4.2 Options for determining appropriate costing methodology

14.82 The following two options were considered in terms of the appropriate costing methodology for SB-WLR nationally and for SABB Outside the LEA:

- BU-LRAIC+ or
- Eircom's Actual Costs Adjusted for Efficiencies.

14.83 Please refer to Chapter 4 (subsection 4.3) for a detailed discussion on the costing methodology options.

14.4.3 Options for determining the appropriate geographic scope for SB-WLR

14.84 For SB-WLR, it is important to achieve an appropriate balance between setting the necessary build / buy signals in the relevant areas (LEA) while at the same

time ensuring that Eircom does not over / under recover its actual efficient costs nationally. If the access price is too high in areas where infrastructure investment is also unlikely to develop (as the deployment cost for each line is high i.e., in rural areas), this would not be desirable due to the detrimental long-term impact on consumers arising from a lack of competition, as competition from operators acting as resellers may also be dampened. On the other hand the access price should not be too low, especially in the LEA, as it could deter investments in the long term in infrastructure-based competition. Therefore, consideration of the derived SB-WLR prices from each pricing option is important with regard to determining the appropriate pricing approach for SB-WLR.

14.85 In Chapter 6 (subsection 6.6) we considered the following options:

- National price based on national costs i.e., Eircom's Indexed RAB for Reusable Assets and BU-LRAIC+ costs for Non-reusable Assets and active equipment;
- National price based on geographic de-averaged costs i.e., LEA and Outside the LEA; or
- National price based on higher of Eircom's Actual Costs Adjusted for Efficiencies nationally (with BU-LRAIC+ costs applied to active assets) or the BU-LRAIC+ for Non-reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets in the LEA.

14.86 Please refer to Chapter 6 (subsection 6.6) for the details.

14.4.4 Options for determining appropriate principles for the retail margin squeeze test

14.87 The following are the main options considered for determining the appropriate principles for the margin squeeze tests:

- (i) **Cost base:** The retail margin squeeze test should be based on either:
 - A SEO (or REO) cost base, which assumes that entrants are currently not likely to be as efficient as Eircom given that they cannot achieve the same scale; or
 - An entire EEO approach once the OAOs have achieved sufficient scale to encourage efficient entry.
- (ii) **Cost standard:** The retail margin squeeze test should take account of either:
 - The LRAIC+ costs; or

- The ATC costs.
- (iii) **Assessment basis:** The retail margin squeeze test should be assessed either:
 - Nationally: Eircom would have some flexibility to efficiently price discriminate on individual products so long as Eircom recovers the overall costs across the national portfolio of products; or
 - Sub-nationally: Eircom would have comply with two difference tests based on LEA and Outside the LEA.

14.88 Please refer to Chapter 10 of this Draft Decision for a discussion on the principles for retail margin squeeze test.

14.4.5 Options for determining the hypothetical investment in the Managed VoB platform

14.89 We considered the following options:

- EEO;
- REO; and
- SEO.

14.90 Please refer to Chapter 10 (subsection 10.3) for a further discussion on each option.

14.4.6 Options for notifying retail price changes for retail line rental

14.91 We considered the following options:

- The introduction of new/revised retail prices for retail line rental should be pre-notified and pre-cleared with ComReg; and
- Eircom should be allowed to self-certify its obligation not to cause a margin squeeze for the introduction of new/revised retail prices for retail line rental products.

14.92 Please refer to Chapter 10 (subsection 10.2.7) for a further discussion on each option.

14.5 Step 3 – Determine the likely impact on stakeholders

14.93 This section summarises the impact of the options above on the various stakeholders. We consider the potential impacts that could be incurred by Eircom in complying with the proposed obligations as well as the potential benefits that would accrue to Eircom, its wholesale customers and end users.

14.94 The likely impact on stakeholders is discussed under the following headings:

- Forms of price control for SB-WLR;
- Costing methodology for SB-WLR nationally and for SABB Outside the LEA;
- Geographic scope for SB-WLR;
- Principles for the retail margin squeeze test; and
- Options for determining hypothetical investment in Managed VoB platform.

A. Forms of price control for SB-WLR:

Option 1: Retail Minus

- (a) Impact on Eircom
- This approach provides a degree of regulatory consistency for Eircom as the SB-WLR price is already set on this basis.
 - This approach allows Eircom some pricing flexibility as the wholesale price is set with reference to the retail price less the retail costs (currently set at no more than 14%).
 - This approach may not ensure cost recovery by Eircom.
 - This approach may not send the appropriate build-or buy signals to Eircom.
- (b) Impact on OAOs
- This approach should provide sufficient margin (at no more than 14%) to ensure entry is possible at prices that are consistent with the outcome of a competitive process.
 - Under this approach, the access price charged to OAOs could be too high if Eircom's retail price is high – especially Outside the LEA.

- This approach may not prevent excessive pricing from Eircom as the wholesale price is not set with reference to costs.
 - This approach may not send the appropriate build or buy signals to OAOs.
 - This approach may lead to pricing instability for other operators.
- (c) Impact on end users
- This approach could give rise to excessive retail prices.

Option 2: Cost Orientation

- (a) Impact on Eircom
- This approach ensures that Eircom's SB-WLR price is set by reference to strict cost recovery i.e., actual efficient costs plus a reasonable rate of return – therefore maintains price stability.
 - This approach should ensure that Eircom does not over or under recover its efficient costs for the provision of SB-WLR.
 - This approach should allow Eircom to recover any money invested in maintaining or upgrading the network which should ensure that Eircom's investment incentives are unlikely to be affected.
 - This approach means that Eircom would have to demonstrate to ComReg that any price increase or new price for SB-WLR is in line with the specified cost orientation obligation.
 - This approach ensures consistency across the investment ladder.
- (b) Impact on OAOs
- This approach should ensure that the access price is not too high so that competition can develop.
 - This approach should provide certainty / predictability for OAOs about price levels for SB-WLR which may have implications for their investment decisions.
 - This approach should provide more consistency across the investment ladder and therefore ensure the appropriate build-or-buy are provided to OAOs in the relevant areas.
 - This approach should ensure that OAOs are not subject to excessive SB-WLR prices.

(c) Impact on end users

- This approach should ensure that competition can develop to the benefit of end-users end-users are not subject to excessive prices.

B. Costing methodology for SB-WLR nationally and for SABB Outside the LEA

Option 1: Eircom's Actual Costs Adjusted for Efficiencies¹³¹

(a) Impact on Eircom:

- This approach should ensure that Eircom does not materially under / over recover its costs as the value is linked to the actual investment made (for Reusable Assets and Non-reusable Assets) adjusted for efficiency plus a reasonable rate of return.
- This approach should allow Eircom to recover any money invested in Reusable Assets and Non-reusable Assets so as to maintain or upgrade the network which should ensure that Eircom's investment incentives are unlikely to be affected.
- This approach should ensure that Eircom does not price excessively as the price is set by reference Eircom's Actual Costs Adjusted for Efficiencies – especially with regard to the area Outside the LEA.
- This approach would mean that Eircom would have to demonstrate to ComReg that any price increase or new price for SB-WLR nationally and / or SABB Outside the LEA is set by reference to its actual costs adjusted for efficiencies plus a reasonable rate of return.

(b) Impact on OAOs:

- This approach should lead to reasonable price stability and predictability which should help operators' investment plans.
- This approach should ensure that OAOs are only paying for actual investments made by Eircom in relation to Reusable Assets and Non-reusable Assets associated with the provision of SB-WLR nationally and for SABB Outside the LEA.
- This approach should ensure that OAOs are not subject to excessive prices as the prices are set by reference to actual efficient costs plus a reasonable rate of return.

¹³¹ BU-LRAIC+ costs are applied to active equipment for SB-WLR nationally and for active equipment for SABB Outside the LEA.

- This approach provides OAOs with a degree of price certainty as Eircom cannot increase the price or introduce a new price for SB-WLR nationally and / or SABB Outside the LEA without demonstrating to ComReg compliance with its specified cost orientation obligation and with reference to its actual costs adjusted for efficiencies plus a reasonable rate of return.

(c) Impact on end users

- This approach should ensure that retail prices are not excessive.

Option 2: BU-LRAIC+

(a) Impact on Eircom

- This approach should send the appropriate investment signals 'build or buy' to OAOs, in the appropriate area – LEA. This is particularly relevant for infrastructure based competition.
- This approach allows Eircom to recover its costs by reference to the replacement cost associated with the asset (rather than the actual efficient cost).
- This approach could allow Eircom to recover the cost of investments that may not have taken place / are not likely to take place in the future, in certain rural areas i.e., Outside the LEA.
- This approach could allow Eircom to over recover costs in certain areas i.e., Outside the LEA – which could give rise to excessive wholesale prices.

(b) Impact on OAOs

- This approach should send the correct investment signals to the market place – especially in the LEA.
- This approach could mean that OAOs would be paying for the cost of investments that Eircom has not made or it not likely to make, in certain rural areas i.e., Outside the LEA. Therefore, in the absence of alternative network competition the BU-LRAIC+ may result in excessive pricing Outside the LEA as it facilitates the recovery of hypothetical costs which may not actually have been incurred.
- Where there is limited prospects of entry in certain rural areas of the country this may not be an appropriate approach.

(c) Impact on end users

- This approach in the absence of alternative network competition may encourage Eircom to “sweat” its assets in certain rural areas resulting in excessive prices relative to active investment without any benefit to end-users in terms of alternative platform based investment.

C. Appropriate geographic scope for SB-WLR:

Option 1: SB-WLR national price based on national costs (i.e., BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom’s Indexed RAB for Reusable Assets)

(a) Impact on Eircom

- This approach may lead to over recovery of costs by Eircom.
- The BU-LRAIC+ costs applied to the Non-reusable Assets Outside the LEA may result in a SB-WLR price that over-compensates Eircom relative to its actual investment, especially Outside the LEA.
- This approach may not send the appropriate signals to Eircom, especially with regard the build or buy signals Outside the LEA. Relative to the actual efficient costs incurred by Eircom nationally this approach Outside the LEA would result in Eircom over-recovering its actual efficiently incurred costs plus a reasonable rate of return.
- This approach ensures that there is no added complexities or costs in terms of billing and administration as there is just one national price for SB-WLR.

(b) Impact on OAOs

- This approach may result in a higher SB-WLR price for OAOs – as OAOs are paying for investments that did not take place / may not take place Outside the LEA.
- This approach may send the wrong investment signal to OAOs in terms of efficient investment – this approach derives a higher national price than is required for the appropriate build or buy signal especially in the LEA.

(c) Impact on end users

- This approach may result in higher costs being passed onto end-users by OAOs.

Option 2: SB-WLR national price based on geographic de-averaged costs (i.e. BU-LRAIC+ and Eircom's Indexed RAB for each area)**(a) Impact on Eircom**

- This approach means that the price for SB-WLR in the LEA reflects the BU-LRAIC+ costs (for Non-reusable Assets and active equipment) and Eircom's indexed RAB (for Reusable Assets) in the LEA – this should send the appropriate investment (build or buy) signals to Eircom in the LEA.
- This approach means that the price for SB-WLR Outside the LEA reflects the BU-LRAIC+ costs (for Non-reusable Assets and active equipment) and Eircom's indexed RAB (for Reusable Assets) Outside the LEA – this approach derives a higher price than is required for appropriate build or buy signals Outside the LEA. Relative to the actual efficient costs incurred by Eircom nationally this approach Outside the LEA would result in Eircom over-recovering its actual efficiently incurred costs plus a reasonable rate of return.

(b) Impact on OAOs

- This approach means that the price for SB-WLR Outside the LEA becomes very expensive as it is set by reference to the BU-LRAIC+ costs for Non-reusable Assets and active assets (with the Reusable Assets based on Eircom's indexed RAB) for area Outside the LEA. OAOs are paying for investments in Non-reusable Assets Outside the LEA that did not take place / may not take place in the future as no commercial operator would invest in this area absent state funding.
- This approach may create a digital divide where OAOs are subject to different SB-WLR depending on the geographic location i.e., LEA or Outside the LEA.
- This approach may result in additional costs associated with billing systems as different prices will apply depending on geographic location i.e., LEA and Outside the LEA.

(c) Impact on end users

- This could create a digital divide where alternative operators charge different retail charges depending on geographic location.

Option 3: SB-WLR national price based on higher of Eircom's Actual Costs Adjusted for Efficiencies nationally (with BU-LRAIC+ costs for active equipment) or BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom's indexed RAB for Reusable Assets in the LEA

(a) Impact on Eircom

- This approach ensures that Eircom does not under / over recover costs – this approach allows Eircom to recover its actual efficient costs plus a reasonable rate of return nationally.
- This approach ensures that any money invested by Eircom in maintaining or upgrading its network should be recouped by it in line with the HCAs. Therefore, this should encourage further investment by Eircom as it assured that what it invests can be recovered.

(b) Impact on OAOs

- This approach would provide the appropriate build or buy signals in the LEA.
- This approach ensure that OAOs only pay for those actual investments made by Eircom especially for investment Outside the LEA.

(c) Impact on end users

- This approach should ensure that end-users are not subject to excessive prices while appropriate incentives are in place for continued investment and competition in the relevant areas.

D. Appropriate inputs for retail margin squeeze test

Cost base:

Option 1: Retail margin squeeze test is based on an EEO cost base

a) Impact on Eircom:

- In general, an entire EEO assumption would imply that entrants could achieve similar economies of scale as Eircom. EEO is likely to assume lower retail costs for Eircom thereby requiring a lower retail margin. Depending on the Eircom Retail price this could provide a higher wholesale access charge.
- EEO approach is more consistent with cost orientation and ensures overall cost recovery for Eircom.

b) Impact on OAOs:

- An entire EEO cost base could make entry more difficult for new entrants, as the resulting gap between wholesale prices and retail prices would be lower, but may incentivise them to invest in their own infrastructure.

c) Impact on end-users:

- It should provide more choice if OAOs are incentivised to invest in their own infrastructure.

Option 2: Retail margin squeeze test is based on a SEO / REO cost base

a) Impact on Eircom:

- The SEO / REO assumes higher costs (compared to EEO) for Eircom which allows a lower wholesale access charge to be set by Eircom.
- The SEO / REO should promote competition from OAOs who would face lower wholesale input costs from Eircom. This could increase the willingness of OAOs to enter the retail market using Eircom wholesale inputs.

b) Impact on OAOs:

- The SEO / REO assumes that entrants have not yet gained sufficient economies of scale to that of Eircom. By using the SEO / REO cost standard in the margin squeeze test, the resulting wholesale prices (assuming Eircom retail prices remain constant) would be lower compared to a margin squeeze based on the EEO cost standard. This approach may be more appropriate Outside the LEA.
- The SEO / REO approach should encourage entry to the retail market and allow existing smaller operators to grow their customer base, by giving rise to a greater space between retail prices and wholesale prices that enable OAOs to supply wholesale and retail services more competitively based on Eircom wholesale inputs.

c) Impact on end-users:

- The SEO / REO approach is likely to result in the medium/long-term (marginally) lower retail prices and more choice, due to higher levels of competition from OAOs.

Cost standard:

Option 1: Retail margin squeeze test is based on 'LRAIC plus'

a) Impact on Eircom:

- This approach should allow Eircom to recover its average efficiently incurred directly attributable variable and fixed costs and an apportionment of joint and common costs.

b) Impact on OAOs:

- This approach should allow the recovery of the relevant common costs, as well as fixed and variable costs. This is the calculus faced by an operator when deciding whether to enter or expand a market. This should also ensure efficient entry, compared with the ATC cost standard.

c) Impact on end-users:

- This approach should allow the promotion of sustainable competition by OAOs to the benefit of end-users.

Option 2: Retail margin squeeze test is based on ATC

a) Impact on Eircom:

- This approach means a larger margin between products which is likely to mean easier entry potentially by an inefficient operator. If retail prices are constrained, the low wholesale charges could undermine the recovery of investment.
- ATC has been used to date for NGA pricing and for current generation Bitstream – therefore it ensures consistency across ladder of investment.
- ATC allows Eircom to recover all of its efficiently incurred costs.

b) Impact on OAOs:

- This approach may promote further entry given that it includes the costs of 'LRAIC plus' and some additional common costs. However, the ATC may encourage inefficient entry.

c) Impact on end-users:

- This approach may mean additional competition could reduce prices or improve choice.

National or sub-national assessment:**Option 1: Retail margin squeeze test - National**

a) Impact on Eircom:

- This approach allows Eircom flexibility in its retail pricing, enabling Eircom to price some retail products above and others below ATC. This is likely to imply discounting on products where the competition is most intense, provided that other products are priced higher, such that the overall average revenue matches ATC. This flexibility may mean that Eircom can experiment with price differentiation for different product offerings which may improve efficiency, and under certain conditions, can be welfare maximising.

b) Impact on OAOs:

- This approach should encourage efficiency and promote competition between operators, especially in the LEA.

c) Impact on end-users:

- This approach may mean improved efficiencies, especially in the LEA.

Option 2: Retail margin squeeze test – Sub-national

a) Impact on Eircom:

- This approach should ensure sufficient margin for each offer, but would restrict the ability of Eircom to price products as flexibly as they would under the national approach. Each SB-WLR product in the LEA and Outside the LEA would need to be priced at a retail level to meet the ATC requirement, which may limit the ability of Eircom to adjust pricing.

b) Impact on OAOs:

- This approach may enhance entry and competition, particularly for entrants that may lack economies of scope.

c) Impact on end-users:

- There may be some gains from improved competition of a sub-national approach, but these may be offset by a reduction of efficiency.

E. Options for determining hypothetical investment in Managed VoB platform

Option 1: Hypothetical investment based on EEO costs:

The EEO approach would mean using Eircom's cost of investment in a Managed VoB platform. The EEO cost approach would assume efficient costs based on the volumes associated with the Incumbent (Eircom). This may not reflect the costs of a typical new entrant operator.

Option 2: Hypothetical investment based on SEO costs:

The SEO approach reflects the fact that OAOs have not achieved the same economics of scope and scale as the Incumbent (Eircom). The SEO costs can be determined by taking Eircom's costs and adjusting for economies of scale / scope. The SEO cost approach is similar to the REO approach below.

Option 3: Hypothetical investment based on REO costs:

The REO approach uses the costs of a typical entrant operator. The REO approach would reflect hypothetical capital costs of an efficient entrant and not the actual costs of the Incumbent. We consider that the REO cost approach is most appropriate in the context of the hypothetical investment in Managed VoB as part of the wholesale margin squeeze test between the price of POTS based VUA and the price for standalone VUA / NGA Bitstream (with a contribution towards the cost of investment in a Managed VoB platform).

F. Options for notifying retail price changes for retail line rental

Option 1: New/revised retail price for retail line rental must be pre-notified by Eircom to ComReg

a) Impact on Incumbent:

- Eircom is currently subject to a pre-notification requirement pursuant to RFVA Decision.

b) Impact on OAOs:

- Will give OAOs legal certainty that there will be regulatory monitoring of Eircom's retail prices for retail line rental prior to their launch.

c) Impact on Consumers:

- Ensures a transparent regulatory environment which monitors retail line rental products at risk of being anti-competitive and which may have long-term negative impacts for consumer choice.

Option 2: Eircom must self-certify that new/revised retail price for retail line rental meets its obligation not to cause a margin squeeze

a) Impact on Incumbent:

- Eircom would not need to get pre-clearance from ComReg when it wishes to launch a new/revised retail price for retail line rental. Eircom would only need to notify ComReg of the details of the new/revised retail price for retail line rental.
- Eircom would be required to maintain records which demonstrated that a margin squeeze test was undertaken prior to launch and that based on the reasonable assumptions used that no margin squeeze issues were raised.

b) Impact on OAOs:

- OAOs would have no certainty of whether a retail line rental product launched by Eircom met its obligation not to cause a margin squeeze. However, as Eircom would be required to demonstrate its ongoing compliance in respect of at least one retail amendment (chosen by ComReg) every three months, OAOs would have some comfort as a result of this continued regulatory monitoring.

c) Impact on Consumers:

- Ensures a transparent regulatory environment which monitors retail line rental products at risk of being anti-competitive and which may have long-term negative impacts for consumer choice.

14.6 Step 4: Determine the likely impacts on competition

14.95 This is discussed at paragraphs 14.14 to 14.19.

14.7 Step 5: Assess the likely impacts and choose the best option

14.96 In light of the reasoning and justification set out throughout this Draft Decision, ComReg is of the preliminary view that SB-WLR prices should be set on the basis of a cost orientation — in particular see Chapter 4 (subsection 4.2).

- 14.97 ComReg considers that a national SB-WLR price based on the higher of the combined BU-LRAIC+ and Eircom's indexed RAB inside the LEA or nationally Eircom's Actual Costs Adjusted for Efficiencies (with the BU-LRAIC+ costs for active equipment i.e., line card), maintains the correct build-or-buy signals in the LEA (where it is most relevant) and ensures that Eircom does not under-recover its actual efficiently incurred costs (plus a reasonable rate of return) nationally for the provision of SB-WLR. Please refer to Chapter 6 (subsection 6.6.) for further details.
- 14.98 For SABB Outside the LEA, the objective is not to stimulate alternative operator investment where it is clear no commercial operator might invest, the need for build-or-buy signals are less relevant in this area. Instead Eircom's Actual Costs Adjusted for Efficiencies (combined with the BU-LRAIC+ costs for active equipment) ensures that there is no over or under recovery of costs by Eircom for the provision of SABB Outside the LEA. Please refer to Chapter 7 (paragraphs 7.23 to 7.27) for further details.
- 14.99 With regard to the retail margin squeeze test for SB-WLR, we consider that the test should be based on EEO retail costs and assessed based on the ATC costs nationally. ComReg considers that the consistent growth in demand for SB-WLR since 2008 indicates that the 2008 SB-WLR Price Decision, which is based on an EEO cost-standard, is delivering benefits to consumers in terms of contributing to competition in the provision of WLR. The EEO costs are also consistent with a cost orientation obligation as they ensure cost recovery for Eircom i.e., EEO costs are based on Eircom's Actual Costs Adjusted for Efficiencies (adjusted for efficiency). The proposed retail margin squeeze principle of ATC allows for a larger margin between products which is likely to mean easier entry by an OAO. In addition, the ATC is compatible with the recent NGA Decision and the WBA Pricing Decision (current generation Bitstream). Given that SB-WLR is a national product it seems reasonable to assess the margin squeeze nationally (rather than sub-national tests). Please refer to Chapter 10.
- 14.100 For the wholesale margin squeeze test, our main consideration is the likely cost base of the investment in Managed VoB as well as the assumed market share of the Managed VoB operator. We propose that the REO cost base should be applied as the investment in Managed VoB is based on a hypothetical investment by alternative operator and not based on an investment by Eircom. In addition, the assumed OAO market share of 25% seems reasonable given that it is consistent with the market share applied in other pricing decisions. Please refer to Chapter 10.
- 14.101 ComReg considers that either pre-notification and pre-clearance requirement or a self-certification for a new/revised retail price for retail line rental may be appropriate. On balance ComReg is of the preliminary view that a pre-notification

and pre-clearance requirement may be more appropriate as it could provide a stronger control based on the prima facie submission made by Eircom to ComReg to ensure that new/revised Eircom retail line rental price is compliant with its obligations not to cause a margin squeeze

14.102 In the context of SB-WLR, SABB Outside the LEA and the proposed margin squeeze tests we consider that this Draft Decision achieves the following:

- a) **Price stability and predictability:** The obligation of cost orientation for SB-WLR ensure that Eircom's price is set with reference to the higher of the combined BU-LRAIC+ and Eircom's indexed RAB inside the LEA or nationally Eircom's Actual Costs Adjusted for Efficiencies with the BU-LRAIC+ costs for active equipment (i.e., line card) for the provision of SB-WLR. This approach gives Eircom certainty that any money invested in maintaining or upgrading the network can be recovered.

For SABB Outside the LEA, Eircom's price is set by reference to Eircom's Actual Costs Adjusted for Efficiencies and the BU-LRAIC+ methodology for active equipment, for the provision of SABB Outside the LEA. Similar to SB-WLR, it allows Eircom to recover any money it invests in its network (in this case Outside the LEA).

The proposal that Eircom should not increase the price or introduce a new price for SB-WLR nationally and / or SABB Outside the LEA without demonstrating to ComReg that any revised (or new) prices are in line with the specified cost orientation obligation gives a level of certainty / predictability to other operators. This should help OAOs in terms of likely investment decisions, especially in the LEA.

The proposed retail margin squeeze tests ensure that there is sufficient margin between retail line rental and wholesale line rental so that OAOs can replicate Eircom's retail service and still make a margin – this gives certainty and predictability to OAOs.

The proposed wholesale margin squeeze test ensure a sufficient economic space between the price of POTS based VUA and the price of standalone NGA Bitstream / VUA (including a contribution towards Managed VoB). This should provide certainty to operators considering investment in alternative voice platforms.

- b) **Promotes investment:** The obligation of cost orientation (with reference to Eircom's Actual Costs Adjusted for Efficiencies) should help operators' investment plans.

For SB-WLR the price is set in accordance with the details at paragraph 14.97 above. This should allow Eircom to recover any money invested

efficiently in maintaining or upgrading its network on the basis that Eircom will have the assurance that what it spends can be recouped over the price control period. On the other hand it also send the appropriate investment signals to operators in the LEA.

For SABB Outside the LEA, Eircom's Actual Costs Adjusted for Efficiencies and the BU-LRAIC+ methodology for active equipment, Outside the LEA should also give Eircom the assurance that what it spends can be recouped. The build or buy signals are not relevant in this area, absent state funding, therefore the key objective is cost recovery.

The wholesale margin squeeze test for POTS based VUA should encourage OAOs to invest in their own Managed VoB platform either currently or prospectively.

- c) **Consistency of approach across networks:** We have taken utmost account of the 2013 Recommendation as discussed in Chapter 4 (subsection 4.4.2). While the 2013 Recommendation is not specifically relevant to Market 2 (SB-WLR) ComReg considers that the objectives of the 2013 Recommendation are equally important in the context of SB-WLR i.e., to ensure that *“operators can cover costs that are efficiently incurred and receive an appropriate return on invested Capital”* and also to ensure that *“the appropriate ‘build-or-buy’ signal strikes an appropriate balance between ensuring efficient entry and sufficient incentives to invest”*. This is reflected in the proposed pricing approach for SB-WLR as discussed in Chapter 6 (subsection 6.6).

For SABB Outside the LEA we consider that the build or buy signals are not appropriate in this area as no commercial operator would invest absent state funding (or the NBP). Please refer to paragraph 14.98 above. In addition, the proposed approach for SABB Outside the LEA is consistent with the WBA Pricing Decision.

The margin squeeze tests are consistent with wholesale / retail margin squeeze tests, including NGA and current generation Bitstream.

- d) **Ensures retail margin for operators competing with Eircom:** The retail margin squeeze test in Chapter 10 should ensure that competitors have sufficient retail margin for line rental and be in a position to replicate the retail offers of Eircom. This should be good for competition and innovation.
- e) **Ensures sufficient economic space for operators using alternative technologies:** Likewise at the wholesale level ComReg considers in Chapter 10 that there should be sufficient economic space between the

price for POTS based VUA and the price for standalone VUA / NGA Bitstream (including a contribution towards the cost of Managed VoB) so that an operator is incentivised to move to alternative technologies as appropriate. This should also ensure technological neutrality.

- 14.103 To conclude, the revised pricing approach for SB-WLR should encourage ongoing efficient entry and investment decisions by other operators in the relevant area while also ensuring that the SMP operator (Eircom) makes a reasonable return on its efficient investment.
- 14.104 This Draft Decision provides transparency to the industry insofar as Eircom can recover no more than its actual efficient costs plus a reasonable rate of return for SABB Outside the LEA¹³² which is consistent with the WBA Pricing Decision published in 2014. This should prevent excessive pricing in rural areas where Eircom is currently the main provider of fixed broadband services.
- 14.105 In addition, our proposed approach should provide reasonable price certainty and predictability to operators. In particular, the proposed obligation that Eircom should notify ComReg before it increases or introduces a new prices for SB-WLR nationally and / or for SABB Outside the LEA and demonstrate that the new prices is in line with the specified cost orientation obligation should provide certainty to OAOs in terms of their own investment plans. It also ensures that Eircom cannot set excessive prices without cost justification, especially Outside the LEA.

Q. 28 Do you have any comments on the Regulatory Impact Assessment and in your opinion are there other factors which ComReg should consider in completing its Regulatory Impact Assessment? Please provide reasons for your response, clearly indicating the relevant paragraph numbers to which your comments refer, along with relevant factual evidence supporting your views.

¹³² With the BU-LRAIC+ methodology applied to active equipment.

Chapter 15

15 Submitting comments

- 15.1 All comments are welcome to the consultation, however it would make the task of analysing responses easier if comments were referenced to the relevant question number from this document.
- 15.2 The consultation will run from 3 July 2015 to 28 August 2015 during which time ComReg welcomes written comments on any of the issues raised.
- 15.3 Having analysed and considered the comments received, ComReg will review the main proposals set out in the consultation, amend if necessary in light of representations received and will then notify the draft measure to the European Commission, the NRAs and BEREC pursuant to Article 7 of the Framework Directive¹³³. ComReg will take utmost account of any comments received from the European Commission and will adopt and publish the final decision.
- 15.4 In order to promote further openness and transparency ComReg will publish all respondents' submissions to this consultation, subject to the provisions of ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24. We would request that electronic submissions be submitted in an-unprotected format so that they can be appended into the ComReg submissions document for publishing electronically.

Please Note:

- 15.5 ComReg appreciates that many of the issues raised in this paper may require respondents to provide confidential information if their comments are to be meaningful.
- 15.6 As it is ComReg's policy to make all responses available on its website and for inspection generally, respondents to consultations are requested to clearly identify confidential material and place confidential material in a separate annex to their response.

¹³³ Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services, as amended by Directive 2009/140/EC ("the Framework Directive")

Annex: 1 Draft Decision Instrument – WPNIA Market

1 STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

- 1.1 This Decision Instrument is made by ComReg and relates to the market for wholesale (physical) network infrastructure access, as identified by the European Commission in the 2007 Recommendation and as defined by ComReg in ComReg Decision D05/10. This Decision Instrument relates to further specification and amendment of the price control and transparency obligations imposed by ComReg in ComReg Decision D05/10 and ComReg Decision D03/13.
- 1.2 This Decision Instrument is made:
- (i) Pursuant to Regulations 8, 9, 13 and 18 of the Access Regulations;
 - (ii) Pursuant to, and having regard to, the significant market power (SMP) designation of Eircom as provided for in Section 5 of the Decision Instrument annexed to ComReg Decision D05/10;
 - (iii) Having had regard to Sections 10 and 12 of the Communications Regulation Act 2002 (as amended); Regulation 16 of the Framework Regulations; and Regulations 6(1), 8(6) and 13(2) of the Access Regulations;
 - (iv) Having, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), complied with Ministerial Policy Directions where applicable;
 - (v) Having taken utmost account of the European Commission's Recommendation of 11 September 2013 on non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment;
 - (vi) Having notified the draft measure and the reasoning on which the measure is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States pursuant to Regulation 13 and Regulation 14 of the Framework Regulations and having taken account of any comments made by these parties;
 - (vii) Having had regard to the analysis and reasoning set out in ComReg Decision D04/09, ComReg Decision D05/10 and ComReg Decision D03/13 and having taken account of the submissions received from interested parties in response thereto following public consultations pursuant to Regulation 12 of the Framework Regulations;

- (viii) Having had regard to the analysis and reasoning set out in ComReg Document No. [YY/XX] and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations; and
 - (ix) Having had regard to the analysis and reasoning set out in ComReg Decision D[XX/YY].
- 1.3 The provisions of ComReg Decision D5/10, ComReg Decision D03/13 ComReg Document No. [YY/XX] and ComReg Decision D[XX/YY] shall, where appropriate, be construed with this Decision Instrument.

PART I - GENERAL PROVISIONS (SECTIONS 2 TO 3 OF THE DECISION INSTRUMENT)

2 DEFINITIONS

- 2.1 In this Decision Instrument, unless the context otherwise suggests:

“(the) 2007 Recommendation” means the European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 344, 28.12.2007, p. 65);

“(the) 2013 Recommendation” means the European Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (C(2013) 5671 final);

“Access Reference Offer” or **“ARO”** is the latest version of the offer of contract by Eircom to OAOs in relation to Current Generation WPNIA and shall include Next Generation WPNIA (but which may from time to time be amended). For the avoidance of doubt the ARO includes the documents which are expressly referred to as being part of the ARO. To the extent that there is any conflict between the ARO and Eircom’s obligations now set out herein, it is the latter which shall prevail;

“Access Regulations” means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011);

“Access” shall have the same meaning as under Regulation 2 of the Access Regulations;

“Ancillary Services” are a subset of Associated Facilities and shall include services such as migrations, fault repair and access connections;

“Associated Facilities” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“BEREC” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EC) No. 1211/2009 of the European Parliament and of the Council of 25 November 2009;

“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, plus an appropriate apportionment of joint and common costs;

“Civil Engineering Infrastructure” (also known as passive infrastructure) means physical local loop facilities deployed by Eircom to host Local Loop cables such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean and above-ground assets such as sub-ducts, ducts, manholes and poles;

“Co-Location” shall have the same meaning and description as under Part B (“Co-location services”) of the Schedule to the Access Regulations, save that it includes for the purposes of this Decision Instrument, access to the MDF and/or to the ODF as applicable, at an Exchange;

“Communications Regulation Act 2002 (as amended)” means the Communications Regulation Act 2002 (No. 20 of 2002) (as amended);

“ComReg Decision D04/09” means ComReg Document No. 09/66, entitled “Rental Price for Shared Access to the Unbundled Local Loop Response to Consultation Document No. 08/106 and Decision”, dated 18 August 2009;

“ComReg Decision D05/09” means ComReg Document No. 09/77, entitled “Intra Migration Premium Charge Response to Consultation Document No. 08/105 and Decision”, dated 6 October 2009;

“ComReg Decision D01/10” means ComReg Document No. 10/10, entitled “Response to Consultation Documents No. 09/39 and 09/62 Local Loop Unbundling (“LLU”) and Sub Loop Unbundling (“SLU”) Maximum Monthly Rental Charges”, dated 9 February 2010;

“ComReg Decision D05/10” means ComReg Document No. 10/39, entitled “Market Review: Wholesale (Physical) Network Infrastructure Access (Market 4) Further Response to ComReg Document No. 08/104, Response to ComReg Document No. 09/42 and Decision (the “Decision Document”)”, dated 20 May 2010;

“ComReg Decision D08/10” means ComReg Document No. 10/67, entitled “Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited”, dated 31 August 2010;

“ComReg Decision D03/13” means ComReg Document No. 13/11, entitled “Next Generation Access (‘NGA’) Remedies for Next Generation Access Markets”, dated 31 January 2013;

“ComReg Decision D04/13” means ComReg Document No. 13/14, entitled “Price Regulation of Bundled Offers Further specification of certain price control obligations in Market 1 and Market 4”, dated 8 February 2013;]

“ComReg Decision D[XX/YY]” means ComReg Document No. [...], entitled “[...]”, dated [...] 20YY;

“ComReg Document No. [YY/XX]” means ComReg Document No. [...], entitled “[...]”, dated [...] 20YY;

“ComReg Document No. 08/71” means ComReg Document No 08/71, entitled “Information Notice Local Loop Unbundling (‘LLU’): ComReg’s Review of Ancillary Charges in Eircom’s Access Reference Offer (‘ARO’) Price List”, dated 2 September 2008;

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act 2002;

“Current Generation WPNIA” means WPNIA provided over Eircom’s current generation copper access network infrastructure and its Associated Facilities (including self-supply by Eircom for the purpose of serving its downstream markets) and includes but is not limited to those facilities and services and variants of those, which are specified in the current version (Version 2.0) of Eircom’s ARO, as may be amended from time to time;

“Dark fibre” is optical fibre that is currently installed in the access network but is not in use. For the purposes of this Decision Instrument, Dark fibre shall mean unlit Eircom fibre in Eircom’s access network;

“Decision Instrument” means this direction and decision instrument which is made pursuant to *inter alia* Regulations 8, 9, 13 and 18 of the Access Regulations;

“Effective Date” means the date set out in Section 12 of this Decision Instrument;

“Eircom” means Eircom Limited and its subsidiaries and any related companies, and any Undertaking which it owns or controls, and any Undertaking which owns or controls Eircom Limited, and its successors and assigns. For the purpose of this Decision Instrument, the terms “subsidiary” and “related company” shall have the meanings ascribed to them in the Companies Act 2014;

“Electronic Communications Network(s)” or **“ECN(s)”** shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Electronic Communications Service” or **“ECS”** shall have the same meaning as under Regulation 2 of the Framework Regulations;

“End User” for the purposes of this Decision Instrument shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Exchange” means an Eircom network premises or equivalent facility used to house network and associated equipment and includes a Remote Subscriber Unit (‘RSU’). The Exchange usually, but not always, houses the Metropolitan Point of Presence (‘MPoP’);

“Fibre to the cabinet” or **“FTTC”** means fibre to the cabinet which is a variant of the FTTN access network architecture where the node used to house active equipment is the street cabinet. The connection between the cabinet and the End User premises is by way of a copper sub-loop;

“Fibre to the Node” or **“FTTN”** means an access network architecture whereby active equipment is installed in an access network node (a street cabinet in the case of FTTC). The active equipment is connected to the Exchange and/or MPoP using fibre optic cable;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011);

“Geographic Number Portability” or **“GNP”** means a facility that allows an End User to retain his/her telephone number when changing or switching service provider and describes the process used for this when the number concerned is a geographic number;

“GLUMP” is the synchronised delivery of ULMP and GNP;

“Historical Cost Accounts” or **“HCA”** means the historical cost accounts which Eircom is required to publish in accordance with ComReg Decision D08/10;

“Larger Exchange Area” or **“LEA”** has the meaning set out in Section 2.1 of the Decision Instrument contained in Annex 3 of ComReg Decision D04/13. For the purposes of this Decision Instrument, the LEA will be the total geographic area comprising all individual exchange areas, each of which, at the Effective Date of this Decision Instrument, satisfies at least one of the criteria set out in Section 2.1 of the Decision Instrument contained in Annex 3 of ComReg Decision D04/13;

“Line Share” means the product whereby the high frequency capacity of a line is provided to other authorised operators;

“Local Loop Unbundling” or **“LLU”** means where an OAO rents access to the local loop and uses it to supply services to its customers either on a wholesale or retail basis. The Local Loop is the final section of Eircom’s access network that provides access into premises (whether residential, business or other premises). It runs between the local exchange and the relevant customer premises;

“Local Loop” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time;

“Local Sub-Loop” shall have the same meaning as in the Schedule to the Access Regulations, as may be amended from time to time;

“MDF” means the main distribution frame;

“Metropolitan Point of Presence” or **“MPoP”** means the point of inter-connection between the access and core networks. It is equivalent to the MDF in the case of the copper access network. All NGA Subscribers’ connections in a given area are centralised to the MPoP on an optical distribution frame (ODF);

“Ministerial Policy Directions” means the policy directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), dated 21 February 2003 and 26 March 2004;

“Next Generation WPNIA” or **“NG WPNIA”** means WPNIA provided over Eircom’s next generation access network infrastructure and its associated facilities (including self-supply by Eircom for the purpose of serving its downstream markets). Eircom’s next generation access network infrastructure includes access paths that are either exclusively fibre or a combination of fibre and copper;

“Node” means any location or concentration point in the access network served from an Eircom exchange which houses VDSL2 equipment for the purpose of providing high speed services to End-Users. A street cabinet is a specific type of Node used by Eircom as part of their NGA FTTC implementation;

“ODF” means the optical distribution frame;

“Other Authorised Operator” or **“OAO”** means an Undertaking that is not Eircom, providing an electronic communications network or an electronic communications service authorised under Regulation 4 of the Authorisation Regulations;

“Re-useable Civil Engineering Infrastructure” means Civil Engineering Infrastructure that is unlikely to be replicated by OAOs. These assets generally have a relatively long lifetime and are expensive to build;

“Revised Copper Access Model” means the model, as amended from time to time, used by ComReg and Eircom to assess Eircom’s compliance with the obligations contained in Section 4 of this Decision Instrument. 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 D[XX/YY];

“Shared Sub-Loop Unbundling” means the provision to a beneficiary of access to the local Sub-Loops on Eircom’s network, authorising the use of the non-voice band frequency spectrum of the twisted metallic pair; the local Sub-

Loops continue to be used by Eircom to provide the telephone service to the public. It includes the provision of access to a tie cable or other connection and appropriate handover for the purposes of making use of Eircom's Sub Loops from an adjacent cabinet;

“Significant Market Power operator” or “SMP operator” means Eircom;

“Sub-Loop Unbundling” also known as “SLU” is an implementation of unbundled access to the Sub-Loop. It excludes the portion of the Local Loop between the Exchange and street (side) cabinet. SLU is contained in the market for Wholesale (Physical) Network Infrastructure Access (Market 4) as set out in ComReg Decision D05/10. It includes the provision of access to a tie cable or other connection and appropriate handover for the purposes of making use of the Sub Loop from an adjacent cabinet;

“Sub-Loop” means the portion of the local loop which runs from a street side cabinet or Node to a home or premises;

“Top-Down HCA” means the methodology in which the HCA and network information of the regulated firm are used as the starting point for calculating the costs of relevant services. These inputs may subsequently be adjusted to reflect efficiencies;

“Unbundled access to the fibre loop” means unbundled access to the optical fibre lines in both the feeder and drop segments of the access network;

“Unbundled Local Metallic Path (ULMP)” is the implementation of Full Unbundled Access to the Local Loop;

“Undertaking(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“VDSL” means very-high-bit-rate digital subscriber line;

“WBA” means wholesale broadband access comprising non-physical or virtual network access including Bitstream access at a fixed location;

“WPNIA” means wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location. It includes Current Generation WPNIA and Next Generation WPNIA and is synonymous with the Access Market as set out in ComReg Decision D05/10.

3 SCOPE AND APPLICATION

- 3.1 This Decision Instrument is binding upon Eircom and Eircom shall comply with it in all respects.

This Decision Instrument relates to a further specification and amendment of the price control obligations imposed by ComReg in ComReg Decision D05/10 and ComReg Decision D03/13.

PART II - FURTHER SPECIFICATION OF OBLIGATIONS RELATING TO PRICE CONTROL AND TRANSPARENCY – CURRENT GENERATION (SECTION 4 OF THE DECISION INSTRUMENT)

4 SMP OBLIGATIONS - CURRENT GENERATION

- 4.1 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Section 12.3 of the Decision Instrument annexed to ComReg Decision D05/10 is amended to read as follows:

“Prices charged by Eircom to any other undertaking for Access to or use of those products, services or facilities referred to in section 7 shall be subject to a cost orientation obligation.”

ULMP and SLU

- 4.2 For the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Section 12.3 of the Decision Instrument annexed to ComReg Decision D05/10, as amended by Section 4.1 of this Decision Instrument, and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the price offered or charged by Eircom to any other Undertaking in relation to SLU shall be no more than the lowest of:

- (a) a price equal to the costs incurred by an efficient operator providing SLU nationally which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and Top-Down HCA costing methodology; or
- (b) the SLU monthly rental charge as amended based on changes made by Eircom to the main parameter(s) of the Revised Copper Access Model as set out in this Decision. Any such amendment or changes to be subject to prior review by ComReg; or
- (c) the revised charge derived by the application of the Margin Squeeze Test between the VUA monthly charge and the SLU monthly charge based on the NGA Margin Squeeze Model (which is more particularly described in Section 11.14 of the Decision Instrument at Annex 2 to ComReg Decision D03/13) in relation to Wholesale Broadband Access. Any such amendment or changes to be subject to prior review by ComReg.

- 4.3 For the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Section 12.3 of the Decision Instrument annexed to ComReg Decision D05/10, as amended by Section 4.1 of this Decision Instrument, and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the monthly rental charge offered or charged by Eircom to any other Undertaking in relation to ULMP shall be no more than the lower of:

- (a) a price equal to the costs incurred by an efficient operator providing ULMP within the LEA which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and Top-Down HCA costing methodology; or
 - (b) the LLU monthly rental charge as amended based on changes made by Eircom to the main parameter(s) of the Revised Copper Access Model as set out in this Decision. Any such amendment or changes would be subject to prior review by ComReg.
- 4.4 Eircom shall ensure that any reduction to the SLU monthly rental charge, in accordance with Section 4.2 (b) above, is consistently applied to the ULMP monthly rental charge at 4.3 above, where applicable, using the Revised Copper Access Model.

LINE SHARE

- 4.5 For the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Section 12.3 of the Decision Instrument annexed to ComReg Decision D05/10, as amended by Section 4.1 of this Decision Instrument and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the monthly rental charge offered or charged by it to any other Undertaking in relation to Line Share recovers no more than the incremental costs associated with the provision of Line Share.
- 4.6 Specifically, Eircom is hereby directed to ensure that the monthly rental charge offered or charged by it to any other Undertaking in relation to Line Share shall be no more than a maximum of €0.77 per month.

CEI AND DARK FIBRE

- 4.7 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Section 12.6 of the Decision Instrument annexed to ComReg Decision D05/10 (which was inserted by Section 4.8 of the Decision Instrument annexed, at Annex 1, to ComReg Decision D03/13) is hereby withdrawn and replaced as follows:

“12. 6 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the rental charge offered or charged by Eircom to any other Undertaking in relation to Civil Engineering Infrastructure shall be no more than a price equal to the costs incurred by an efficient operator providing Civil Engineering Infrastructure, which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and a Top-Down HCA costing methodology.”

- 4.8 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Section 12.7 of the Decision Instrument annexed to ComReg Decision D05/10 (which was inserted by Section 4.8 of the Decision instrument annexed, at Annex 1, to ComReg Decision D03/13) is hereby withdrawn and replaced as follows:

“12.7 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the rental charge offered or charged by Eircom to any other Undertaking in relation to Dark Fibre shall be no more than a price equal to the costs incurred by an efficient operator providing Dark Fibre, which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and a Top-Down HCA costing methodology.”

ANCILLARY SERVICES

- 4.9 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, for the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Section 12.3 of the Decision Instrument annexed to ComReg Decision D05/10, as amended by Section 4.1 of this Decision Instrument, Eircom shall ensure, where appropriate, that it recovers no more than its actual incurred costs (adjusted for efficiencies) (plus a reasonable rate of return) associated with the provision of Ancillary Services to Current Generation WPNIA products, services or facilities.
- 4.10 Pursuant to Regulations 8, 13 and 18 of the Access Regulations Section 12.5 of the Decision Instrument annexed to ComReg Decision D05/10 (that was inserted by Section 4.8 of the Decision instrument annexed, in Annex 1, to ComReg Decision D03/13) is hereby withdrawn and replaced with as follows:

“Specifically, pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the price offered or charged by Eircom to any other Undertaking in relation to fault repair charges associated with Current Generation WPNIA products, services and facilities shall include an option of either:

- (i) a monthly fault repair charge of not more than €0.96 cent per customer line;*
or
- (ii) a one off per event fault repair charge of no more than €110 (excluding line test) or €117 (including line test).*

In the event that the fault is on the Undertaking’s network then Eircom shall charge the Undertaking a one-off fault charge of no more than €100.”

PART III - FURTHER SPECIFICATION OF OBLIGATIONS RELATING TO PRICE CONTROL (SECTION 5 OF THE DECISION INSTRUMENT) – NEXT GENERATION

5 SMP OBLIGATIONS - NEXT GENERATION

- 5.1 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Section 11.4 of the Decision Instrument annexed, at Annex 1, to ComReg Decision D03/13 is hereby withdrawn and replaced as follows:

“11.4 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the rental charge offered or charged by Eircom to any other Undertaking in relation to Civil Engineering Infrastructure shall be no more than a price equal to the costs incurred by an efficient operator providing Civil Engineering Infrastructure, which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and Top-Down HCA costing methodology.”

- 5.2 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Section 11.5 of the Decision Instrument annexed, at Annex 1, to ComReg Decision D03/13 is hereby withdrawn and replaced as follows:

“11.5 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the rental charge offered or charged by Eircom to any other Undertaking in relation to Dark Fibre shall be no more than a price equal to the costs incurred by an efficient operator providing Dark Fibre, which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and a Top-Down HCA costing methodology.”

- 5.3 Pursuant to Regulations 8 and 13 of the Access Regulations Section 11.9 of the Decision Instrument annexed, in Annex 1, to ComReg Decision D03/13 is hereby withdrawn and replaced as follows:

“11.9 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the price offered or charged by Eircom to any other Undertaking in relation to SLU shall be no more than the lowest of:

- (a) a price equal to the costs incurred by an efficient operator providing SLU nationally which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and Top-Down HCA costing methodology; or
- (b) the SLU monthly rental charge as amended based on changes made by Eircom to the main parameter(s) of the Revised Copper Access Model as set out in ComReg Decision No D[XX/YY]. Any such amendment or changes would be subject to prior review by ComReg; or

- (c) the revised monthly rental charge derived by the application of the Margin Squeeze Test between the VUA monthly charge and the SLU monthly charge based on the NGA Margin Squeeze Model (which is more particularly described in Section 11.14 of the Decision Instrument at Annex 2 to ComReg Decision D03/13) in relation to Wholesale Broadband Access. Any such amendment or changes to be subject to prior review by ComReg.
- 5.4 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Section 11.10 of the Decision Instrument annexed, at Annex 1, to ComReg Decision D03/13 is hereby withdrawn and replaced as follows:
- “11.10 With regard to Backhaul, as referred to in Section 6.2 of the Decision instrument annexed, at Annex 1, to ComReg Decision D03/13, Eircom shall ensure that the costs are calculated in a manner which is consistent with the methodology used in the Revised Copper Access Model as adjusted, where appropriate, for fibre costs.”*
- 5.5 For the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Sections 11.3, 11.11 and 11.12 of the Decision Instrument annexed, at Annex 1, to ComReg Decision D03/13, and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom shall ensure, where applicable, that it recovers no more than its actual incurred costs (adjusted for efficiencies) (plus a reasonable rate of return) associated with the provision of Ancillary Services to Next Generation WPNIA products, services or facilities.
- 5.6 Without prejudice to the generality of Section 5.5 of this Decision Instrument, and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom is hereby directed to ensure that the price offered or charged by Eircom to any other Undertaking in relation to fault repair charges associated with Next Generation WPNIA products, services and facilities shall include an option of either:
- (i) a monthly fault repair charge of not more than €0.96 cent per customer line; or
 - (ii) a one off per event fault repair charge of no more than €110 (excluding line test) or €117 (including line test).

In the event that the fault is on the Undertaking's network then Eircom shall charge the Undertaking a one-off fault charge of no more than €100.

PART IV - FURTHER SPECIFICATION OF OBLIGATIONS RELATING TO TRANSPARENCY (SECTION 6 OF THE DECISION INSTRUMENT) – GENERAL

6 SMP OBLIGATIONS - GENERAL - CURRENT AND NEXT GENERATION

- 6.1 Pursuant to Regulations 8, 9, and 18 of the Access Regulations, and in accordance with the timelines contained in the transparency obligations contained in Section 10 of ComReg Decision D05/10 and Section 9 of the Decision Instrument annexed, at Annex 1, to ComReg Decision D03/13, Eircom shall notify ComReg before it amends or introduces a new price for the provision of Access and, as part of that notification, Eircom shall ensure, where appropriate, that the price amendment or new price is consistent with the Revised Copper Access Model.

PART V – OPERATION AND EFFECTIVE DATE (SECTIONS 7 TO 12 OF THE DECISION INSTRUMENT)

7 STATUTORY POWERS NOT AFFECTED

- 7.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation in force prior to or after the Effective Date of this Decision Instrument.

8 MAINTENANCE OF OBLIGATIONS

- 8.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument continue in force and Eircom shall comply with same.

9 CONFLICT

- 9.1 For the avoidance of doubt to the extent that there is any conflict between a ComReg Decision Instrument or ComReg document dated prior to the Effective Date and Eircom's obligations now set out herein, this Decision Instrument shall prevail, unless otherwise indicated by ComReg.

10 SEVERANCE

- 10.1 If any Section(s), clause(s) or provision(s), or portion(s) thereof, contained in this Decision Instrument, is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s), or portion(s) thereof, shall, to the extent required, be severed from this Decision Instrument

and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s), or portion(s) thereof, of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

11 WITHDRAWAL OF SMP OBLIGATIONS

11.1 Pursuant to Regulations 8, 9, 13 and 18 of the Access Regulations, the following Decision Instruments, and/or ComReg Documents and/or Decisions are hereby withdrawn, and are replaced with the obligations in this Decision Instrument when this Decision Instrument takes effect:

- (i) ComReg Document No. 08/71
- (ii) ComReg Decision D04/09
- (iii) ComReg Decision D01/10
- (iv) Sections 12.5, 12.6, 12.7 and 12.8 of the Decision Instrument annexed to ComReg Decision D05/10 (which were inserted by Section 4.8 of the Decision Instrument annexed, at Annex 1, to ComReg Decision D03/13)
- (v) Sections 11.4, 11.5 and 11.6 and Sections 11.9 and 11.10 of the Decision Instrument, annexed, at Annex 1, to ComReg Decision D03/13.

12 EFFECTIVE DATE

12.1 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom and it shall remain in force until further notice by ComReg.

JEREMY GODFREY

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE [] DAY OF [] 20YY

Q. 29 Do you believe that the draft text of the proposed Decision Instrument for Market 4 is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

Annex: 2 Draft Decision Instrument – WBA Market

1 STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

- 1.1 This Decision Instrument is made by ComReg and relates to the market for wholesale broadband access, as identified by the European Commission in the 2007 Recommendation and as defined by ComReg in ComReg Decision D06/11. This Decision Instrument relates to amendment and further specification of the price control and transparency obligations imposed by ComReg in ComReg Decision D06/11, ComReg Decision D03/13 and ComReg Decision D11/14.
- 1.2 This Decision Instrument is made:
- (i) Pursuant to Regulations 8, 9, 13 and 18 of the Access Regulations;
 - (ii) Pursuant to, and having regard to, the significant market power (SMP) designation of Eircom as provided for in Section 5 of the Decision Instrument annexed to ComReg Decision D06/11;
 - (iii) Having had regard to Sections 10 and 12 of the Communications Regulation Act 2002 (as amended); Regulation 16 of the Framework Regulations; and Regulations 6(1) 8(6) and 13(2) of the Access Regulations;
 - (iv) Having, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended) complied with Ministerial Policy Directions, where applicable;
 - (v) Having taken utmost account of the European Commission's Recommendation of 11 September 2013 on non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment;
 - (vi) Having notified the draft measure and the reasoning on which the measure is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States pursuant to Regulation 13 and Regulation 14 of the Framework Regulations and having taken account of any comments made by these parties;
 - (vii) Having had regard to the analysis and reasoning set out in ComReg Decision D06/11 and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations;

- (viii) Having had regard to the analysis and reasoning set out in ComReg Decision D03/13 and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations;
 - (ix) Having had regard to the analysis and reasoning set out in ComReg Decision D11/14 and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations;
 - (x) Having had regard to the analysis and reasoning set out in ComReg Document No. [YY/XX] and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations; and
 - (xi) Having had regard to the analysis and reasoning set out in ComReg Decision D[XX/YY].
- 1.3 The provisions of ComReg Decision D06/11, ComReg Decision D03/13, ComReg Decision D11/14, ComReg Document No. [YY/XX] and ComReg Decision D[XX/YY] shall, where appropriate, be construed with this Decision Instrument.

PART I - GENERAL PROVISIONS (SECTIONS 2 TO 3 OF THE DECISION INSTRUMENT)

2 DEFINITIONS

- 2.1 In this Decision Instrument, unless the context otherwise suggests:

“(the) 2007 Recommendation” means the European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 344, 28.12.2007, p. 65);

“(the) 2013 Recommendation” means the European Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (C(2013) 5671 final);

“Access Regulations” means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011);

“Access” shall have the same meaning as under Regulation 2 of the Access Regulations;

“Active Assets” in the context of this Decision means the line card, digital subscriber line access multiplexers (‘DSLAMs’) and the broadband remote access servers (‘BRAS’) associated with the provision of Standalone Broadband;

“Asymmetric Digital Subscriber Line” or **“ADSL”** means a technology that utilises the local loop to provide an internet connection with a download speeds of up to 8mb/sec;

“ADSL 2+” means an extension to ADSL technology that provides subscribers with faster download speeds up to 24mb/sec;

“Ancillary Services” are a subset of Associated Facilities and for the purposes of this Decision Instrument shall include services such as migrations, fault repair, access connections, co-location, in-building handover, in-span handover and in-premises services;

“Associated Facilities” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“BEREC” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EC) No. 1211/2009 of the European Parliament and of the Council of 25 November 2009;

“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, plus an appropriate apportionment of joint and common costs;

“Civil Engineering Infrastructure” (also known as passive infrastructure) means physical local loop facilities deployed by Eircom to host Local Loop cables such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean and above-ground assets such as sub-ducts, ducts, manholes and poles;

“Communications Regulation Act 2002 (as amended)” means the Communications Regulation Act 2002 (No. 20 of 2002) (as amended);

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act 2002;

“ComReg Decision D08/10” means ComReg Document No. 10/67 entitled “Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited”, dated 31 August 2010;

“ComReg Decision D06/11” means ComReg Document No. 11/49 entitled “Response to Consultation and Decision Market Review: Wholesale Broadband Access (Market 5)”, dated 8 July 2011;

“ComReg Decision D03/13” means ComReg Document No. 13/11 entitled “Next Generation Access (‘NGA’) Remedies for Next Generation Access Markets”, dated 31 January 2013;

“ComReg Decision D04/13” means ComReg Document No. 13/14 entitled “Price Regulation of Bundled Offers Further specification of certain price control obligations in Market 1 and Market 4”, dated 8 February 2013;

“ComReg Decision D11/14” means ComReg Document No. 14/73R entitled “Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream”, dated 9 July 2014;

“ComReg Decision D[XX/YY]” means ComReg Document No.[YY/XX], entitled “[...]”, dated [...]20YY;

“ComReg Document No. [YY/XX]” means ComReg Document No.[YY/XX] entitled “[...]”, dated [...]20YY;

“Decision Instrument” means this direction and decision instrument which is made pursuant to, *inter alia*, Regulations 8, 9, 13 and 18 of the Access Regulations;

“Eircom” means Eircom Limited and its subsidiaries and any related companies, and any Undertaking which it owns or controls, and any Undertaking which owns or controls Eircom Limited, and its successors and assigns. For the purpose of this Decision Instrument, the terms “subsidiary” and “related company” shall have the meanings ascribed to them in the Companies Act 2014 ;

“Effective Date” means the date set out in Section 9 of this Decision Instrument;

“Electronic Communications Network(s)” or **“ECN(s)”** shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Electronic Communications Service” or **“ECS”** shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011);

“Historical Cost Accounts” or **“HCA”** means the historical cost accounts which Eircom is required to publish in accordance with ComReg Decision D08/10;

“Larger Exchange Area” or **“LEA”** has the meaning set out in Section 2.1 of the Decision Instrument contained in Annex 3 of ComReg Decision D04/13. For the purposes of this Decision Instrument, the LEA will be the total geographic area comprising all individual exchange areas, each of which satisfies, at the Effective Date of this Decision Instrument, at least one of the criteria set out in

Section 2.1 of the Decision Instrument contained in Annex 3 of ComReg Decision D04/13;

“Ministerial Policy Directions” means the policy directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), dated 21 February 2003 and 26 March 2004;

“PSTN” means Public Switched Telephone network;

“Revised Copper Access Model” means the model, as amended from time to time, used by ComReg and Eircom to assess Eircom’s compliance with the obligations contained in Section 4 of this Decision Instrument. 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 D[XX/YY];

“Standalone Broadband” means ADSL/ADSL2plus service delivered over a 2-wire copper pair without a PSTN voice telephony service;

“Top-Down HCA” means the methodology in which the HCA and network information of the regulated firm are used as the starting point for calculating the costs of relevant services. These inputs may subsequently be adjusted to reflect efficiencies; and

“Undertaking(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations.

3 SCOPE AND APPLICATION

- 3.1 This Decision Instrument is binding upon Eircom and Eircom shall comply with it in all respects.
- 3.2 This Decision Instrument relates to an amendment and further specification of the price control and transparency obligations imposed by ComReg in ComReg Decision D06/11, ComReg Decision D03/13 and ComReg Decision D11/14.

PART II - FURTHER SPECIFICATION OF OBLIGATIONS RELATING TO PRICE CONTROL AND TRANSPARENCY (SECTION 4 OF THE DECISION INSTRUMENT)

4 SMP OBLIGATIONS

- 4.1 For the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Section 4.6 of the Decision Instrument in ComReg Decision D11/14, and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom shall ensure that the monthly rental charge offered or charged by Eircom to any other Undertaking for Standalone Broadband shall be no more than Eircom’s total actual incurred costs Outside

the LEA (adjusted for efficiency) (plus a reasonable rate of return) associated with the provision of Standalone Broadband, which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a Top-Down HCA costing methodology with the BU-LRAIC+ methodology applied to Active Assets.

- 4.2 Pursuant to Regulations 8, 9, and 18 of the Access Regulations, and in accordance with the timelines contained in the transparency obligations contained in Section 10 of ComReg Decision D06/11, as amended by Section 5.1 of the Decision Instrument in ComReg Decision D11/14, Eircom shall notify ComReg before it increases or introduces a new price for Standalone Broadband Outside the LEA.
- 4.3 At notification, Eircom shall furnish ComReg with a detailed written submission demonstrating that the proposed new or increased charge(s) complies(y) with the obligations contained in Section 4.1 of this Decision Instrument. The submission shall make full and true disclosure of all material facts for the purpose of demonstrating that the proposed new or increased charge(s) complies(y) with Section 4.1 herein. Upon receipt of the submission, ComReg shall review the same and, within one (1) month, communicate to Eircom its decision whether to give or withhold approval to implement the proposed new or increased charge(s). Such approval shall not be unreasonably withheld by ComReg. Eircom shall not implement any new or increased charge(s) for Standalone Broadband Outside the LEA without having received such approval from ComReg. Prior to the expiry of the one (1) month period, ComReg may seek further information from Eircom to inform its decision as to whether approval to implement the new or increased charge(s) should be given or withheld. If such further information is not provided by Eircom within ComReg's timeline or to the standard required by ComReg, approval to implement the proposed new or increased charge(s) shall be withheld pending the required information being made available to ComReg for review and consideration. Upon receipt of the requested information, ComReg will proceed to make a decision as to whether approval for implementation of the new or increased charge(s) should be granted or withheld. The periods referred to in this Section 4.3 may be varied with the agreement of ComReg or at ComReg's discretion.

- 4.4 For the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Sections 12.5 and 12.6 (as amended by Section 7.2 of ComReg Decision D11/14) of the Decision Instrument annexed to ComReg Decision D06/11 (as inserted by Sections 4.1 and 4.2 of the Decision Instrument annexed, at Annex 2, to ComReg Decision D03/13), and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom shall ensure, where appropriate, that it recovers no more than its actual incurred costs (adjusted for efficiencies) (plus a reasonable rate of return) associated with the provision of Ancillary Services to Current Generation WBA products, services or facilities.
- 4.5 For the purposes of further specifying requirements to be complied with relating to the cost orientation obligation set out in Sections 11.22, 11.23 and 11.24 of the Decision Instrument annexed, at Annex 2, to ComReg Decision D03/13, and pursuant to Regulations 8, 13 and 18 of the Access Regulations, Eircom shall ensure, where appropriate, that it recovers no more than its actual incurred costs adjusted for efficiencies (plus a reasonable rate of return) associated with the provision of Ancillary Services to Next Generation WBA products, services or facilities other than In-Premises Services.

PART III – OPERATION AND EFFECTIVE DATE (SECTIONS 5 TO 9 OF THE DECISION INSTRUMENT)

5 STATUTORY POWERS NOT AFFECTED

- 5.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation in force prior to or after the Effective Date of this Decision Instrument.

6 MAINTENANCE OF OBLIGATIONS

- 6.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument, continue in force and Eircom shall comply with same.

7 CONFLICT

- 7.1 For the avoidance of doubt to the extent that there is any conflict between a ComReg Decision Instrument or ComReg document dated prior to the Effective Date and Eircom's obligations now set out herein, this Decision Instrument shall prevail, unless otherwise indicated by ComReg.

8 SEVERANCE

- 8.1 If any Section(s), clause(s) or provision(s), or portion(s) thereof, contained in this Decision Instrument, is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s), or portion(s) thereof, shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s), or portion(s) thereof, of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

9 EFFECTIVE DATE

- 9.1 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom and it shall remain in force until further notice by ComReg.

JEREMY GODFREY

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE [] DAY OF [] 20YY

Q. 30 Do you believe that the draft text of the proposed Decision Instrument for Market 5 is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

Annex: 3 Draft Decision Instrument – FACO Market

1 STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

1.1 This Decision Instrument (“Decision Instrument”) is made by the Commission for Communications Regulation (“ComReg”) and relates to the market for call origination on the public telephone network provided at a fixed location, as defined by ComReg in ComReg Decision D[XX/15] (i.e. SMP FACO Decision) which satisfies the three criteria test as set out in ComReg Decision D[XX/15] (i.e. SMP FACO Decision), as required by the European Commission in the 2014 Recommendation. This Decision Instrument relates to further specification and amendment of the price control and transparency obligations imposed by ComReg under Section 12 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision).

1.2 This Decision Instrument is made:

- (i) Pursuant to Regulations 8, 9,13 and 18 of the Access Regulations;
- (ii) Pursuant to, and having regard to, the significant market power (SMP) designation of Eircom as provided for in Section 5 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision);
- (iii) Having had regard to Sections 10 and 12 of the Communications Regulation Act 2002 (as amended); Regulation 6(1) of the Access Regulations, Regulation 16 of the Framework Regulations, Regulation 8(6) of the Access Regulations and Regulation 13(2) of the Access Regulations;
- (iv) Having, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), complied with Ministerial Policy Directions where applicable;
- (v) Having notified the draft measure and the reasoning on which the measure is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States pursuant to Regulation 13 and Regulation 14 of the Framework Regulations and having taken account of any comments made by these parties;
- (vi) Having had regard to the analysis and reasoning set out in ComReg Decision D[XX/YY] (i.e. Revised Copper Access Model Decision) and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations; and

- (vii) Having had regard to the analysis and reasoning set out in ComReg Document No.[YY/XX] and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations.
- 1.3 The provisions of ComReg Decision D[XX/YY], ComReg Document No. [YY/XX] and ComReg Decision D[XX/YY] shall, where appropriate, be construed with this Decision Instrument.

PART I - GENERAL PROVISIONS (SECTIONS 2 TO 3 OF THE DECISION INSTRUMENT)

2 DEFINITIONS

- 2.1 In this Decision Instrument, unless the context otherwise suggests:

“(the) 2014 Recommendation” means the European Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 295, 11.10.2014, p. 97);

“Access Path” means the Physical Transmission Path(s) between the line-card or equivalent in the Exchange or RSU to the NTP or NTU;

“Access Regulations” means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011);

“Access” shall have the same meaning as under Regulation 2 of the Access Regulations;

“Active Assets” in the context of this Decision means the line card associated with the provision of SB-WLR;

“BEREC” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EC) No. 1211/2009 of the European Parliament and of the Council of 25 November 2009;

“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, plus an appropriate apportionment of joint and common costs;

“Bundled Lower Level Voice Access” or **“Bundled LLVA”** means access via a PSTN, ISDN BRA or analogous broadband connection (cable, fibre, FWA and DSL), that is used to provide PSTN voice, ISDN voice or Managed VOIP service

sold in a product bundle which includes any of broadband, television or mobile services (and which product bundle may include fixed voice calls);

“Carrier Pre-Selection” or **“CPS”** is defined as a call origination product, service or facility (whether provided standalone or as part of SB-WLR) that permits an End User to decide, in advance, to nominate and use an Undertaking of its choice to provide certain voice call services over Eircom’s fixed network;

“Civil Engineering Infrastructure” (also known as passive infrastructure) means physical local loop facilities deployed by Eircom to host Local Loop cables such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean or above-ground assets such as sub-ducts, ducts, manholes and poles;

“Communications Regulation Act 2002 (as amended)” means the Communications Regulation Act 2002 (No. 20 of 2002) as amended;

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act 2002;

“ComReg Decision D08/10” means ComReg Document No. 10/67, entitled “Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited”, dated 31 August 2010;

“ComReg Decision D04/13” means ComReg Document No. 13/14, entitled “Price Regulation of Bundled Offers Further specification of certain price control obligations in Market 1 and Market 4”, dated 8 February 2013;

“ComReg Decision D[XX/15]” (i.e. SMP FACO Decision) means ComReg Document No. [...], entitled “[...]”, dated [...];

“ComReg Decision D[XX/YY]” (i.e. Revised Copper Access Model Decision) means ComReg Document No YY/[...], entitled “[...]”, dated [...];

“ComReg Document No. [YY/XX]” (i.e. Revised Copper Access Model Consultation Document) means ComReg Document No. [...], entitled “[...]”, dated [...];

“Decision Instrument” means this direction and decision instrument which is made pursuant to, *inter alia*, Regulations 8, 9, 13 and 18 of the Access Regulations;

“DSL” means digital subscriber line;

“Effective Date” means the date set out in Section 11 of this Decision Instrument;

“Eircom” means Eircom Limited and its subsidiaries and any related companies, and any Undertaking which it owns or controls, and any Undertaking which owns or controls Eircom Limited, and its successors and assigns. For the purpose of this Decision Instrument, the terms “subsidiary” and

“related company” shall have the meanings ascribed to them in the Companies Act 2014 ;

“**Electronic Communications Network(s)**” or “**ECN(s)**” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“**Electronic Communications Service**” or “**ECS**” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“**End User**” (for the purposes of this Decision Instrument) shall have the same meaning as under Regulation 2 of the Framework Regulations. For the avoidance of doubt, End-User(s) shall be deemed to include any natural or legal person who facilitate(s) or intend(s) to facilitate the provision of public communications networks or publicly available electronic communications services to other End-Users and who is(are) not acting as (an) Authorised Undertaking(s);

“**Equally Efficient Operator cost base**” or “**EEO cost base**” means a cost base which is derived from Eircom’s costs and is based on Eircom’s scale of operations;

“**Exchange**” means an Eircom network premises or equivalent facility used to house network and associated equipment, and includes a Remote Subscriber Unit (RSU);

“**FWA**” means fixed wireless access;

“**Framework Regulations**” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011);

“**Higher Level Voice Access** or “**HLVA**” means access via ISDN FRA or ISDN PRA that is used to provide voice service sold either on a standalone basis or in a package with fixed voice calls, or in a product bundle which includes any of broadband, television, or mobile services (and which product bundle may also include fixed voice calls);

“**Historical Cost Accounts**” or “**HCA**” means the historical cost accounts which Eircom is required to publish in accordance with ComReg Decision D08/10;

“**ISDN**” means integrated services digital network;

“**ISDN BRA**” means ISDN basic rate access;

“**ISDN FRA**” means ISDN fractional primary rate access;

“**ISDN PRA**” means ISDN primary rate access;

“**Larger Exchange Area**” or “**LEA**” has the meaning set out in Section 2.1 of the Decision Instrument contained in Annex 3 of ComReg Decision D04/13. For the purposes of this Decision Instrument, the LEA will be the total geographic

area comprising all individual exchange areas, each of which satisfies, at the Effective Date of this Decision Instrument, at least one of the criteria set out in Section 2.1 of the Decision Instrument contained in Annex 3 of ComReg Decision D04/13;

“Managed voice over broadband” or “Managed VoB” means managed voice over broadband provided by a fixed service provider either directly using its own network, or indirectly by renting the access path from a third party;

“Managed Voice Over Internet Protocol (VOIP)” means a managed voice over internet protocol service, including but not limited to managed VOIP provided over cable, DSL, fibre optic, cable and fixed wireless access (FWA), which is provided to a similar quality as the voice service currently provided by Eircom over PSTN;

“Ministerial Policy Directions” means the policy directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), dated 21 February 2003 and 26 March 2004;

“Network Termination Point” or “Network Termination Unit” or “NTP” or “NTU” means the physical interface which provides the service demarcation point or point of handover of a wholesale service(s) within the End User’s premises;

“Next Generation Access” or “NGA” means wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over exclusively copper access networks;

“NGA Bitstream” means a NGA wholesale broadband access (WBA) product provided by Eircom in the wholesale broadband access market i.e. a WBA product provided using NGA;

“Other Authorised Operator(s)” or “OAO(s)” means an Undertaking that is not Eircom, providing or intending to provide an ECN or an ECS pursuant to Regulation 4 of the Authorisation Regulations;

“PSTN” means public switched telephone network(s);

“Physical Transmission Path(s)” means a form of copper, fibre or wireless physical infrastructure (including any combination of these), or its nearest equivalent, which may be used to transmit Electronic Communications Services;

“Plain Old Telephone Service” or “POTS” means the standard telephone service that most homes use;

“Reasonably Efficient Operator” or “REO” means a reasonably efficient operator which has a different basic cost function to Eircom and does not yet enjoy the same economies of scale and scope as Eircom;

“Remote Subscriber Unit” or **“RSU”** means a subordinate type of Exchange that is attached to an upstream primary Exchange;

“Retail Line Rental” means Standalone Lower Level Voice Access (Standalone LLVA), Bundled Lower level Voice Access (Bundled LLVA) and Higher Level Voice Access (HLVA);

“Retail Margin Squeeze Test” as described in Section 4 of this Decision Instrument means the setting of a retail price by Eircom for Retail Line Rental which does not allow another operator, relying on SB-WLR, to provide the same or a similar retail product at sufficient margin by reference to the Retail Line Rental Margin Squeeze Model;

“Retail Line Rental Margin Squeeze Model” means the model (as amended from time to time) used by ComReg and Eircom to monitor Eircom’s compliance with the Retail Margin Squeeze Test (based on an EEO cost base, calculated using a portfolio approach by taking into account the average total costs) regarding SB-WLR, contained in Section 4 of this Decision Instrument;

“Revised Copper Access Model” means the model, as amended from time to time, used by ComReg and Eircom to assess Eircom’s compliance with the obligations contained in Section 4 of this Decision Instrument. 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 D[XX/YY];

“RIO Price List” or **“Reference Interconnect Offer Price List”** means the list of charges collated by Eircom for products, services and facilities, which are to be provided and specified in its RIO in accordance with the requirements of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision)

“Single Billing - Wholesale Line Rental” or **“SB-WLR”** means a wholesale service comprised of both CPS and WLR;

“Standalone Lower Level Voice Access” or **“Standalone LLVA”** means access via a PSTN, ISDN BRA or analogous broadband connection (cable, fibre, FWA or DSL), that is used to provide PSTN voice, ISDN voice or Managed VOIP service sold on a standalone basis or in a package with fixed voice calls,

“(the) Three Criteria Test” means the test set out in paragraph 2 of the 2014 Recommendation used to identify markets other than those set out in the Annex to the 2014 Recommendation as being susceptible to *ex ante* regulation. ComReg must demonstrate and the European Commission must verify that the following three criteria are cumulatively met:

- a. the presence of high and non-transitory structural, legal or regulatory barriers to entry;

- b. a market structure which does not tend towards effective competition within the relevant time horizon, having regard to the state of infrastructure based and other competition behind the barriers to entry; and
- c. competition law alone is insufficient to adequately address the identified market failure(s).

“Top-Down HCA” means the methodology in which the HCA and network information of the regulated firm are used as the starting point for calculating the costs of relevant services. These inputs may subsequently be adjusted to reflect efficiencies;

“Undertaking(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Virtual Unbundled Access” or **“VUA”** means Eircom’s wholesale active access product in the wholesale broadband access market. It is an enhanced layer 2 product which allows the handover or interconnection of aggregate End Users’ connections at the local exchange. It allows a level of control to the Access Seeker similar to that afforded to the access seeker connecting their own equipment to a fully unbundled local loop;

“Wholesale Line Rental” or **“WLR”** means the wholesale service that allows an OAO to rent an Access Path from Eircom which in turn enables that OAO to offer or provide services over such an Access Path to either an End User or another OAO;

“Wholesale Margin Squeeze Test” as described in Section 4 of this Decision Instrument means the setting of a wholesale price for POTS based VUA which does not allow a REO relying on standalone VUA or NGA Bitstream to provide a Managed VOB service at sufficient margin by reference to the Wholesale Margin Squeeze Model; and

“Wholesale POTS based VUA Margin Squeeze Model” means the model (as amended from time to time) used by ComReg and Eircom to monitor Eircom’s compliance with the Wholesale Margin Squeeze Test regarding POTS based VUA, contained in Section 4 of this Decision Instrument.

3 SCOPE AND APPLICATION

- 3.1 This Decision Instrument is binding upon Eircom and Eircom shall comply with it in all respects.
- 3.2 This Decision Instrument relates to a further specification of the price control obligations imposed by ComReg under Section 12 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. *SMP FACO Decision*).

PART II - FURTHER SPECIFICATION OF OBLIGATIONS RELATING TO PRICE CONTROL AND TRANSPARENCY (SECTION 4 OF THE DECISION INSTRUMENT)

4 SMP OBLIGATIONS

COST ORIENTATION PRICE CONTROL OBLIGATION:

- 4.1 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, Sections 12.6 and 12.7 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision) are hereby withdrawn and replaced as follows:

“12.6 Pursuant to Regulations 8 and 13 of the Access Regulations the price offered or charged by Eircom to any other Undertaking in relation to the WLR element of SB-WLR shall be subject to a cost orientation price control.

12.7 Without prejudice to the generality of Section 12.6 above, and pursuant to Regulations 8, 13 and 18 of the Access Regulation, Eircom shall ensure that the monthly rental charge offered or charged by Eircom to any other Undertaking in relation to the WLR element of SB-WLR shall be the higher of:

- (a) a price equal to Eircom’s total actual nationally incurred costs (adjusted for efficiency) (plus a reasonable rate of return) associated with the provision of WLR, which shall be calculated in line with the Revised Copper Access Model. Such costs will be based on a Top-Down HCA costing methodology with a BU-LRAIC+ methodology applied to Active Assets; or*
- (b) a price equal to the costs incurred by an efficient operator providing WLR within the LEA, which shall be calculated in line with the Revised Copper Access Model. Such costs shall be based on a combination of a BU-LRAIC+ costing methodology and a Top-Down HCA costing methodology.”*

- 4.2 Pursuant to Regulations 8, 9 and 18 of the Access Regulations, and in accordance with the timelines set out in the transparency obligations contained in Section 10 of ComReg Decision D[XX/15], (i.e. SMP FACO Decision) Eircom shall notify ComReg before it increases or introduces a new price for the WLR element of SB-WLR.

- 4.3 At notification, Eircom shall furnish ComReg with a detailed written submission demonstrating that the proposed new or increased charge(s) complies(y) with the obligation contained in Sections 4.1 of this Decision Instrument. The submission shall make full and true disclosure of all material facts for the purpose of demonstrating that the proposed new or increased charge(s) complies(y) with Section 4.1 herein. Upon receipt of the submission, ComReg shall review the submission and, within one (1) month, communicate to Eircom its decision whether to give or withhold approval to implement the proposed new or increased charge(s). Such approval shall not be unreasonably withheld by ComReg. Eircom shall not implement any new or increased charge(s) for SB-WLR without having received such approval from ComReg. Prior to the

expiry of the one (1) month period, ComReg may seek further information from Eircom to inform its decision as to whether approval to implement the new or increased charge(s) should be given or withheld. If such further information is not provided by Eircom within ComReg's timeline, or to the standard required by ComReg, approval to implement the proposed new or increased charge(s) shall be withheld pending the required information being made available to ComReg for review and consideration. Upon receipt of the requested information, ComReg will proceed to make a decision as to whether approval for implementation of the new or increased charge(s) should be granted or withheld. The periods referred to in this Section 4.3 may be varied with the agreement of ComReg or at ComReg's discretion.

RETAIL MARGIN SQUEEZE PRICE CONTROL OBLIGATION:

- 4.4 The Direction in this Section is issued pursuant to Regulations 13 and 18 of the Access Regulations, for the purposes of further specifying requirements to be complied with by Eircom relating to the obligation not to cause a margin / price squeeze imposed, pursuant to Regulation 13 of the Access Regulations, by Section 12.8 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision).
- 4.5 Eircom is directed not to cause a Retail Margin Squeeze between: (i) the retail price of Retail Line Rental; and (ii) the price charged by Eircom for SB-WLR. The assessment of the Retail Margin Squeeze Test shall be conducted on a portfolio basis by reference to the Retail Line Rental Margin Squeeze Model.
- 4.6 Eircom shall notify ComReg (by email) of all retail price changes or new retail prices for the Retail Line Rental product no later than five (5) working days prior to the date that the new or revised price is to become operative (for the avoidance of doubt, the timelines set out at Section 5.1 of this Decision Instrument and Section 10 of the Decision Instrument annexed to ComReg Decision D[XX/15] shall not apply in this respect, where no wholesale price amendment is required).
- 4.7 For the purposes of new retail prices or amendments to existing retail prices for the Retail Line Rental product, Eircom shall furnish to ComReg, at the same time as it notifies ComReg in accordance with Section 4.6 of this Decision Instrument, a detailed written statement of compliance demonstrating Eircom's compliance and proposed compliance with the price control obligation, as more specifically referred to in Section 4.5 of this Decision Instrument. The statement of compliance shall include the following:
- (i) a full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control and the obligation referred to in Section 4.5 of this Decision Instrument, which is based on the Retail Margin Squeeze Test in the Retail Line Rental Margin Squeeze Model;

- (ii) all relevant supporting documentation for the purpose of demonstrating compliance with the price control and the obligation referred to in Section 4.5 of this Decision Instrument and which is based on the Retail Margin Squeeze Test in the Retail Line Rental Margin Squeeze Model; and

4.8 Upon receipt of the statement of compliance referred to in Section 4.7, ComReg shall review the same. Within the 5 working day period referred to in Section 4.6, ComReg may do one or more of the following things:

- (i) provide Eircom with both (a) an appropriate written view, insofar as possible based on the available information provided by Eircom at that point in time, in relation to the statement of compliance referred to in Section 4.7; and (b) written confirmation that the making available or offering for sale of the new or existing Retail Line Rental product appears to be in compliance with Eircom's obligations under Section 4.5. However, any such written view or confirmation provided by ComReg is a *prima facie* view and does not fetter ComReg's future discretion in relation to its statutory powers;
- (ii) request any further information from Eircom and set a deadline by which such information shall be provided. Eircom shall provide the requested information by the deadline and in such format and to the level of detail as stipulated by ComReg. Upon receipt of the requested information from Eircom and within the five (5) working day period referred to in Section 4.6, ComReg may do one or more of the things referred to in sub-sections (i), (iii), (iv) or (v) of this Section 4.8;
- (iii) inform Eircom in writing that the amendment(s) to either the new or existing Retail Product would, in ComReg's view, not be in compliance with the price control obligation and the obligation referred to in Section 4.5 of this Decision Instrument, giving reasons therefor and also more specifically inform Eircom that the amendment or change if made operative will or could result in the issuing of a notification of non-compliance under Regulation 19(1) of the Access Regulations;
- (iv) for the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the obligation referred to in Section 4.5 of this Decision Instrument, issue a direction or directions to Eircom, under Regulation 18 of the Access Regulations, to refrain from making operative the corresponding amendment(s) to the equivalent wholesale offering of any existing or new product, service or facility; or

- (v) for the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the obligation referred to in Section 4.5 of this Decision Instrument, issue a direction or directions to Eircom, under Regulation 18 of the Access Regulations, to refrain from making available or offering for sale, the equivalent wholesale offering of any new product, service or facility.

- 4.9 For the purposes of Promotions and Discounts and Bundles, the obligations contained in Sections 4.4 to 4.8 above shall apply in respect of new and existing Retail Line Rental products and any equivalent Wholesale product(s).

WHOLESALE MARGIN SQUEEZE PRICE CONTROL OBLIGATION:

- 4.10 The Direction in this Section is issued pursuant to Regulations 13 and 18 of the Access Regulations, for the purposes of further specifying requirements to be complied with by Eircom relating to the obligation not to cause a margin / price squeeze imposed, pursuant to Regulation 13 of the Access Regulations, by Section 12.8 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision).
- 4.11 Eircom is directed not to cause a wholesale margin squeeze between: (i) the price for POTS based VUA; and (ii) the price for standalone VUA / NGA Bitstream including a contribution towards the cost of Managed VOB. The assessment of the Wholesale Margin Squeeze Test shall be conducted by reference to the Wholesale POTS based VUA Margin Squeeze Model.

5 TRANSPARENCY OBLIGATIONS TO SUPPORT PRICE CONTROL OBLIGATIONS

- 5.1 Pursuant to Regulations 8, 9 and 18 of the Access Regulations, Section 10.10 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision) is hereby amended by the insertion of the following wording after the wording already contained in that Section:-

“Eircom shall, unless otherwise agreed by ComReg, make publicly available and publish on Eircom’s publicly available wholesale website at least three (3) months in advance of coming into effect, any proposed amendments or changes to the RIO Price List, resulting from a price increase to a SB-WLR product, service or facility. Eircom shall notify ComReg in writing by email with the information to be published at least one (1) month in advance of any such publication taking place, that is, two (2) or four (4) months (as appropriate) prior to any amendments or changes coming into effect. The periods referred in this Section may be varied with the agreement of ComReg or at ComReg’s discretion.”

- 5.2 In accordance with Section 10.1 of the Decision Instrument annexed to ComReg Decision D[XX/15], (i.e. SMP FACO Decision) Eircom shall, in respect of Access, have an obligation of transparency, as provided for by Regulation 9 of the Access Regulations. Without prejudice to the generality of Section 10.1 and Section 10.10 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision) (now amended pursuant to Section 5.1 of this Decision Instrument), and pursuant to Regulations 9 and 13 of the Access Regulations, Eircom shall, unless otherwise agreed by ComReg, make publicly available and publish on Eircom's publicly available wholesale website at least three (3) months in advance of coming into effect, any proposed amendments or changes to the RIO Price List, resulting from a price increase to a SB-WLR product, service or facility. Eircom shall notify ComReg in writing by email with the information to be published at least one (1) month in advance of any such publication taking place, that is, two (2) or four (4) months (as appropriate) prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion. For the avoidance of doubt, except as expressly varied in this Decision Instrument, Section 10.10 of the Decision Instrument annexed to ComReg Decision D[XX/15] (i.e. SMP FACO Decision) shall otherwise be unaffected and shall continue in force.

PART III – OPERATION AND EFFECTIVE DATE (SECTIONS 6 TO 11 OF THE DECISION INSTRUMENT)

6 STATUTORY POWERS NOT AFFECTED

- 6.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation in force prior to or after the Effective Date of this Decision Instrument.

7 MAINTENANCE OF OBLIGATIONS

- 7.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument continue in force and Eircom shall comply with same.

8 CONFLICT

- 8.1 For the avoidance of doubt to the extent that there is any conflict between a ComReg Decision Instrument or ComReg document dated prior to the Effective Date and Eircom's obligations now set out herein, this Decision Instrument shall prevail, unless otherwise indicated by ComReg .

9 SEVERANCE

- 9.1 If any Section(s), clause(s) or provision(s), or portion(s) thereof, contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s), or portion(s) thereof, shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s), or portion(s) thereof, of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

10 WITHDRAWAL OF SMP OBLIGATIONS

- 10.1 Pursuant to Regulations 8, 13 and 18 of the Access Regulations, the following Sections of ComReg Decision D[XX/15](i.e. SMP FACO Decision) are hereby withdrawn, and are replaced with the obligations in this Decision Instrument when this Decision Instrument takes effect:
- (viii) Section 12.6 of the Decision Instrument annexed to ComReg Decision D[XX/15] (*i.e.* SMP FACO Decision) is replaced with Section 4.1 of this Decision Instrument.
 - (ix) Section 12.7 of the Decision Instrument annexed to ComReg Decision D[XX/15] (*i.e.* SMP FACO Decision) is replaced with Section 4.1 of this Decision Instrument.

11 EFFECTIVE DATE

- 11.1 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom and it shall remain in force until further notice by ComReg.

JEREMY GODFREY

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE [] DAY OF [] 20YY

Q. 31 Do you believe that the draft text of the proposed Decision Instrument for Market 2 is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

Annex: 4 Legal basis

- A 4.1 By ComReg Decision D05/10, and pursuant to Regulations 25 and 26 of the Framework Regulations, ComReg designated Eircom as having SMP on the market for Wholesale (Physical) Network Infrastructure access, as identified by the European Commission in the 2007 Recommendation and as defined by ComReg in ComReg Decision 05/10 (the “WPNIA” market).
- A 4.2 By ComReg Decision D06/11, and pursuant to Regulations 25 and 26 of the 2011 Framework Regulations, ComReg designated Eircom as having SMP on the market for Wholesale Broadband Access (“WBA”), as identified by the European Commission in the 2007 Recommendation and as defined by ComReg in ComReg Decision D06/11 (the “WBA” market).
- A 4.3 By ComReg Decision D[XX/15] (SMP FACO Decision), and pursuant to Regulations 25 and 26 of the 2011 Framework Regulations, ComReg designated Eircom as having SMP on the market for call origination on the public telephone network provide at a fixed location (the “FACO” market).
- A 4.4 Pursuant to Regulation 8 of the Access Regulations, where an operator has been designated by ComReg as having significant market power on a relevant market as a result of a market analysis carried out by ComReg in accordance with Regulation 27 of the 2011 Framework Regulations, ComReg shall impose on such operator such obligations set out in Regulations 9 to 13 of the Access Regulations as ComReg considers appropriate. Among others, the following obligations were imposed on Eircom in the WPNIA market, the WBA market and the FACO market: (i) obligations of transparency pursuant to Regulation 9 of the 2011 Access Regulations; and (ii) obligations relating to price control and cost accounting pursuant to Regulation 13 of the 2011 Access Regulations.
- A 4.5 Pursuant to Regulation 18 of the Access Regulations, the Regulator may, for the purpose of further specifying requirements to be complied with relating to an obligation imposed by or under these Regulations, issue directions to an operator or undertaking to do or refrain from doing anything which the Regulator specifies in the direction.
- A 4.6 The amendment, imposition, withdrawal and further specification of SMP obligations in relation to the WPNIA market, the WBA market and the FACO market is more particularly set out in the Decision Instrument contained in Annex 1 (for WPNIA market), Annex 2 (for WBA market) and Annex 3 (for FACO market) of this Draft Decision.

Consultation requirements:

A 4.7 Regulation 12(3) of the 2011 Framework Regulations provides that, except in cases falling within Regulation 13(8) (i.e. exceptional cases involving urgency), before taking a measure which has a significant impact on a relevant market, ComReg must publish the text of the proposed measure, give the reasons for it, including information as to which of ComReg's statutory powers gives rise to the measure, and specify the period within which submissions relating to the proposal may be made by interested parties. Regulation 12(4) states that ComReg, having considered any representations received under Regulation 12(3), may take the measure with or without amendment. Regulation 12 implements Article 6 of the Framework Directive.

A 4.8 Regulation 13(3) of the 2011 Framework Regulations provides that, upon completion of the consultation provided for in Regulation 12, where ComReg intends to take a measure which falls within the scope of Regulation 26 or 27 of the Framework Regulations, or Regulation 6 or 8 of the Access Regulations, and which would affect trade between Member States, it shall make the draft measure accessible to the European Commission, BEREC and the NRAs in other Member States at the same time, together with the reasoning on which the measure is based. Regulation 13 implements Article 7 of the Framework Directive.

Annex: 5 Glossary of Terms

The glossary is for guidance purposes. It is intended to help the reader in understanding this Draft Decision document, but is not intended to be a legal or other interpretation of acronyms and terms.

<u>Acronym</u>	<u>Full Title</u>	<u>Description</u>
ABC	Activity based costing	A method of allocating costs to products and services.
Access Directive	Directive 2002/19/EC of the European Parliament and the Council of 7 March 2002 on access to, and interconnection of electronic communications networks and associated facilities	Establishes a regulatory framework, in accordance with internal market principles, for the relationships between suppliers of networks and services that will result in sustainable competition, interoperability of electronic communications services and consumer benefits. It establishes rights and obligations for operators and for undertakings seeking interconnection and/or access to their networks or associated facilities. It sets out objectives for national regulatory authorities with regard to access and interconnection, and lays down procedures to ensure that obligations imposed by national regulatory authorities are reviewed and, where appropriate, withdrawn.
Access Regulations	The European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003	They transpose Directive 2002/19/EC of the European Parliament and the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities, in to Irish law.
ADSL	Asymmetric Digital Subscriber Line	A data communications technology that enables faster data transmission over copper telephone lines than a

		conventional voiceband modem can provide.
ADSL2 Plus	Asymmetric Digital Subscriber Line 2 Plus	ADSL2 Plus is the next generation ADSL. It offers high bandwidth using the same copper lines. It can offer up to 24 Mbps but this depends on a number of parameters.
ARCEP	L'Autorité de Régulation des Communications Électronique et des Postes	National regulatory agency for France.
Arcor	Arcor AG & Co.	A German operator in the fixed line market, of that name. Also the name of a preliminary reference case heard before the ECJ.
ARO	Access Reference Offer	A contract containing the various prices and terms and conditions that in Ireland, Eircom offers to OAOs for access to its network.
Backhaul	Backhaul	Infrastructure that enables the transmission of voice and data traffic from a remote site to a central site.
Bitstream	Bitstream	A system whereby wireline incumbent installs a high speed access link to the customer's premises (e.g., by installing ADSL equipment in the local access network) and then makes this access link available to third parties, to enable them to provide high speed services to customers. This type of access does not entail any third party access to the copper pair in the local loop.
Broadband	Broadband	Telecommunication in which a wide band of frequencies is available to transmit information. Because a wide band of frequencies is available, information can be multiplexed and sent on many different frequencies or

		channels within the band concurrently, allowing more information to be transmitted in a given amount of time.
BU-LRAIC plus	Bottom Up Long Run Average Incremental Cost Plus	BU-LRAIC plus is the costing 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, plus an appropriate apportionment of joint and common costs.
Cable	Cable	A system of providing television to consumers via radio frequency signals. It is transmitted to televisions through fixed optical fibres or coaxial cables as opposed to the over-the-air method used in traditional television broadcasting (via radio waves) in which a television antenna is required.
CCA	Current cost accounting.	A system of valuing assets based on their replacement cost rather than their cost when purchased or produced.
ECJ	European Court of Justice.	The highest court in Europe. The ECJ is sometimes called upon by referring national courts, to interpret points of law. This is known as a preliminary reference. (Arcor is an example).
	Cost Orientation	A form of price control whereby prices are set be reference to associated costs.
ComReg	Commission for Communications Regulation.	National regulatory agency for Ireland.

CPI	Consumer price index	The measurement of the average price of consumer goods and services purchased by households
CVR	Cost volume relationship	A cost driver is the factor or event that causes a cost to be incurred. A CVR describes how costs change as the volume of the cost driver changes. The aim of identifying a CVR is to be able to demonstrate how costs change as the volume of the cost driver is altered.
DCENR	The Department of Communications, Energy and Natural Resources	The department of central Government in Ireland of the same name. The immediate predecessor of the DCENR was the Department of Communications, Marine and Natural Resources.
Download	Download	To bring files down from the internet and put them on a hard drive so they can be worked on locally.
DP	Distribution Point	A point within a network where the cable or fibre terminates prior to distribution to end customers.
Drop Wire	Drop Wire	Connecting wire from pole to customer premises
D-side	Distribution side	Access network from exchange to customer premises.
DSL	Digital subscriber line	A family of technologies that provide digital data transmission over the wires of a local telephone network.
DSLAM	Digital Subscriber Line Access Multiplexer	Allows telephone lines to make faster connections to the Internet. It is a network device, located near the customer's location, which connects multiple customer Digital Subscriber Lines (DSLs) to a high-speed Internet backbone line where multiple data

			streams are combined into one signal over a shared medium.
Ducts	Ducts		Tubes through which cables are laid.
ERG	European Group	Regulators	Established by the European Commission to provide a suitable mechanism for encouraging cooperation and coordination between national regulatory authorities and the Commission, in order to promote the development of the internal market for electronic communications networks and services, and to seek to achieve consistent application, in all Member States, of the provisions set out in the Directives of the new regulatory framework.
	Economic Depreciation		With economic depreciation an exercise is undertaken to estimate amongst other things, future demand and operating costs and then the cost of the asset is allocated in a manner that optimally allocates all costs associated with the asset to the revenues through the assets life.
E-side	Exchange side		Access network within an exchange.
FAC	Fully attributed costs		An accounting method to distribute all costs among a firm's various products and services; hence, the FAC may include costs not directly associated with a particular product or service
FCM	Financial Capital Maintenance		Under CCA, FCM is a concept that considers the financial capability of the local loop operator is maintained. Surpluses or deficits on the restatement of net assets to current cost are put in the income statement.
FDC	Fully distributed costs		See "FAC" Fully attributed costs.

Fibre	Fibre	Optical fibre is a glass or plastic fibre designed to guide light along its length. Optical fibres are widely used in fibre-optic communication, which permits transmission over longer distances and at higher data rates than other forms of communication. Fibres are used instead of metal wires because signals travel along them with less loss, and they are immune to electromagnetic interference
Framework Directive	Directive 2002/21/EC of the European Parliament and the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services	The EU Directive which establishes a harmonised framework for the regulation of electronic communications services, electronic communications networks, associated facilities and associated services. It lays down tasks of national regulatory authorities and establishes a set of procedures to ensure the harmonised application of the regulatory framework throughout the Community.
FTTH	Fibre to the home	A form of fibre optic communication delivery in which the optical signal reaches the end user's living or office space.
FWA	Fixed wireless access	The use of radio links for the transmission of voice and data communications.
GRC	Gross replacement cost	The value of a brand new asset providing the same level of functionality and capacity as the existing asset.
HCA	Historical cost accounting	A system where assets are valued at their original cost, less accumulated depreciation.
Incumbent	Incumbent	Existing companies often first established as regulated monopolies.

IP	Internet Protocol	Method for moving information from one network to another on the internet.
ISDN	Integrated services digital network	Provision of dial up services at twice the speed of standard telephone connections.
Jumpering	Jumpering	Physically cross-connecting OAO and incumbents equipment using copper or fibre cables, within an exchange (copper wire pairs on the MDF –main dist frame, Co-Ax cable on the DDF-digital distribution frame , Optical jumpers on the ODF (optical dist frame), or within a street cabinet.
KB	Kilobit	One thousand bytes.
Last Mile	Last mile	The last mile is the final leg of delivering connectivity from a communications provider to a customer. Usually referred to by the telecommunications and cable television industries, it is typically seen as an expensive challenge because “fanning out” wires and cables is a considerable physical undertaking.
LLU	Local loop unbundling	The regulatory process of allowing multiple telecommunications operators’ use of connections from the incumbent’s telephone exchange’s to the customer’s premises.
Local Loop	Local loop	The physical circuit connecting the network termination point at the subscriber’s premises to the main distribution frame or equivalent facility in the fixed public telephone network provider’s network.
Line Share	Line share	Line share provides OAOs with shared use of a metallic path between an Eircom exchange facility and a customer’s premises. Eircom retains the voice-band frequency spectrum of the circuit and continues to provide voice

		services and the OAO is able to use the remainder of the frequency spectrum.
Margin Squeeze	Margin Squeeze	A margin or price squeeze occurs when the difference between the wholesale price and the retail price of the final good or service does not give an efficient downstream firm a reasonable profit margin.
MB	Megabit	One thousand kilobits.
MDF	Main distribution frames.	A signal distribution frame for connecting equipment (inside an exchange) to cables and subscriber carrier equipment (outside an exchange).
Naked-DSL	Naked Digital Subscriber Line	SABB, stand-alone broadband) provides a standalone DSL (Digital Subscriber Line) broadband service over the Local Loop, without a Public Switched Telephone Network (PSTN) service.
Narrowband	Narrowband	Telecommunication that carries voice information in a narrow band of frequencies.
NBP	National broadband plan	Government initiative to develop broadband infrastructure in the more rural towns and villages in Ireland to give access to high-speed broadband.
NBS	National broadband scheme	Provision of broadband services to certain target areas in Ireland in which broadband services are not available or are unlikely to be available in the foreseeable future.
NGA	Next generation access	Next Generation Access refers to the introduction of new products including super fast broadband.
NGN	Next generation networks	The creation of an all IP environment (sometimes referred to as "Next

		Generation core networks”) and the introduction of high-speed high-bandwidth access networks (often called “Next Generation access networks or NGA networks”).
Node	Node	A point of connection on a network.
NRA	National regulatory agency	A state or government agency which regulates businesses in the public interest.
NRC	Net replacement cost	Value of another asset (of the same age) providing the same level of functionality and capacity as the existing asset.
NTU	Network termination unit	Terminating equipment which is placed in the customer’s premises which presents the physical circuit interface to the customer and to which the customer connects their equipment
OAO	Other authorised operator(s)	A fixed operator other than the incumbent, providing telecommunication services.
OCM	Operating Capital Maintenance	Under CCA, OCM is a concept that considers the operating capability of the local loop operator is maintained. Surpluses or deficits on the restatement of net assets to current cost are put in the balance sheet in the current cost reserve.
OFCOM	Office of Communications.	National regulatory agency for the United Kingdom.
POTS	“Plain old telephone service”	Standard telephone service that most homes use. In contrast, telephone services based on high-speed, digital communications lines are differentiated by speed and bandwidth.
	Predatory pricing	Predatory pricing takes place when a dominant firm sells a good or service below costs of production for a

		sustained period of time, with the intention of deterring entry, or putting a rival out of business, enabling the dominant firm to further increase its market power and later its accumulated profits
PSTN	Public switched telephone network	PSTN refers to the international telephone system based on copper wires and carrying analogue voice data. This is in contrast to newer telephone networks based on digital technologies such as ISDN.
	Retail Minus	This is a form of price control whereby the SMP's wholesale price is set by reference to its retail price minus an appropriate margin to enable OAOs to cover their retail costs and compete with the SMP.
SABB	Stand Alone Broadband	ADSL/SDSL2plus service delivered over a 2-wire copper pair without a PSTN voice telephony switch.
SAC	Standalone costs	Method that allocates a portion of common costs to each user by applying a ratio equal to the stand-alone cost of providing benefits to that user divided by the sum of the stand-alone costs for all users.
SB-WLR	Single Billing Wholesale Line Rental	Single Billing through Wholesale Line Rental means that the customer has no relationship with Eircom, and all of the interfaces (ordering, billing, and fault repair) are with the Carrier Pre Select Operator (CPSO). The CPSO and Eircom have a separate contract for wholesale line rental. This product is only available in conjunction with Carrier Pre-Selection 'all calls'

Scorched earth	Scorched earth	A model that is based on an ideal network topology and not the existing network topology of the operator.
Scorched node	Scorched node	A model that takes as its starting point the existing network topology of the operator.
SLU	Sub loop unbundling	Process by which a sub-section of part of the local loop is unbundled.
SMP	Significant market power	A position which is equivalent to dominance of that market, that is to say a position of economic strength affording an undertaking the power to behave to an appreciable extent, independently of its competitors, customers, and, ultimately, consumers.
	Standard Annuities	This approach calculates, over time, an increasing depreciation charge and a decreasing cost of capital resulting in a constant annualised charge and price stability given stable asset prices and demand.
	Sunk Costs	A cost which has already been incurred and cannot be recovered.
The Framework Regulations	The European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2003	They transpose Directive 2002/21/EC of the European Parliament and the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, in to Irish law.
	Tilted Annuities	A tilted annuity incorporates a tilt in its formula which facilitates the calculation of annuities that evolve in line with asset price changes (it is therefore a current cost approach).
ULMP	Unbundled local metallic path	ULMP provides OAOs with exclusive use of a metallic path between the

		incumbents exchange facility and a customer's premises.
VoIP	Voice over internet protocol	The transport of voice traffic across the internet.
WBA Market	WBA Market	Wholesale Broadband Access Market – included in Market 5.
WPNIA Market	WPNIA Market	Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.

Annex: 6 Consultation Questions

Section	Page
Q. 1 Do you agree with ComReg’s preliminary view that the price control for SB-WLR should be amended from a retail minus to a cost orientation price control? Please provide reasons for your responses.	40
Q. 2 Do you agree with ComReg’s preliminary views that the cost orientation price control remains appropriate for determining the prices for LLU, SLU, Line Share, SABB Outside the LEA, CEI, dark fibre and the ancillary services for Market 4 and SB-WLR? Please provide reasons for your responses.	40
Q. 3 Do you agree with ComReg’s preliminary views that in general Eircom’s Indexed RAB should be applied to Reusable Assets while a BU-LRAIC+ methodology should be applied to Non-reusable Assets and active assets? Please provide reasons for your response.	63
Q. 4 Do you agree with ComReg’s preliminary view that for Reusable Assets we should take account of reuse and replacement of existing assets as described at paragraphs 4.132, 4.133 and 4.134 rather than assuming 100% reuse of existing assets? Please provide reasons for your response.	63
Q. 5 Do you agree with the proposed principles, inputs and assumptions of the Revised CAM, as set out above in Chapter 5? Please provide reasons for your response.	114
Q. 6 Do you agree with ComReg’s assumption that the volumes in the BU model should remain stable over the proposed price control period while the volumes in the TD model (for SB-WLR) should reflect projected volume decline? Please provide reasons for your response.	116
Q. 7 Do you agree with ComReg’s preliminary view that an average price per service over the price control period is appropriate? Please provide reasons for your response.	118
Q. 8 Do you agree with ComReg’s preliminary view that the monthly rental charge for LLU should be based on the BU-LRAIC+ methodology for Non-reusable Assets and Eircom’s Indexed RAB for Reusable Assets in the LEA? Please provide reasons for your response.	135
Q. 9 Do you agree with ComReg’s preliminary view that the LEA footprint should be locked-in for the purposes of setting the LLU monthly rental price? Please provide reasons for your response.	135
Q. 10 Do you agree with ComReg’s preliminary view that the maximum monthly rental charge for SLU should be based on the BU-LRAIC+ methodology for Non-reusable Assets and Eircom’s Indexed RAB for Reusable Assets nationally, while	

- lines longer than 1km should be excluded from the calculation? Please provide reasons for your response. 141
- Q. 11 Do you agree with ComReg’s preliminary view that the monthly rental price for SB-WLR should be based on the higher of the Eircom’s Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally (with active equipment based on BU-LRAIC+ costs) **or** the BU-LRAIC+ costs for Non-reusable Assets and active equipment with Eircom’s Indexed RAB applied to Reusable Assets for the provision of SB-WLR in the LEA? Please provide reasons for your response. 150
- Q. 12 Do you agree with ComReg’s preliminary view that the monthly rental price for SB-WLR ISDN PRA and FRA services should be based on the higher of the Eircom’s Actual Costs Adjusted for Efficiencies for the provision of SB-WLR ISDN FRA and PRA nationally (with active equipment based on BU-LRAIC+ costs) **or** the BU-LRAIC+ costs for Non-reusable Assets and active equipment with Eircom’s Indexed RAB applied to Reusable Assets for the provision of SB-WLR ISDN FRA and PRA services in the LEA? Please provide a reason for your response..... 151
- Q. 13 Do you agree with ComReg’s preliminary view that the monthly rental price for SABB Outside the LEA should be based on Eircom’s Actual Costs Adjusted for Efficiencies with the active equipment based on the BU-LRAIC+ methodology for the provision of SABB Outside the LEA? Please provide reasons for your response. 159
- Q. 14 Do you agree with ComReg’s proposed approach for setting the price per pole? Please provide reasons for your response. If respondents have any alternative views regarding any of the assumptions used for setting pole access prices please substantiate your response with evidence, where appropriate..... 165
- Q. 15 Do you agree with ComReg’s preliminary view that price per meter of sub-duct should be used for setting duct access prices? Please provide reasons for your response. 168
- Q. 16 Do you agree with ComReg’s preliminary view that duct access prices should reflect the cost differences between Dublin and provincial areas? Please provide reasons for your response. 169
- Q. 17 Do you agree with ComReg’s preliminary view that national price per meter is appropriate for setting dark fibre prices? Please provide reasons for your response. 171
- Q. 18 Do you agree with ComReg’s preliminary views that the incremental cost methodology should remain in place for determining the appropriate monthly rental price for Line Share? Please provide reasons for your response..... 174
- Q. 19 Do you agree with ComReg’s preliminary views regarding the retail margin squeeze test between retail line rental and wholesale line rental and the associated inputs of the test? Please provide reasons for your response..... 181

- Q. 20 Do you agree with ComReg’s preliminary views that pre-notification and pre-clearance is appropriate for the retail margin squeeze test between retail line rental and SB-WLR? Please provide reasons for your response. We welcome the views of industry regarding the alternative approach of self-compliance as discussed above at paragraphs 10.45 to 10.48. 184
- Q. 21 Do you agree with ComReg’s preliminary views regarding the wholesale margin squeeze test between POTS based VUA and standalone VUA / NGA Bitstream (including a contribution towards Managed VoB costs) and the associated inputs of the test? Please provide reasons for your response..... 187
- Q. 22 Do you agree with ComReg’s preliminary views regarding the ancillary charges for Market 4 products and services? Please provide reasons for your response. 193
- Q. 23 Do you agree with ComReg’s preliminary view that circa €0.50 per line per month is appropriate to take account of SB-WLR connection costs in the SB-WLR rental charge? Please provide a reason for your response..... 195
- Q. 24 Do you agree with ComReg’s preliminary view that the price control period should be for three years but should remain in place any further notice by ComReg and that Eircom should review the inputs, costs and assumptions of the Revised CAM annually for material changes? Please provide reasons for your response. 198
- Q. 25 Do you agree with ComReg’s preliminary views regarding the pre-notification timelines and pre-clearance / compliance obligations for the SB-WLR price nationally and for SABB Outside the LEA? Please provide reasons for your response. 202
- Q. 26 Do you agree with ComReg’s preliminary view regarding the regulatory approval mechanism and where Eircom should be allowed to reduce wholesale price for SB-WLR nationally and for SABB Outside the LEA below the regulated price so long as it does not breach the price floor set by reference to the BU-LRAIC+ costs in the LEA and subject to ComReg’s approval? Please provide reasons for your response. 204
- Q. 27 Do you agree with ComReg’s preliminary view that Eircom should not be allowed to give promotions / discounts with regard to SB-WLR connections? Please provide reasons for your response..... 206
- Q. 28 Do you have any comments on the Regulatory Impact Assessment and in your opinion are there other factors which ComReg should consider in completing its Regulatory Impact Assessment? Please provide reasons for your response, clearly indicating the relevant paragraph numbers to which your comments refer, along with relevant factual evidence supporting your views..... 243
- Q. 29 Do you believe that the draft text of the proposed Decision Instrument for Market 4 is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your

response and provide details of any specific amendments you believe are required.
..... 258

Q. 30 Do you believe that the draft text of the proposed Decision Instrument for Market 5 is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.
..... 266

Q. 31 Do you believe that the draft text of the proposed Decision Instrument for Market 2 is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.
..... 279

Annex: 7 TERA Report

A 7.1 Please refer to ComReg Document No 15/67A.

Annex: 8 Geocible work

A 8.1 Eircom provided the coordinates of all MDFs and an electronic map (shape file) with the coverage area of each MDF. Eircom also provided the coordinates of all SCs. However, the coverage of the SCs was not provided. The coverage of the SCs has been computed using a Voronoï based algorithm¹³⁴.

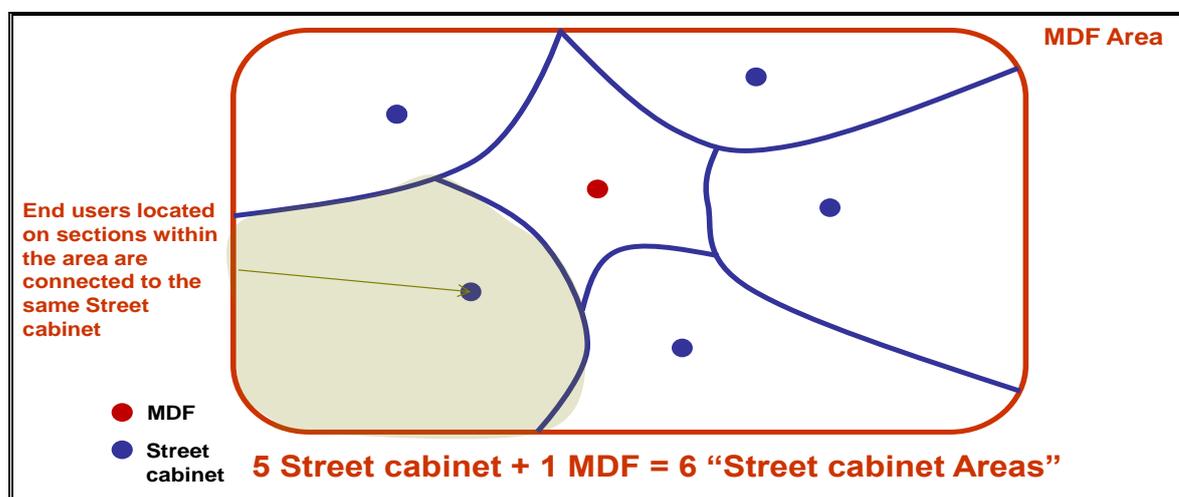
A 8.2 The Geocible exercise splits each MDF area into areas ensuring that each section is located in the same area as its closest SC.

A 8.3 There are two sets of paths that need to be computed in order to be able to connect all the buildings/dwellings for the purposes of dimensioning the access network:

- The set of paths linking each section to its SC;
- The set of paths linking each SC to its MDF.

A 8.4 Each section has its own path to its SC and each path follows the road network (note this path is not using the crow fly distance but the follows the road network). Please refer to Figure 46 for a graphical illustration of road section allocated to closest SC.

Figure 46: Illustration of road section allocated to closest SC

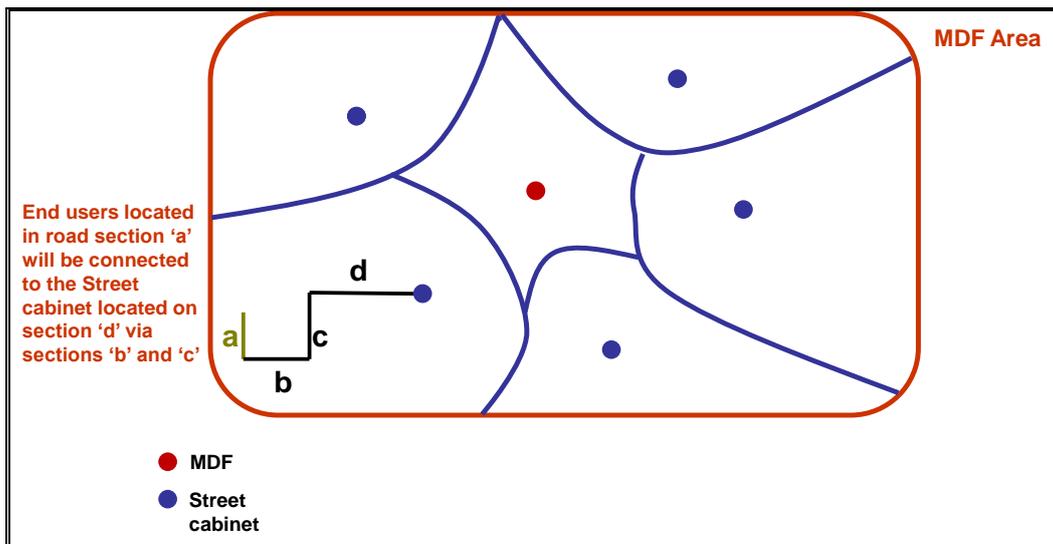


Source: TERA

A 8.5 The shortest path algorithm is used to set the path from each road section to the corresponding SC. Please refer to Figure 47 for an illustration.

¹³⁴ In the Voronoï approach, each road section is attributed to the closest MDF (closest meaning “with the shortest path using the road network”).

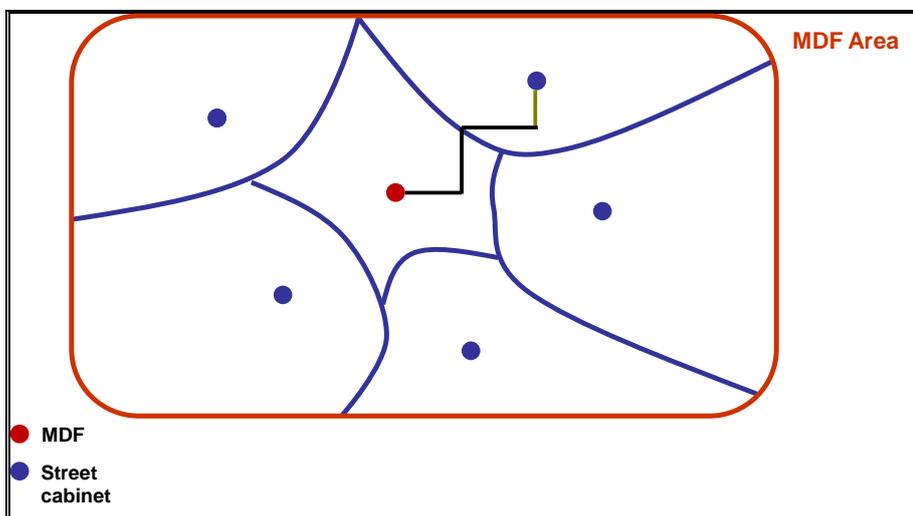
Figure 47: Illustration of shortest path algorithm to SC



Source: TERA

A 8.6 The shortest path algorithm is also used to determine the path from each SC to its corresponding MDF. Please refer to Figure 48 for an illustration.

Figure 48: Illustration of shortest path algorithm to MDF



Source: TERA

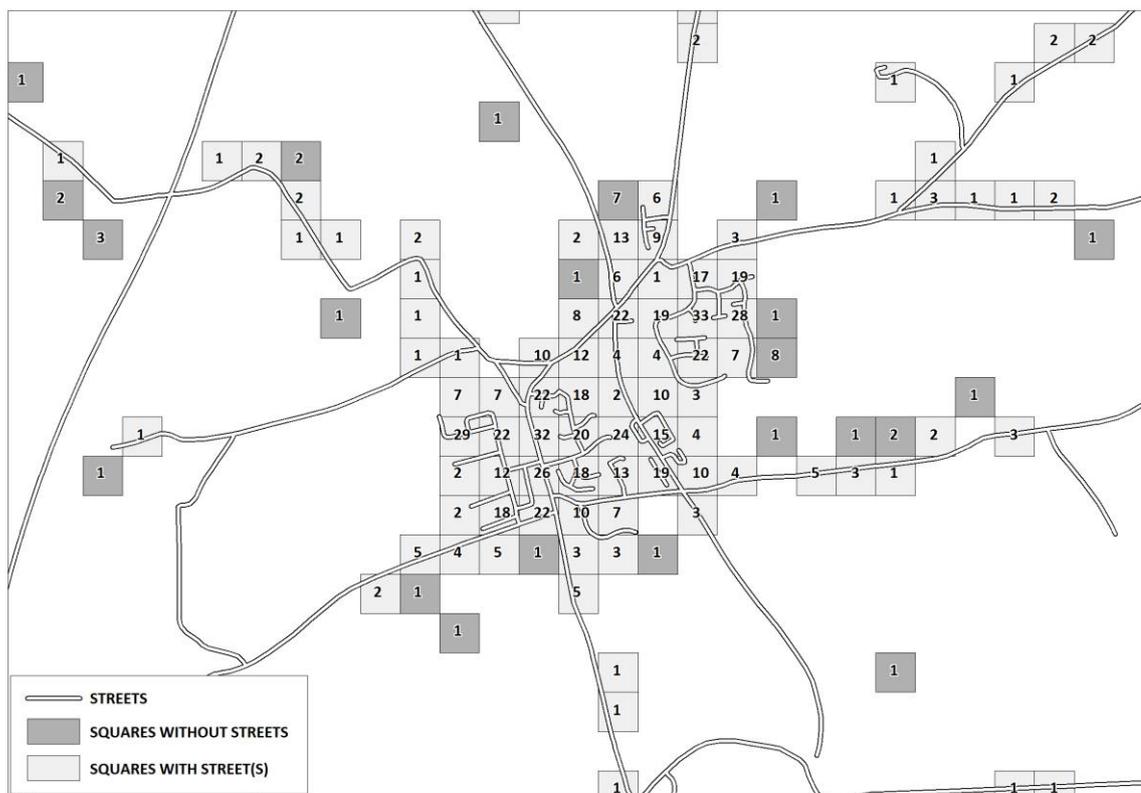
A 8.7 The Gamma database (which determines the number of buildings) shows Ireland in 100m wide squares where each square has at least one building in it. Areas of the country with no building are not covered by a square.

A 8.8 For each of these squares the Gamma database provides the following data:

- The number of buildings
- The number of residential delivery points
- The number of business delivery points.

A 8.9 Each building has to be allocated to a section. When a square is intersected by a single section, all the buildings of the square are allocated to the section. When a square is intersected by several sections, an allocation key has to be defined as no data is available. In Figure 49 we can see that 21 squares do not intersect any section and 85 squares are crossed by one or several sections.

Figure 49: Illustration of squares (and sections)



Source: TERA

A 8.10 Once all buildings have been allocated to a section, their location on the section has to be determined. Buildings have to be located on one side or the other of each section. This choice impacts the network dimensioning given that buildings on both sides of the sections leads to the roll-out of network on both sides of the sections. This is discussed in detail in subsection 5.4 above.

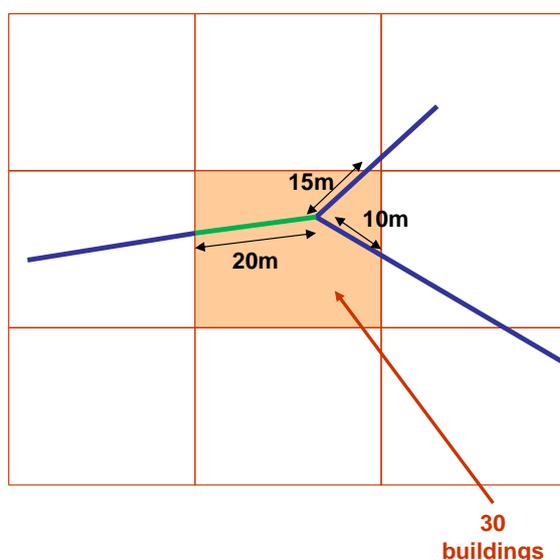
A 8.11 Once the buildings have been located on each side of the section, their exact position has to be defined. Two allocation keys have been defined in the Revised CAM to allocate the buildings of a square to the sections intersecting the square.

A 8.12 The first allocation key is when:

- All sections are located in a urban area; or
- All sections are located outside any urban area.

A 8.13 Please see Figure 50 which shows that there are 45m of road sections in the red square. The green section is allocated $20/45 \times 30$ buildings which equals 13.33 (or rounded at 13)¹³⁵.

Figure 50: Illustration of first allocation key



Source: TERA

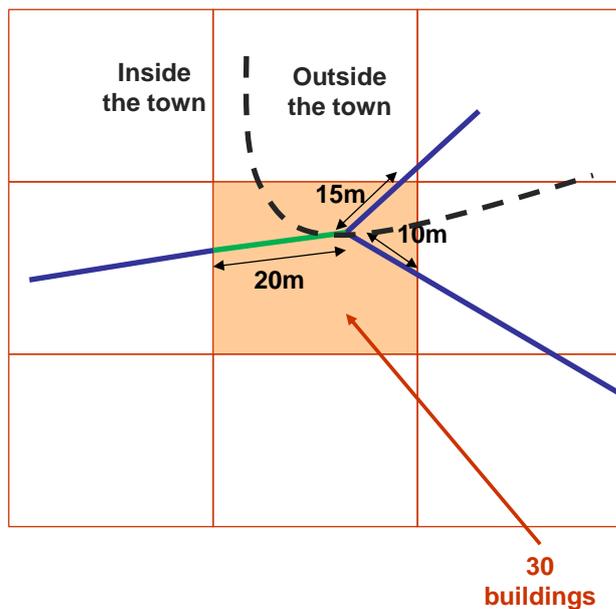
A 8.14 The second allocation key in the Revised CAM is when:

- Some sections are in an urban area; and
- Some are outside of an urban area.

A 8.15 Please see Figure 51 which shows that there are 45m of road sections in the red square of which 30m are inside the urban area. The green section is allocated $20/30 \times 30$ buildings which equals 20. Sections outside the urban area are given no building.

¹³⁵ The rounding rule ensures that the overall number of buildings is kept by allocating to the last section (randomly chosen) the total number of buildings minus those allocated to other sections.

Figure 51: Illustration of second allocation key



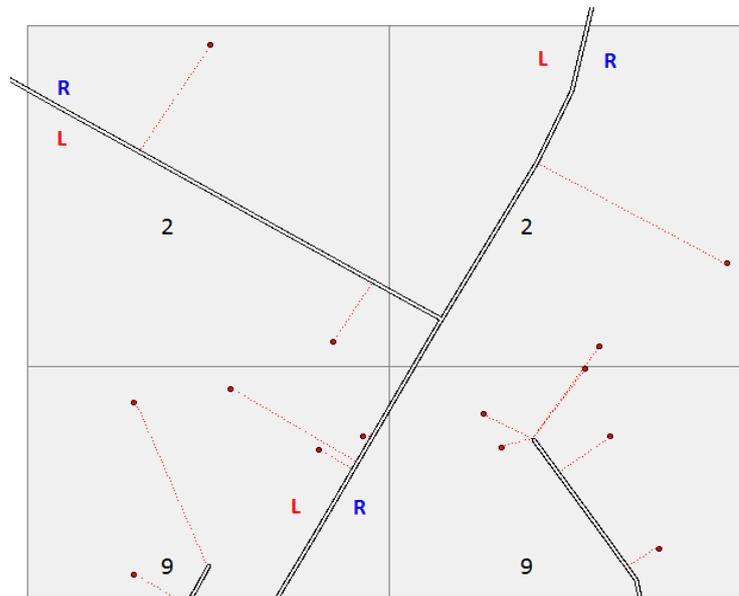
Source: TERA

A 8.16 ComReg has assumed in the Revised CAM that the buildings are equally distributed over the section length.

A 8.17 As illustrated in Figure 52, in order to allocate the buildings between the 2 sides of the sections, ComReg has applied the following rule in the Revised CAM:

- In each square, buildings have been randomly positioned;
- Each building has then been projected on the closest section;
- For each square, the total number of buildings projected on the left side is counted giving for each square the distribution of the buildings between the left and the right side.

Figure 52: Illustration of allocation of buildings between 2 sides of the sections



Source: TERA

Annex: 9 LEA Criteria

(i) Criterion 1: An exchange area in which:

- a) at least one AIP is providing telecommunications services at the retail level to End-Users; and
- b) at least one OAO (not being an AIP) is providing telecommunications services at the retail level to End-Users from the relevant exchange using LLU or VUA (either by means of direct provision by that OAO to End-Users or via a wholesale service provided to that OAO by another OAO by means of LLU or VUA), subject to the condition that the said AIP(s) and the said OAO(s) using LLU or VUA must, all taken collectively, have a reasonable market share and reasonable market coverage in the relevant exchange area;

(ii) Criterion 2: An exchange area in which at least two OAOs (not being AIPs) are providing telecommunications services at the retail level to End-Users from the relevant exchange using LLU or VUA (either by means of direct provision by those OAO(s) to End-Users or via a wholesale service provided to those OAO(s) by another OAO by means of LLU or VUA) - subject to the condition that the said OAOs using LLU or VUA must, taken collectively, have a reasonable market share and reasonable market coverage in the relevant exchange area;

(iii) Criterion 3: An exchange area in which:

- a) at least one AIP is providing telecommunications services at the retail level to End-Users; and
- b) Eircom (and OAOs (not being AIPs) relying on wholesale inputs provided by Eircom) are providing retail fixed broadband services to less than 20 per cent of the premises in that exchange area,

subject to the condition that the said AIP(s) must, taken collectively, have a reasonable market share and reasonable market coverage in the relevant exchange area;

(iv) Criterion 4: An exchange area in respect of which Eircom has provided at least six months prior notification (or such shorter period as may be agreed by ComReg) on its publicly available Wholesale website (in accordance with Section 9.13(i) of the Decision Instrument contained in Annex 1 of ComReg Decision D03/13 and/or Section 9.13(i) of the Decision Instrument contained in Annex 2 of ComReg Decision D03/13) regarding the launch of NGA services by Eircom in cabinets in the relevant exchange area, subject to the condition that those proposed NGA-enabled cabinets must serve at least a reasonable number of lines in that exchange area;

(v) Criterion 5: exceptionally, and subject to case-by-case assessment by ComReg, an exchange area in which the relevant exchange:

- a) Is surrounded by Qualifying Exchanges; or*
- b) Serves fewer than 500 residential premises and is located either adjacent to, or in reasonable proximity to, Qualifying Exchange(s); or*
- c) Is determined, to the satisfaction of ComReg, to have an economic affinity with adjacent Qualifying Exchange(s), subject to the total residential premises served by Qualifying Exchanges under this sub-criterion 5(c) not exceeding 5% of the total residential premises in the Larger Exchange Area (excluding those residential premises which are served by Qualifying Exchanges under sub-criterion 5(b) above).*

Annex: 10 Updated Competition Assessment in the access markets

Market 4:

The existing market definition, SMP designation and obligations:

1. A decision notice on the Wholesale Physical Network Infrastructure Access ('**WPNIA**') Market (formerly Market 4 under the 2007 Recommendation¹³⁶, but now Market 3a under the 2014 Recommendation¹³⁷) was published on 20 May 2010¹³⁸ ('**WPNIA Market Decision**'). The WPNIA Market, which was defined as being national in its geographic scope, was found to include¹³⁹:
 - Wholesale physical network infrastructure access provided over current generation copper network infrastructure and its associated facilities at a fixed location ('**Current Generation (CG) WPNIA**'); and
 - Wholesale physical network infrastructure access provided over next generation fibre network infrastructure and its associated facilities at a fixed location ('**Next Generation (NG) WPNIA**').
2. Eircom's self-supplied physical network infrastructure access is included in the WPNIA Market.
3. ComReg considered that the conditions of competition in the upstream WPNIA market were sufficiently similar across Ireland to warrant the definition of a single nationwide market. The WPNIA geographic market is, therefore, national in scope.
4. WPNIA and Wholesale Broadband Access ('**WBA**') were found to fall within separate markets, due to differences in functionality and pricing (amongst other reasons).
5. ComReg considered whether potential WPNIA products provided over other platforms such as cable and Fixed Wireless Access ('**FWA**') networks warranted inclusion in the WPNIA product market. However, given the lack of demand and supply side substitutability and the weakness of indirect pricing constraints, ComReg concluded that potential wholesale physical access products provided over these other platforms did not warrant inclusion within the WPNIA market.

¹³⁶ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services, (the '**2007 Recommendation**').

¹³⁷ European Commission – Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (the '**2014 Recommendation**').

¹³⁸ ComReg Document No 10/39 (ComReg Decision D01/10): Response to Consultation and Decision Document – Wholesale Physical Network Infrastructure Access (Market 4).

¹³⁹ Please refer to the WPNIA Market Decision for a full explanation of the reasoning for the definition of the WPNIA Market.

6. Following an assessment of existing competition, potential competition and Countervailing Buyer Power ('**CBP**'), ComReg designated Eircom as having Significant Market Power ('**SMP**') in the WPNIA Market.
7. Having regard to Eircom's SMP position in the WPNIA Market and its ability and incentive to potentially engage in a range of anti-competitive behaviours, ComReg imposed a number of regulatory obligations on Eircom with regard to Current Generation WPNIA. One such set of obligations imposed on Eircom related to price control and cost orientation. In addition, ComReg specified that Eircom should continue to comply with ComReg Decision D01/10¹⁴⁰ ('**LLU Pricing Decision**') regarding the monthly rental price for Local Loop Unbundling ('**LLU**') and Sub-Loop Unbundling ('**SLU**').
8. ComReg also imposed specific obligations in principle with regard to NG WPNIA, although these services, with, ComReg signalling that it intended to engage in a subsequent consultation to further specify the detailed manner in which these obligations would be implemented.

Next Generation Access ('NGA') Remedies Decision:

9. In 2013, ComReg published its decision on remedies to be applied with respect to Next Generation WPNIA and WBA in ComReg Decision D03/13¹⁴¹ ('**NGA Remedies Decision**').
10. In the NGA Remedies Decision ComReg amended the LLU and SLU pricing obligations from the LLU Pricing Decision. However, the change made to the pricing obligations for LLU and SLU in the NGA Decision did not require an amendment to the overriding price control obligation of cost orientation. Rather, the changes related to the detailed specification and implementation of the price control obligation of cost orientation as specified in the WPNIA Market Decision. Please refer to Chapter 3 (subsection 3.4.1) in the main body of the Draft Decision for the changes.

Proposed amendment to the LLU / SLU pricing methodology:

11. The WPNIA Market Decision sets out the overriding price control obligation of cost orientation, with this being further specified and or amended in the LLU Pricing Decision and in the NGA Remedies Decision.
12. With regard to the current proposal to amend the LLU/SLU pricing methodology, ComReg considers that this does not constitute a material change to the price control obligation of cost orientation obligation as specified in the WPNIA Decision. Rather, the proposed change relates to the form of cost orientation, namely the methodology and implementation of the obligations specified in the LLU Pricing Decision and the NGA Remedies Decision. The proposed change therefore does not require amendment of the primary price control obligation of cost orientation established in the WPNIA Market Decision.

¹⁴⁰ ComReg Document No 10/10: Local loop unbundling (LLU) and sub loop unbundling (SLU) maximum monthly rental charges; 9 February 2010.

¹⁴¹ ComReg Document No 13/11: Next generation access ('NGA'): Remedies for next generation access markets; 31 January 2013.

13. The proposed change to the pricing methodology is intended to better effect ComReg's regulatory objectives, which include the promotion of competition, by ensuring that there is no distortion or restriction of competition in the WPNIA and related downstream markets and by encouraging efficient investment in infrastructure. The proposal is consistent with, and falls within, the scope of the existing price control obligation of cost orientation.

Proposed amendment to civil engineering infrastructure ('CEI') and dark fibre:

14. The WPNIA Market Decision sets out that NG WPNIA products should be subject to a price control obligation, which would be subject to further consultation.
15. In the NGA Remedies Decision ComReg imposed a cost orientation price control obligation in Section 11.4 and 11.5 of the Decision Instrument contained in Annex A with regard to the NG WPNIA products including civil engineering infrastructure ('CEI') i.e., duct and pole access and for dark fibre. ComReg also further specified the cost orientation obligation for CEI and dark fibre as follows:

"With regard to Civil Engineering Infrastructure (including Duct Access) as referred to in Section 6.2 of this Decision Instrument, Eircom shall base such charges on no more than BU-LRAIC plus costs in accordance with the Copper Access Model;

With regard to Dark Fibre as referred to in Section 6.2 of this Decision Instrument, Eircom shall base such charges on no more than BU-LRAIC plus costs in accordance with the Copper Access Model, as adjusted, where appropriate, for fibre costs."

16. With regard to the current proposal to amend the CEI and dark fibre pricing methodology, ComReg considers that this does not constitute a material change to the price control obligation (set out in the WPNIA Market Decision) or the cost orientation obligation (set out in the NGA Decision). Rather, the proposed change relates only to the methodology of the existing price control obligation of cost orientation as established by ComReg in the WPNIA Market Decision and the NGA Remedies Decision, respectively. The existing cost orientation price control obligation does not, therefore, change.
17. The proposed change to the pricing methodology (to a combined BU-LRAIC+ and Eircom's Actual Costs Adjusted for Efficiencies as described in Chapter 4 of this Draft Decision) is intended to better effect ComReg's regulatory objectives, which include the promotion of competition, by ensuring that there is no distortion or restriction of competition in the market and by encouraging efficient investment in infrastructure.

Preliminary high level market observation:

18. While we note the entry of the Electricity Supply Board ('ESB') and Vodafone joint venture ('JV') (known as 'SIRO') to the market as a potential WPNIA supplier we consider that in the short to medium term Eircom will continue to be the sole WPNIA provider.
19. In addition, the Irish Government has announced plans for a new National Broadband Plan ('NBP') to provide broadband to rural areas. While some details

of the NBP are still unknown, a detailed procurement process is due to take place in 2015, with rollout expected to commence in 2016. The NBP is expected to have a limited impact on Eircom's position as the SMP operator in the WPNIA market in the short to medium term.

20. ComReg considers that based on the current market definition as set out in the 2010 WPNIA Market Decision, Eircom continues to have SMP in the WPNIA market. Therefore, the current remedies in the WPNIA Market remain valid at this time. As such, the decision to amend the pricing methodology remains equally valid. ComReg therefore considers that the continued imposition of the price control and cost orientation obligation in the WPNIA Market is consistent with ComReg's objectives as set out in the Access Regulations and that the price control and cost orientation obligation should remain in place.

Analysis of Wholesale Physical Network Infrastructure Access Market:

21. ComReg has commenced its review of the Wholesale Local Access Market (Market 3a) and we expect to issue a consultation in Q4 2015 / Q1 2016.

Market 5:

The existing market definition, SMP designation and obligations:

22. A decision notice on the Wholesale Broadband Access ('WBA') market (formerly Market 5 under the 2007 Commission Recommendation, but now Market 3b under the 2014 Recommendation) was published on 8 July 2011¹⁴² ('WBA Market Decision').
23. In the WBA Market Decision we concluded that the broadband market included retail broadband provided over DSL, cable, Fibre to the X ('FTTx') and Fixed Wireless Access ('FWA'). The retail broadband market did not include mobile broadband or broadband delivered over satellite.
24. The definition of the wholesale market consists of WBA provided over extensive current and next generation infrastructure.
25. The WBA Market Decision defined the relevant geographic market as being national in scope. While evidence of structural change was identified in areas of overlapping cable and LLU infrastructure this was considered, at the time, to be relatively recent and unstable (absent regulation). ComReg also found little evidence of behavioural change that would distinguish one area from another. ComReg indicated that this issue would be monitored.
26. As part of the WBA Market Decision, ComReg identified the competition problems associated with the WBA market which included excessive pricing, exclusionary behaviour and as well as concerns around vertical leverage/predatory practices.
27. Having regard to Eircom's SMP position in the WBA Market and its ability and incentive to potentially engage in a range of anti-competitive behaviours, ComReg imposed a number of regulatory obligations on Eircom with regard to Current Generation WBA. One such set of obligations imposed on Eircom related to price control. The price control obligation imposed on Eircom was a

¹⁴² ComReg Document No 11/49: Market Review: Wholesale Broadband Access, dated 8 July 2011.

continuation of the 2006 Retail Minus Price Control pending any other decisions or directions by ComReg in relation to the appropriate price control. In addition, the obligation not to cause a margin squeeze was imposed on Eircom.

Amendment to price control obligation for current generation WBA:

28. In 2014 ComReg issued a decision notice¹⁴³ regarding the price control obligation for current generation services in the WBA Market (known as '**WBA Pricing Decision**'). In the WBA Pricing Decision ComReg amended the retail minus price control obligation (from the WBA Market Decision) to a retail margin squeeze test. In addition, ComReg imposed a national cost orientation obligation with regard to Eircom's current generation Bitstream services. The application of both pricing obligations differs somewhat between more urban and less urbanised areas. ComReg has previously defined a larger exchange area ('**LEA**') which comprises those exchange areas where there is the presence of cable infrastructure, LLU based competition, and prospectively, the potential for the rollout of NGA. Areas outside the LEA i.e., '**Outside the LEA**' are those areas which have less / no infrastructure based competition and where the wholesale broadband market is unlikely to become competitive prospectively. Outside the LEA, Eircom are required to ensure that it recovers no more than the actual incurred costs (adjusted for efficiency, plus a reasonable rate of return) associated with the provision of current generation Bitstream services in the area Outside the LEA.
29. For SABB Outside the LEA, in the WBA Pricing Decision ComReg imposed the obligation of cost orientation. This obligation is now further specified in this Draft Decision, as discussed at Chapter 7. In this Draft Decision we are further specifying the methodology that should apply to determine the SABB price Outside the LEA only.

Preliminary high level market observation Outside the LEA:

30. Eircom is currently the main provider of wholesale fixed broadband services Outside the LEA. This is unlikely to change absent state intervention.
31. Outside the LEA, ComReg consider that entry prospects are limited largely due to the less favourable cost and scale characteristics. In the area Outside the LEA there is currently little or no infrastructure competition.
32. As noted above at paragraph 18, the entry of SIRO to the market may create competition prospectively in the WBA market. However, the SIRO rollout of fibre is more of a 'regional' rollout rather than a rollout of fibre to rural parts of Ireland and is more likely to form part of the LEA.
33. The NBP is envisaged to cover a significant proportion of the exchanges Outside the LEA, which is due to start rolling out by the end of next year and is to be completed by the end of 2020.

Analysis of WBA Market:

34. ComReg has commenced its review of the Wholesale Central Access Market (Market 3b) and we expect to issue a consultation in Q4 2015 / Q1 2016.

¹⁴³ ComReg Decision D11/14 (ComReg Document No 14/73R): Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream; 9 July 2014.

Annex: 11 Eircom and ComReg correspondence

A 11.1 Please refer to ComReg Document No 15/67B.

Annex: 12 Vodafone submission

A 12.1 Please refer to ComReg Document No 15/67C.

Annex: 13 “Dublin” duct access prices relate to the listed exchanges / MDFs

NAVAN
BOHERMEEN
BEAUPARC
KILCARN
KILMESSAN
ROBINSTOWN
TARA
BALRATH
DUNDERRY
TRIM
BALBRIGGAN
COURTLOUGH BIZ PK
KILBRECK
NAUL
SKERRIES
STAMULLIN
ADAMSTOWN CASTLE
ARDCLOUGH
ADAMSTOWN STRATTON GR
ADAMSTOWN SQUARE
ADAMSTOWN THE PADDOC
BRITTAS
CELBRIDGE
GREENOGE
HEWLETT-PACKARD
INTEL
KILCOCK
LUCAN BALLYDOWD
LEIXLIP
LUCAN
MAYNOOTH BUSINESS CA
MAYNOOTH
PEAMOUNT LANE
RATHCOOLE
STRAFFAN
ASHBOURNE
BATTERSTOWN
DUNBOYNE
DUNSHAUGHLIN

GARRISTOWN
KILLEEN CASTLE
RATOATH
ADELAIDE ROAD
BEGGARS BUSH
BLANCHARDSTOWN
BALGRIFFIN
BALLYBODEN
BELCAMP
BALLYMOUNT
BALLYCOOLIN
BRAY
BALLYBOUGHAL
CABRA
COLDWINTERS
CLONEE
CLONSKEAGH
NANGOR ROAD
COOLOCK
CLONTARF
CENTREPOINT BIZ PARK
CAPPOGE BUS PK
CROWN ALLEY
CRUMLIN
CUSTOMS HS DOCKS
CHERRYWOOD
CITYWEST
DUBLIN AIRPORT
DOLPHINS BARN
DUBBER
DONABATE
DUNDRUM
DUNLAOGHAIRE
DONAGHMEDE
ENNISKERRY_KILGARRON
ENNISKERRY
EASTPOINT
FARMLEIGH
FINGLAS
FOXROCK
GLENCULLEN
GLENCREE
HEUSTON SOUTH QUARTER
IBMSITE
KILBRIDE
KILMACANOGUE

KILMACANOGE_TWO
MERRION
MALAHIDE
MITCHELSTOWN
NUTGROVE EP
NORTH MAIN
NUTLEY
NORTHWEST BUSINESS PK
NEWLANDS CROSS
OLDTOWN
PALMERSTOWN
PHIBSBORO
PARK WEST
PELLETSTOWN
PORTMARNOCK
PRIORY PARK
POWERSCOURT
QUARRYVALE
RATHMINES
ROCHESTOWN
RUSH
SANTRY
SHIP STREET
SHANKILL
SANDYFORD
SANDYFORD AEH
SWORDS
SUMMERHILL
SUTTON
TALLAGHT
TYRRELSTOWN
TERENURE
WALKINSTOWN
WHITEHALL
GREYSTONES
NEWTOWNMTKENNEDY
PRIESTSNEWTOWN
ROUNDWOOD
BLESSINGTON
CLANE
CARRAGH
JOHNSTOWN
KILL
NAAS
PROSPEROUS
RATHMORE

SALLINS
BRITTAS BAY BRIDGE
GLENDALOUGH
GLENEALY
KILBRIDE
MERRYMEETING
RATHDRUM
REDCROSS
WICKLOW