



Response to Consultation & Further Consultation & Draft Decision

Response to Consultation Document No 08/56

Further Consultation on Local Loop Unbundling ('LLU') and Sub Loop Unbundling ('SLU') Monthly Rental Charges

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All responses to this consultation should be clearly marked:-  
"Reference: Submission re ComReg 09/39" as indicated above,  
and sent by post, facsimile, e-mail or on-line at [www.comreg.ie](http://www.comreg.ie)  
(current consultations), to arrive on or before 5.30 pm, 12 June  
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Please note ComReg will publish all respondents submissions  
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## 1 Executive Summary

- 1.1 Effective competition between telecom operators will benefit consumers by driving down prices and increasing the availability and choice of services. There are very large costs involved in the construction of fixed-line networks and so Ireland's policy, in line with the rest of Europe, is to facilitate competition by requiring Eircom Limited ("Eircom"), as the incumbent, to grant access to parts of its network at regulated prices.
- 1.2 This consultation relates to the Commission for Communications Regulation ("ComReg") proposals for revisions to the regulation of Local Loop Unbundling ("LLU") and Sub Loop Unbundling ("SLU") pricing for the next three years in Ireland. These wholesale products allow entrants access to the last mile into consumers homes/businesses and, unlike some other types of regulated access, gives them direct control over the hardware used to provide broadband services. This control over the hardware enhances the ability of operators to differentiate their services (by offering higher-speed broadband, for example) helping to increase consumer welfare and ensure the long-term sustainability of competition.
- 1.3 However, the take up of these services in Ireland, unlike many other European countries, is low despite a number of improvements to the processes involved, such as the ability to port fixed line numbers when changing operator. Aside from process related issues, one of the main factors that can be attributed to the low take up LLU in Ireland to date has been the high price being charged by Eircom for the entire network. This high charge relates to a number of factors which has been highlighted by Eircom to ComReg such as the low population density compared to other countries, the high proportion of one off housing in rural areas and the low number of working lines, among other factors. Through significant engagement with Eircom and industry over the past number of years, ComReg believes it has now reached a position where LLU can become a key platform for effective competition.
- 1.4 In ComReg Consultation Document No. 08/56<sup>1</sup> ("Consultation Document No. 08/56"), ComReg consulted on the various methods of setting a reasonable price for these services so that efficient competition is facilitated, whilst also ensuring that Eircom gets an appropriate return on the costs it incurred in constructing its network.
- 1.5 On the basis of Consultation Document No. 08/56, ComReg is proposing to reduce the price of LLU and SLU services by approximately 26% and 34% respectively. Under the proposals contained in this document the monthly rental charge for LLU would become €12.18 and the monthly rental charge for SLU would become €9.79.
- 1.6 Firstly, the proposed price reduction reflects a number of changes to ComReg's approach to setting a LLU price. There are a large number of exchanges in Ireland that may be too small to viably be unbundled by entrants (at least over the next few years). Historically LLU and SLU operators have been required to contribute towards the cost of these exchanges as well as those exchanges that they do have a realistic probability of unbundling. In this consultation, ComReg proposes to more closely align the price of LLU and SLU with the costs of exchanges that could viably be unbundled during the current price control.

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<sup>1</sup> Proposal for Local Loop Unbundling Pricing Methodologies, dated 10 July 2008.

- 1.7 Secondly, ComReg has constructed a much more sophisticated model of Eircom's access network, giving a more accurate picture of the costs that Eircom incurs in providing LLU and SLU services.
- 1.8 The current proposed prices are predicated on adopting the revised regulatory asset lives as proposed by ComReg in Consultation Document No. 09/11<sup>2</sup>. The preliminary conclusions of that consultation process have been notified to the European Commission ("EC").
- 1.9 ComReg has constructed a new version of the model, and arrived at its preliminary conclusions, through a significant interactive engagement with Eircom on the appropriate costs of building and operating an efficient network in Ireland. These proposals if implemented provide the basis for new and enhanced investment benefiting consumers in both urban and rural communities through greater choice and lower prices.

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<sup>2</sup> Review of the Regulatory Asset Lives of Eircom Limited, dated 17 February 2009.

## 2 Introduction

- 2.1 ComReg is responsible for the regulation of the electronic communications sector in Ireland. Part of ComReg's statutory functions under the Communications Regulation Act 2002 (as amended) ("the Act") and a number of statutory instruments, is the regulation of the unbundled local metallic path ("ULMP") or LLU and SLU.
- 2.2 LLU is a wholesale service whereby the fixed line incumbent (in Ireland's case Eircom) is required to provide access to its local loop to other fixed operators, known as Other Authorised Operators ("OAOs"). The OAOs can use LLU for the provision of a full range of electronic communications services. The local loop is the physical path, usually copper, which connects a local exchange to an end user. It is the most difficult part of a telecoms network for Eircom's competitors to replicate economically. Therefore, by virtue of its significant market power ("SMP")<sup>3</sup> in the LLU market and in order to create conditions conducive to competition, Eircom is legally obliged by ComReg to allow OAOs to gain access to LLU, in order to allow them to provide electronic communications services to end users.
- 2.3 An advanced telecommunications infrastructure is a key enabler for enterprise in Ireland; be it consumer to consumer, consumer to business, business to consumer or business to business. It is also rapidly becoming a vital requirement for the provision of entertainment services such as television, internet surfing, music, videos, gaming etc.
- 2.4 Currently the take-up of LLU services in Ireland is below the EU average while the price for LLU is well above the EU average. To ensure that Ireland catches up with other EU countries, it is important that this vital platform for a competitive environment is encouraged and developed through a regulatory framework that ensures access to LLU and SLU at competitive prices. ComReg believes that once this occurs, OAOs will commit investment to develop their businesses and their networks, in particular broadband related infrastructure and services. The benefits of this to businesses and consumers should give rise to a greater variety of services, more service providers, more innovative service offerings and more competitive prices.
- 2.5 This consultation document is concerned with the charge for a fully unbundled loop, that is, where an OAO rents the entire local loop. The charge for the service whereby the OAO rents only high speed frequencies (known as LLU Line Share) is being consulted upon separately, in Consultation Document No. 08/106<sup>4</sup>.
- 2.6 In ComReg Document No. 08/56, ComReg consulted on a range of options open to ComReg when assessing the cost of providing LLU services in Ireland and what an appropriate pricing methodology might be for the setting of LLU prices. ComReg received seven responses to that consultation.
- 2.7 This document contains a summary of these responses and ComReg's preliminary conclusions on what is considered to be the most appropriate approach in relation to cost modelling for LLU and SLU (Section 3). The preliminary conclusion set out in this document is that the use of a bottom up long run incremental cost ("BU-

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<sup>3</sup> SMP is equivalent to a position of dominance in competition law terms.

<sup>4</sup> Rental Price for Shared Access to the Unbundled Local Loop, dated 23 December 2008.

LRAIC”) modelling approach, while taking into account the actual costs incurred on a historical cost basis by the incumbent (Eircom), is appropriate.

- 2.8 Section 4 of this document outlines the detailed modelling process in relation to Eircom’s copper access network, which commenced in late 2007. Ultimately, ComReg has developed a BU-LRAIC model which provides the basis for determining a cost, per line per month, for providing LLU and SLU in Ireland.
- 2.9 Section 5 of this document consults further on an appropriate pricing methodology. ComReg’s pricing proposals are based on a weighting exercise that applies different but proportionate weightings to the probability that OAOs are unlikely to unbundle a certain number of exchanges via direct investment in LLU and SLU and the remaining exchanges via indirect investment in the timeframe of this review. While all existing lines built over the years by Eircom will contribute to the prices proposed for LLU and SLU, the overall price is reduced by this proportionate weighting exercise so as to ensure that OAOs do not pay in excess of the service being provided and that Eircom does not over recover costs. Section 5 also proposes actual monthly rental charges for LLU and SLU. The proposed monthly rental charges per line have been determined as €12.18 for LLU and €9.79 for SLU.
- 2.10 Also included in this document are further questions for consultation relating to the modelling process.
- 2.11 ComReg believes that its proposed approach in relation to LLU and SLU pricing should stimulate necessary and further investment in infrastructure in Ireland (in particular broadband). In addition, its approach should promote competition while providing a reasonable rate of return to Eircom on its investments in the copper access network for the provision of access to its copper network. ComReg believes that its proposed measures, if made final and implemented, will have significant potential to benefit consumers in the medium to long term, through increased innovation, choice and lower prices.
- 2.12 ComReg also believes that the proposals set out in this document are consistent with national policy objectives.

### 3 Local Loop Unbundling Pricing Methodologies

#### Introduction

- 3.1 ComReg Consultation Document No. 08/56, published on 10 July 2008 outlined its proposals for LLU pricing methodologies.
- 3.2 ComReg received 7 responses to this consultation. These respondents were:
  - Eircom Limited (“Eircom”);
  - Smart Telecom Holdings Limited (“Smart”);
  - Vodafone Ireland Limited (“Vodafone”);
  - BT Communications Ireland Limited (“BT”);
  - UPC Ireland (“UPC”);
  - Magnet Networks Limited (“Magnet”); and
  - Irish Farmers Association (“IFA”).
- 3.3 Their responses are analysed in the following sections below.
- 3.4 This section is subdivided into the following two main areas:
  - 3.4.1 Analysis of general comments and views raised by respondents and ComReg’s response and preliminary conclusion; and
  - 3.4.2 Analysis of the views of the respondents to the individual questions and ComReg’s position and preliminary conclusion on each.

#### General Views and Comments Raised by Respondents and ComReg’s Response

- 3.5 Of the seven respondents, four submitted general views and comments to the consultation document. These were:
  - UPC;
  - Magnet;
  - IFA; and
  - Eircom.
- 3.6 Of these respondents Eircom and Magnet also submitted responses to individual questions.
- 3.7 **UPC General Views**
- 3.8 UPC underlined that while LLU has contributed to the increased broadband penetration rate in Ireland, alternative infrastructure also played a role.
- 3.9 UPC requested that ComReg be mindful that any new pricing regime did not undermine competition or continued investment by alternative network providers in infrastructure. If regulatory intervention reduced an operator’s ability to recover investment costs this may affect the operator’s future investments.
- 3.10 ComReg note the point made by UPC and this has been further considered as part of this consultation document and indeed throughout the modelling exercise.

### 3.11 Magnet General Views

- 3.12 In Magnet's view, although the development of the LLU market had been slow, there was still an opportunity in the medium term for companies who have invested in LLU. In general, it supported the arguments made in Consultation 08/56.
- 3.13 Magnet highlighted that it currently installs fibre to homes through exchanges which are also currently unbundled. In its view there is no direct correlation between LLU and alternative infrastructure. It argued that ComReg should seek to achieve the lowest cost possible for LLU without regard to the theoretical impact of alternative infrastructure.
- 3.14 ComReg, in section 3 of Consultation Document No. 08/56, highlighted that both cable and Fixed Wireless Access ("FWA") offer a high level of broadband coverage throughout Ireland. ComReg is of the preliminary view that failure to take account of the investment in these alternative infrastructure in providing service not only where copper is the primary method of providing broadband, but also where copper is found not to be suitable due to its technical limitations could adversely affect this investment. The installation of fibre, in the first instance, is more likely, to take place in those exchanges which operators view as being economically viable and have assessed as part of a business case.
- 3.15 As articulated in paragraph 3.6 of Consultation Document No. 08/56 ComReg, therefore remains of the view that:

"If the level of LLU prices is very low, there is a risk that the competitiveness of these operators based on alternative infrastructures could be unfairly impacted, as would their incentives to invest in alternative technologies. In contrast, a high LLU price would deter the take-up of LLU and increase the risk of inefficient duplication of infrastructure."

### 3.16 IFA General Views

- 3.17 While it supported the need to reduce telecommunication costs, the IFA was very concerned that ComReg's proposals would result in lower prices in urban and more densely populated areas and as a corollary, higher prices in less populated or rural areas.
- 3.18 ComReg would like to highlight that the current LLU monthly rental charge is one single national wholesale charge and indeed, ComReg's current preliminary views involve the retention of a single wholesale charge for LLU irrespective of the geographic location of its customers. Please refer also to ComReg's response to Question 10.

### 3.19 Eircom General Views

- 3.20 Eircom considered that the objective of the consultation proposed by ComReg was unclear as in its view, ComReg had already decided upon the methodology to be used. Moreover, according to Eircom, ComReg has built an LLU cost model (which indicates that a methodology has been selected) and then consulted in Consultation Document No.08/56 on the methodology underpinning this model. Given that ComReg has built the model, Eircom questioned the goal of Consultation Document No. 08/56.

- 3.21 In response to Eircom's concerns regarding the methodology selection process, ComReg would like to make it clear that the methodology and approach had not already been concluded prior to the consultation process. ComReg would underline that the approach proposed in Consultation Document No. 08/56 and (indeed in this document) is still not conclusive and may be subject to change, pending the responses received. All available and practical options were and remain open for consideration.
- 3.22 Eircom further stated that no choice of methodology could be taken without completing the Wholesale Physical Network Infrastructure Access ("WPNIA") (formerly Wholesale Unbundled Access ("WUA")) market analysis first. It submitted that issues relating to market definition, market analysis and the justification of remedies for LLU must be considered and it is inappropriate for ComReg to "prejudge" the outcome of the market analysis. It was of the view that ComReg's proposals were incompatible with the obligation of cost orientation imposed in relation to a market which was national in scope. It concluded that the methodologies proposed in Consultation Document No. 08/56 and the completion of a new BU model, strongly suggested that ComReg had prejudged both the outcome of the WPNIA consultation and Consultation Document No. 08/56.
- 3.23 In response to Eircom's concerns regarding the timing of the WPNIA market analysis, ComReg would stress that Eircom has SMP in the market for LLU, by virtue of ComReg Decision No. D8/04<sup>5</sup>. Eircom will continue to have SMP until such time as ComReg determines that it no longer has SMP, following a market analysis. Please refer to Appendix D for further details.
- 3.24 Further, at the time of publication of Consultation Document No. 08/56, ComReg had published Consultation Document No. 08/41<sup>6</sup> which had stated that it was ComReg's preliminary view that Eircom still had SMP in the WPNIA market.
- 3.25 On 23 December 2008, ComReg notified the WPNIA market analysis to the European Commission as required by legislation. The European Commission did not exercise its right of veto and in all material respects agreed with ComReg's preliminary findings.
- 3.26 Given that Eircom has SMP, postponing a consultation on the various methodologies would have resulted in unnecessary delay to the overall LLU price review and consultation process. Accordingly ComReg saw fit to consult on the most suitable LLU pricing methodologies. The need to consult also arises from:
- the fact that the current LLU price regime expired in December 2007;
  - the slow take up of LLU in Ireland to date (only 22,652<sup>7</sup> local loops unbundled); and

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<sup>5</sup> ComReg Document 04/70: Market Analysis: Wholesale Unbundled Access (including Shared Access) to Metallic Loops and Sub Loops; published on 15 June 2004.

<sup>6</sup> ComReg Document 08/41: Market Analysis: Wholesale Unbundled Access; published on 11 June 2008.

<sup>7</sup> ComReg Document 09/17: Quarterly Key Data Report – Data as at Q4 2008; published on 19 March 2009.

- delaying the consultation would ultimately have represented an unacceptable delay and would have led to uncertainty in the marketplace.

3.27 Eircom also noted that a Regulatory Impact Assessment (“RIA”) had not been completed.

3.28 In response to Eircom’s claim that ComReg has not conducted a RIA, ComReg notes that Consultation Document No. 08/56 outlined proposals for consideration as part of the LLU price review. This consultation sets out ComReg’s preliminary views in this regard. To summarise the proposals and possible implications of same, ComReg has carried out a Regulatory Impact Assessment (“RIA”) in Section 7 which summarises the key considerations in arriving at the costing proposals.

Questions posed in Consultation Document No. 08/56

3.29 The following sections detail the views of respondents in relation to the various consultation questions set out in Consultation Document No. 08/56 and provide ComReg’s preliminary views in relation to each of these questions.

Consultation Question 1

<b>Do you agree or disagree that there are only four possible methodologies [...] for the setting of cost oriented LLU prices? Please explain your response in detail.</b>
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View of Respondents

3.30 Of the seven respondents to Consultation Document No. 08/56, two did not offer any specific views or opinions in relation to this question. They were:

- UPC; and
- IFA.

3.31 Of the remaining five respondents, four agreed with ComReg’s preliminary views. They were:

- Magnet;
- Smart;
- BT; and
- Vodafone.

3.32 Of the four respondents who agreed, **BT** suggested that there were other possible methodologies which could be considered but that Long Run Incremental Cost was the most widely understood methodologies and therefore, BT accepted ComReg’s preliminary view.

3.33 Neither **Smart, Magnet or Vodafone**, while agreeing with ComReg expanded upon their responses.

3.34 **Eircom**, who appeared to accept much of the underlying theoretical concepts that ComReg utilised to inform its modelling work, disagreed with some of the more specific ways in which those concepts are proposed to be applied (this disagreement is discussed in more detail in relation to Question 2 below).

## ComReg's Preliminary Views in relation to Question 1

3.35 ComReg notes the general acceptance of its view that the principle approaches to setting cost oriented prices are:

- Historical Cost Accounts (“HCA”);
- Current Cost Accounts (“CCA”);
- Top Down Long Run Average Incremental Costs (“TD-LRAIC”); and
- Bottom Up Long Run Average Incremental Costs (“BU-LRAIC”).

## Consultation Question 2

**Which of the 4 possible methodologies for the setting of cost oriented LLU prices would you recommend, (a) HCA, (b) CCA, (c) TD LRAIC or (d) BU-LRAIC, to be the most appropriate methodology for ComReg to use as part of the modelling exercise of the Eircom Access Network? Please explain your response in detail.**

### View of Respondents

3.36 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.37 Of the four respondents, other than Eircom, Magnet, Vodafone, BT, and Smart each considered BU-LRAIC to be the most appropriate methodology, however, three qualified their responses. The following sections summarise these four responses.

3.38 **Magnet** stated that HCA was unsuitable, the reliability of CCA information could be questionable and TD-LRAIC had inbuilt inefficiencies of the incumbent. It considered that BU-LRAIC was the most suitable as it was the most efficient, allowed the incumbent to recover its costs and because the use of the incumbent's accounting records was not required.

3.39 **Vodafone**, while agreeing with the use of BU-LRAIC, stated that ComReg must have due regard to the possibility that the engineering rules applied in the model may be “over-engineered” and would not reflect reality. It considered that the development of BU-LRAIC and TD-CCA models would address this issue. However, it acknowledged that as the incumbent currently does not prepare CCA accounts for the access network, that this reconciliation is not possible. The use of a BU-LRAIC model is appropriate in these circumstances, but particular care must be given to the engineering rules employed. The preparation of access CCA accounts should be considered in the future, to enable a reconciliation of BU-LRAIC and TD-CCA methodologies; which could be used to determine regulated prices in future reviews.

3.40 **BT** stated that HCA accounts were inappropriate as they do not reflect a competitive market and offer no incentive to achieve efficiencies. Some of the drawbacks of HCA can be addressed by CCA. However, CCA are not currently prepared by Eircom. It stated that it would normally advocate the use of TD models, but that it understood it was difficult for ComReg to undertake these. It supported the use of

BU-LRAIC models but stressed the difficulties of ensuring a balance between an efficient, optimal network design and reality. These difficulties could be compounded by unforeseen or inaccurately estimated circumstances and it cited the example of the introduction of Next Generation Access (“NGA”).

- 3.41 **Smart** stated that BU-LRAIC contained up to date technologies and efficient costs.
- 3.42 **Eircom** advanced the following arguments in its disagreement with ComReg in relation to Questions 1, 2 and 3.
- 3.43 In its view, ComReg had already predetermined the methodology that was to be adopted. The wording of Question 3 it said reinforced this view.
- 3.44 It generally agreed that there were three areas which should be assessed when devising a model for cost oriented prices; the valuation of assets, the type of cost model to be used; and the accounting methodology.
- 3.45 Eircom agreed that current costs are the most appropriate for use in the current context.
- 3.46 Eircom discussed the merits and risks associated with BU models. It also pointed to the potential regulatory uncertainty that can arise due to the introduction of a new costing model. It suggested that ComReg should refrain from using a BU model in isolation but rather should use a BU model that is populated using TD cost data appropriately adjusted.
- 3.47 In relation to the selection of an accounting methodology, Eircom detailed its views in relation to the differing methodologies.
- 3.48 Moreover, Eircom also argued that it was not necessary (or necessarily desirable) to force an explicit choice between the four theoretical approaches identified by ComReg. Rather, Eircom expressed the view that the different approaches could be complementary and particularly, where BU modelling was being used, the simultaneous application of a TD model represented an important cross-check to validate the results.
- 3.49 According to Eircom, this view is supported by the European Court of Justice (“ECJ”) judgement in the *Arcor AG & Co. KG v Federal Republic of Germany on 24 April 2008, C-55/06 (“Arcor2)*, which implies that ComReg must engage in TD modelling to validate its BU results, before imposing a pricing obligation.
- 3.50 Eircom commented that ComReg’s preferred option was BU-LRAIC and this option was supported by the fact that CCA accounts are not currently prepared by the incumbent. The lack of CCA accounts therefore meant that TD-LRAIC information was not available in a timely manner for the current LLU price review and that time and effort to produce them would be prohibitive. It considered that ComReg’s point of view was misleading. Eircom argued that it would be possible to calculate many of the CCA costs of the access network based on CCA costs already derived for the core network. It further stated that the exception to this was the cost of the copper access cables, for which it considered a CCA valuation could be derived within the timeframe of the current review.
- 3.51 Eircom further argued that the introduction of a new model, to replace a model which has been used for a relatively short period of time (when compared to the long economic life of infrastructure assets) can cause regulatory uncertainty. According

to Eircom, this is particularly the case where the new model is radically different from the model currently in use. It did not agree with ComReg that the model being proposed by it is simply an update of the current model and contended that the resulting regulatory uncertainty would distort market outcomes, investment decisions and ultimately be to the detriment of consumers.

#### ComReg's Preliminary View in relation to Question 2

- 3.52 Having considered the views of respondents, it is ComReg's preliminary view that in principle, BU-LRAIC would be the most appropriate methodology to use as part of the modelling exercise of the Eircom access network, while taking into account the actual costs incurred by Eircom because:
- 3.52.1 A BU model creates the most efficient access network that a new entrant would construct upon entering a market, taking account of the most up to date engineering rules and cost data of Eircom. ComReg agrees that the model should not be unrealistic and for this reason has used a "scorched node" approach which to a large extent reflects Eircom's actual network topography. In addition, ComReg has incorporated significant amounts of Eircom's data into the model.
- 3.52.2 In ComReg's assessment, a BU model provides efficient incentives for alternative platform providers, the incumbent, and potential new entrants to appropriately invest in infrastructure and ensures that the incumbent recovers its efficient costs together with a reasonable rate of return.
- 3.52.3 The use of BU models, especially in the manner implemented by ComReg, is in ComReg's view, consistent with the principles outlined in the ECJ judgment in the *Arcor* case.
- 3.53 ComReg has considered the remaining three methodologies but they have been assessed and appear inappropriate in this context for the purpose of deriving the monthly rental charges for LLU and SLU. This has been discussed in detail in the sections below.
- 3.54 For the reasons set out in Consultation Document No. 08/56, ComReg is still not of the view that FDC HCA represents an appropriate basis on which to set regulated prices – a view that seems to be the accepted consensus of the respondents. The reason is that historic data, may, in many cases be very old, that prices may have changed materially and that incorrect price signals would likely be sent.
- 3.55 Similarly, TD-LRAIC seems inappropriate in this context because Eircom's current network was built in piecemeal over many years and as such has, in common with many other former state owned monopolies, inherited legacy inefficiencies. These legacy issues are often not representative of current engineering rules employed in developing a network. ComReg is of the opinion that the calculation of any efficiency adjustment to compensate for legacy issues would be problematic and difficult to quantify. Absent such an adjustment, prices would very likely be excessively high, in the sense that they would be higher than what a competitive market would deliver.
- 3.56 ComReg is of the preliminary view that FDC CCA may be appropriate for the following reasons:

- 3.56.1 It takes account of the current costs that would be incurred by an operator upon entering a market.
- 3.56.2 It uses actual financial data of the operator as the basis for cost calculation.
- 3.57 Eircom's response to Consultation Document No. 08/56 claimed that, although the required information to apply CCA is not currently available, it should be possible to address this matter within the timeframe of the review. However, from its review to date and a separate review in relation to accounting separation, ComReg believes that Eircom cannot produce the required audited CCA information within a reasonable timeframe. It should be noted that the current format of the HCAs offers little granularity in respect of the access network since the accounts were designed primarily to provide information in respect of other services. In any event, as already noted, the HCA accounts are based solely upon Eircom's historical data and do not reflect any efficiency adjustments. CCA accounts are not prepared at all for the access network. ComReg is of the view that such a task would present a considerable challenge if it is to be done with any degree of granularity and proposes to address this issue in a separate consultation. A final difficulty is that while it may be possible to construct CCA accounts for the access network in the future, great care will need to be taken to ensure that they are sufficiently transparent and that cost allocations are sufficiently well understood for regulatory pricing purposes. This has not always been the case in the past with respect to other regulated services. In conclusion, it does not appear possible to have the required CCA data, at the required level of granularity for the entire access network at this time.
- 3.58 A further difficulty with CCA accounting is the requirement for efficiency adjustments, an issue which also poses significant difficulties. Aside from these issues of appropriate cost modelling, ComReg notes Eircom's concerns in relation to:
- 3.58.1 what it perceives to be the subjective and theoretical nature of building cost models;
- 3.58.2 regulatory uncertainty created by the adoption of a new cost model part of the way through the life-time of existing assets; and
- 3.58.3 ComReg's decision to focus on a BU approach to the modelling.
- 3.59 Indeed, it was partly in recognition of the first of these potential concerns that ComReg engaged in a highly detailed process with Eircom in relation to the modelling work; a process that has been undertaken over a period of almost two years. During this process, ComReg carried out a number of practical exercises which compared model outputs with experience on the ground. This was done in order to understand why a theoretical model might illustrate different network architecture to what may have been built several years ago and why operating costs might be higher for an old network, when compared to a newly built capitalised network.
- 3.60 In relation to Eircom's point regarding the regulatory uncertainty posed by the introduction of new models, ComReg points out that the model is simply a new version of the model but both existing prices and the new proposed prices are based on BU-LRAIC principles. ComReg recognises that a degree of uncertainty is inherent to the introduction of a new approach to price setting. However, as set out in the RIA, ComReg considers that the downsides of this potential uncertainty are outweighed by the benefits arising from achieving an appropriate and cost-orientated

LLU price. Moreover, ComReg notes that the incremental approach proposed by Eircom may actually have the effect of extending the period of regulatory uncertainty.

- 3.61 Finally, the majority of Eircom's comments relate to its contention that ComReg should either have adopted a TD modelling approach, or that if a BU approach were to be used, then it should be complemented with a TD cross-check. Eircom goes on to claim that the utilisation of a BU model without such a cross-check would not be consistent with the *Arcor* judgement.
- 3.62 The first point to note is that the existing model, substantially designed by Eircom, adopts a BU approach and, accordingly ComReg's updating does not represent a radical change from the status-quo. In addition, ComReg has, where feasible and appropriate, constructed the new version of the model using Eircom's own cost data and engineering rules
- 3.63 Moreover, ComReg notes that Eircom has not made any alternative proposals during the past two years in relation to a TD model. For example, it was noted as part of the review that it was difficult, given the time constraints, to obtain a granular level of information on the actual operating costs and indirect capital costs of LLU, from Eircom. As an alternative, Eircom decided to build a version of a BU model of the operating costs of a new efficient operator. The details of this part of the review are set out in Section 4 of this document.
- 3.64 In response to Eircom's assertions regarding the use of BU modelling, the ECJ judgement in relation to the *Arcor* case recommended the use of actual data wherever possible to cross check the results of theoretical models.
- 3.65 There are some significant practical difficulties with doing that in this case but, nevertheless, ComReg has undertaken such cross-checks where they are feasible and proportionate.
- 3.66 In this regard, ComReg has compared the model predictions to various features of Eircom's current networks such as the length of trenches, number of drop points, and so forth. When these comparisons were undertaken at a national level, the results proved rather conservative, in that the model forecast slightly higher asset numbers than would be expected and indeed, proved to be more accurate than the existing model used to set LLU prices.
- 3.67 In addition to this, ComReg has undertaken a number of practical steps to ensure that its approach is consistent with the *Arcor* case. At all times during the process, ComReg has been mindful to ensure that the resulting LLU monthly rental charge from this review process can be determined as much as possible using actual costs and data where relevant and possible. For example, ComReg has taken utmost account of the following:
  - 3.67.1 Assessed infrastructure physically in/on the ground in cities/towns/villages to compare the model predictions with actual infrastructure deployment;
  - 3.67.2 Requested the engineering rules from Eircom and used these where appropriate in the model built;
  - 3.67.3 Visited a number of Eircom exchange sites, villages and towns in order to gain a deeper understanding of the practical application of those rules;

- 3.67.4 Where the engineering rules of Eircom have not been used these have been fully explained to Eircom;
- 3.67.5 Utilising of appropriate actual capital cost, operating cost data and indirect capital cost data of Eircom in the cost modelling;
- 3.67.6 Spent a significant amount of time, through workshops with Eircom staff, to gain an understanding of the practical implications of building an access network in Ireland;
- 3.67.7 Gained an understanding of the significant differences between building an access network in Ireland against that experienced in other countries;
- 3.67.8 Requested network maps from Eircom so as to understand engineering rules used over the years and compare them with up to date engineering rules; and
- 3.67.9 Considered a Dot Econ Report prepared by Eircom for the purpose of understanding why Ireland is more expensive than most other countries when providing fixed lines<sup>8</sup>. It should be noted however that this exercise carried out by Eircom, independently of this project, has not been reviewed in detail by ComReg. Nevertheless, Dot Econ's conclusions appear to be broadly consistent with ComReg's.

### Consultation Question 3

**Do you agree or disagree that the two possible methodologies for setting the monthly LLU rental charge, in Ireland, are CCA or BU-LRAIC? Please explain your response in detail.**

#### View of Respondents

- 3.68 Two of the seven respondents did not offer any specific views or opinions on this question. They were:
  - UPC; and
  - IFA.
- 3.69 Of the remaining five respondents, **Eircom** included its overall views and comments with its answers to Questions 1 and 2.
- 3.70 Four of the respondents (**BT, Magnet, Smart and Vodafone**) believed that either CCA or BU-LRAIC were the two possible methods for setting the monthly LLU charge in Ireland.
- 3.71 Of these four respondents **BT** stated that the absence of CCA accounts for the access network presented a serious difficulty and prevented the use of a TD-LRAIC model. BT noted that this absence should be addressed by ComReg in any future review of the accounting separation obligation. It concluded with its support for a BU-LRAIC approach in the current circumstances.
- 3.72 The remaining three operators (Magnet, Smart, and Vodafone) all believed that the two available options to setting monthly LLU charges in Ireland were CCA or BU-LRAIC.

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<sup>8</sup> [http://www.broadbandatoz.ie/dynamic/File/DotEcon\\_Phase\\_2\\_Presentation\\_ComReg.ppt#1](http://www.broadbandatoz.ie/dynamic/File/DotEcon_Phase_2_Presentation_ComReg.ppt#1)

### ComReg's Preliminary Views in relation to Question 3

- 3.73 Having considered the views of respondents, ComReg remains of the preliminary view that the only two possible methods for setting the monthly LLU rental charge in Ireland would appear to be either CCA or BU-LRAIC.
- 3.74 As highlighted in ComReg's response to Question 2, while acknowledging the merits of CCA, ComReg has detailed that it is not currently possible to implement in Ireland due to the current absence of the required CCA accounts at the required level of granularity.
- 3.75 In its deliberations, ComReg also considered the presence of alternative infrastructure in Ireland; please refer to Section 3.14 for further discussion. In considering such alternative infrastructure, ComReg made reference in Consultation Document No.08/56 to the opinion of the Advocate General in the *Arcor* case to the effect that:
- *Where there is no risk of deterring investment in alternative technologies, the net replacement costs and the data from the accounting system of the operator should be used (i.e. CCA methodology); and*
  - *Where such a risk arises, the combination of asset valuation at their GRC and of analytical cost models can be used (i.e. BU-LRAIC methodology)*
- 3.76 As a result, it would appear that BU-LRAIC is the most appropriate approach that is open to ComReg for the current review, given the possible risk of deterring investment in alternative technologies and the absence of the required CCA information. Please refer also to ComReg's response to Question 2 and Questions 4 and 5, where ComReg has set the European context in relation to the selection of a cost model.

### Consultation Question 4

**Do you agree or disagree with the summary as set out above [...] in relation to the methodologies used in EU15 countries for the purpose of setting cost-oriented LLU prices? If not, please explain why. If there is any additional information which should be brought to ComReg's attention and you are aware of it, please include it in a detailed response.**

### View of Respondents

- 3.77 Of the seven respondents three did not offer views or opinions on this question. They were:
- UPC;
  - IFA; and
  - Vodafone.
- 3.78 Two respondents (Magnet and Smart) agreed with ComReg's assessment. However, **Smart** noted that there was no single solution as each country has different levels of competition, government policy and state intervention.
- 3.79 **Magnet** commented that it was not aware of the methodologies used in other countries and therefore, agreed with ComReg's assessment.

- 3.80 **BT** neither agreed nor disagreed with ComReg's assessment and cautioned against making a comparative summary.
- 3.81 **Eircom** combined its responses to Questions 4, 5, and 6. Although Eircom raised one or two specific questions on the detail of ComReg's summary of the methodologies, the majority of its comments relate to the rationale for undertaking such a study. In particular, Eircom highlights its concern that ComReg is inappropriately utilising the study to justify a BU-LRAIC approach and that it should have started with a generalised analysis of the current state of competition in the relevant market.
- 3.82 Eircom also disagrees with ComReg's finding that countries where entrants collectively account for more than 25% of the broadband market typically adopt a BU-LRAIC approach. Eircom states that it would be more meaningful to compare the costing methodology with the proportion of houses covered by cable networks which, it claims, provides a better insight into the state of competition in a given jurisdiction.

#### ComReg's Preliminary Views in relation to Question 4

- 3.83 ComReg used this section of Consultation Document No. 08/56 to outline the European context. It was never ComReg's intention, as is implied in Eircom's response to Consultation Document No. 08/56, to use European comparisons to set an LLU rental charge in Ireland. It was purely providing details of the costing methodologies that have been employed by other European National Regulatory Authorities ("NRAs"), while also looking at investment in alternative infrastructure in these countries.
- 3.84 ComReg's focus is on the Irish context. However, it is essential that ComReg is cognisant of the cost methodologies employed in the EU15 to enable it to make comparisons where appropriate and relevant to costing methodologies employed and to the roll out of LLU and alternative infrastructure in these countries.
- 3.85 ComReg acknowledges both Eircom and Smart's point that local circumstances must be taken into account when assessing and comparing methodologies used in the EU15. In considering the various methodologies, ComReg has assessed them with particular reference to alternative investment in infrastructure in Ireland, as well as the adoption of the findings in the *Arcor* case.
- 3.86 However, ComReg does not accept Eircom's claim that the purpose of the study was to justify a pre-existing decision. ComReg would underline that the approach put forward in this document is still not conclusive and may be subject to change pending the responses received. All available and practical options were and remain open for consideration.
- 3.87 ComReg also acknowledges Eircom's concern over the approach that led ComReg to draw the general observation that regulators appear to have adopted a BU-LRAIC approach where alternative access networks represent more than 25% of the broadband market. However, to carry out a BU-LRAIC model in just these areas covered by that infrastructure would be problematic and ComReg believes that the approach proposed in this paper is more robust.
- 3.88 However, ComReg considers that its assessment of the overall methodologies for the setting of cost oriented prices in Europe is appropriate and reasonable. While it acknowledges that there are local variations between countries impacting how they

assess alternative infrastructure and its potential impact upon LLU, ComReg considers that its general observations remain valid.

- 3.89 Eircom states that in each country utilising a BU model, there was insufficient data available to undertake a TD approach. As stated in our response to Question 2 ComReg considers that there is not sufficiently robust information available to undertake a TD approach in Ireland. Indeed, as discussed in our response to Question 2, Eircom has not made any proposals in the last two years for an appropriate TD model and, when ComReg requested information from Eircom that might have assisted in the construction of such a model for operating expenditure, it proved extremely difficult to obtain.

#### Consultation Question 5

**Do you agree with the proposition that, in general, where there is evidence that operators with their own alternative local loops (cable, FWA, etc.) have made, or have plans to make significant investments, that the preferred methodology in the EU 15 is BU-LRAIC? Please explain your response in detail.**

#### View of Respondents

- 3.90 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

- 3.91 Of the remaining five respondents, both **Smart** and **Vodafone** agreed with ComReg's assessment.

- 3.92 Smart also stated that a BU model enabled the incumbent to recover its investment and to continue maintaining its network.

- 3.93 **Magnet** neither agreed nor disagreed with ComReg's position and highlighted ComReg's acknowledgment in Consultation Document No. 08/56 that not all of the EU 15 fit this proposition.

- 3.94 **BT** combined its comments to Question 5 with those of Questions 6 and 7.

- 3.95 **BT** in its comments, stated that it would prefer a single methodology across the entire network. It pointed to the risks and complications associated with imposing variable methodologies which changed according to perceptions of potential competition.

- 3.96 While both TD and BU models have merits in BT's view, it restated its earlier preference for CCA accounts but acknowledged the absence of such information.

- 3.97 **Eircom** did not agree with ComReg's assessment and included its overall views and comments with its answers to Questions 4 and 6.

#### ComReg's Preliminary Views in relation to Question 5

- 3.98 Having reviewed the responses received, ComReg remains of the preliminary view that where there is evidence that operators, with their own alternative cable have

made or have plans to make significant investments<sup>9</sup>, the preferred methodology in the EU15 is BU-LRAIC. While Fixed Wireless Access (“FWA”) is available as an alternative local loop, to date the investment in FWA has not been as significant as the investment in cable, in Ireland.

3.99 In relation to BT’s comments, as noted in its position in relation to Question 2, ComReg would like to emphasise that it is proposing one methodology for the entire capital access network, namely BU-LRAIC. ComReg has performed the BU / TD reconciliation where possible. However, as previously stated, because audited CCA accounts, at the required level of granularity, are not prepared by Eircom for the copper access network a full TD reconciliation is not possible.

3.100 As stated in its response to Question 2, consistent with the ruling in the *Arcor* case, ComReg considers that if there is alternative infrastructure, it must be considered when setting a cost oriented LLU rental charge. If there is alternative infrastructure, BU models provide both sufficient incentives to invest in alternative infrastructure, while allowing the incumbent to recover the cost of its copper access network.

3.101 ComReg notes Magnet’s comments in relation to the non application of BU / CCA by certain countries when assessing the cost of LLU. ComReg is aware of this constraint. ComReg considered this in light of the principles as articulated in the *Arcor* judgement and its assessment of circumstances particular to Ireland. When phrasing the question ComReg included the phrase “*in general*” so as to account for local variations.

#### Consultation Question 6

**Do you agree with the proposition that, in general, where there is evidence that operators based on alternative local loops (cable, FWA, etc.) have not made significant investments to date and have no plans to do so that the preferred methodology in the EU 15 is CCA? Please explain your response in detail.**

#### View of Respondents

3.102 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.103 Of the remaining 5 respondents, both **Smart** and **Vodafone** agreed with ComReg’s assessment.

3.104 **Magnet** referred ComReg to its answer to Question 5 where it neither agreed nor disagreed with ComReg’s position.

3.105 **BT** combined its response to Question 6 with those of Question 5 and 7.

3.106 **Eircom** did not agree with ComReg’s assessment and included its overall views and comments with its answers to Questions 4 and 5 earlier.

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<sup>9</sup> This is evident by a recent announcement by UPC (Cable Operator) that it plans to invest €90m this year in upgrading its network.  
<http://www.siliconrepublic.com/news/article/12855/business/upc-builds-120mbps-ngn>

### ComReg's Preliminary Views in relation to Question 6

3.107 As highlighted earlier, it is essential that ComReg is cognisant of the methodologies employed in the EU15 to enable it to make comparisons to Irish context where appropriate. Having reviewed the responses received, ComReg remains of the preliminary view that the general proposition, where there is evidence to suggest that operators based on alternative local loops have not made significant investment to date and have no plans to do so, the preferred methodology in the EU15 is CCA, where practical.

### Consultation Question 7

**Do you agree or disagree that Option 1 (apply CCA everywhere if alternative infrastructure is not likely to be available in a substantial area) is not appropriate in Ireland given the investment in alternative platforms to date? Please explain your response in detail.**

### View of Respondents

3.108 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.109 **Magnet** did not advance a view on the suggested application of CCA. However, it highlighted the existence of alternative access infrastructure in Ireland.

3.110 Both **Vodafone** and **Smart** agreed with the proposition put forward by ComReg.

3.111 **Smart** noted the existence of alternative infrastructure in Ireland and on this basis dismissed the application of CCA.

3.112 While **Vodafone** agreed with ComReg's analysis, it reinforced its preference for the application of BU-LRAIC.

3.113 **BT** combined its answer to Question 7 with those of Questions 5 and 6 above.

3.114 **Eircom** combined its answers to Questions 7, 8, and 9.

3.115 Eircom disagrees with the premise behind Questions 7, 8 and 9, that the competitive conditions in the market may influence the appropriate costing methodology. In this regard, Eircom make three central points, namely:

- That setting the price on the basis of those exchanges that could reasonably be expected to be unbundled during the period of the price review would lead to an under-recovery of its costs.
- That ComReg has incorrectly interpreted the *Arcor* judgement as supporting its case. In Eircom's view the *Arcor* judgement is more nuanced and, moreover, is not binding on ComReg.
- That the proposed BU-LRAIC model should only be applied where it can be cross-checked against a TD analysis of Eircom's cost data.

### ComReg's Preliminary Views in relation to Question 7

3.116 While ComReg welcomes the general support for its preliminary view that option 1 would not be appropriate given the extent of infrastructure competition in Ireland, it

also notes that Eircom's option differs significantly from that of the other respondents.

3.117 ComReg disagrees with Eircom's assertion that it is inappropriate to take account of competitive market conditions when determining the appropriate costing methodologies. In ComReg's view the costing methodology must strike a balance between a number of factors, (such as the trade-off between ensuring that wholesale prices remain low while providing efficient investment incentives for Eircom and OAOs) which require an assessment of actual and potential competition. To illustrate this point, ComReg notes that Recital 19 of the Access Directive<sup>10</sup> which provides:

*“The imposition by national regulatory authorities of mandated access that increases competition in the short-term should not reduce incentives for competitors to invest in alternative facilities that will secure more competition in the long-term”*

3.118 Moreover, ComReg does not believe that it has misinterpreted the *Arcor* judgement, or placed undue reliance on it in evaluating potential costing methodologies.

3.119 ComReg has addressed Eircom's points on the application of BU-LRAIC and cross-checking in its response to Question 2.

#### Consultation Question 8

**Do you agree or disagree that Option 2 (Apply BU-LRAIC where alternative access infrastructure will probably become available and competitive and apply CCA elsewhere) will most likely lead to geographically de-averaged prices? Please explain your response in detail.**

#### View of Respondents

3.120 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.121 Of the remaining five respondents, four were unsure as to the potential impact of the suggestion. These four respondents were Magnet, Smart, Vodafone, and BT.

3.122 While recognising that option 2 could be a solution, **Magnet** was of the view that its application would deepen any potential urban / rural divide. However, it recognised that it would ensure the lowest cost in the most popular exchanges. Magnet suggested that this option could work in conjunction with an incentive to unbundle the less attractive exchanges.

3.123 **Smart** agreed with ComReg's proposition but caveated that it was very difficult to predict the outcome.

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<sup>10</sup> DIRECTIVE 2002/19/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive).

- 3.124 **Vodafone** was unsure whether or not option 2 would ultimately result in geographic de-averaged prices and noted its concerns regarding de-averaged pricing.
- 3.125 While noting that it was not opposed to de-averaged pricing in principle, **BT** said that a distinction should be made between different methodologies being applied in different areas and a conscious decision to de-average costs based on a specific methodology.
- 3.126 **BT** also recognised the possible conflicts that de-averaged pricing could have with a regulator's objectives. However, if undertaken, in **BT**'s view, it would have to be applied consistently across all wholesale products.
- 3.127 **Eircom** included its response to Question 8 with its combined comments on Questions 7 and 9.

#### ComReg's Preliminary Views in relation to Question 8

- 3.128 Having considered the responses received, ComReg remains of the preliminary view that the application of option 2 could lead to de-averaged wholesale pricing in Ireland which is not a desirable outcome.
- 3.129 In addition, the application of option 2 would in itself prove difficult. **Eircom** would have to produce, not only CCA accounts, but CCA accounts on a geographically de-averaged basis. This basis would be susceptible to change each time there was a price review as OAOs LLU footprints would also be susceptible to change. In ComReg's view this would not be proportionate.
- 3.130 Therefore, ComReg is still of the preliminary view that the application of option 2 is not a viable or reasonable option.

#### Consultation Question 9

**Do you agree or disagree that Option 3 (Apply BU-LRAIC everywhere if it is likely that alternative access infrastructure will become available and competitive everywhere (or almost everywhere)) provides an appropriate incentive for investment in alternative infrastructure? Please explain your response in detail.**

#### View of Respondents

- 3.131 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:
- UPC; and
  - IFA.
- 3.132 Of the remaining five respondents, three were in general agreement with ComReg's assessment of option 3, namely **Smart**, **Vodafone**, and **BT**.
- 3.133 **Smart** agreed with ComReg and commented that this option was broadly in line with its practical experience.
- 3.134 While **Vodafone** agreed with option 3, its agreement was caveated by its response to Question 2.
- 3.135 **BT** was also broadly supportive of option 3 and underlined its preference for the application of a single methodology.

3.136 **Magnet** did not provide a specific response to ComReg's proposition. Instead, it stated its view that alternative infrastructures should not be accounted for when determining how to price LLU and provided an example of its own experience with an unbundled exchange.

3.137 **Eircom** included its response to Question 9 with its combined comments on Questions 7 and 8.

ComReg's Preliminary Views in relation to Question 9

3.138 Having considered the views of respondents, ComReg remains of the preliminary view that option 3 (that is BU-LRAIC solely on a national basis) would represent the most appropriate option to sustain the incentive for investment in alternative infrastructure.

3.139 Please refer also to ComReg's response to Questions 2 and 3.

Consultation Question 10

**Do you agree or disagree that ComReg should calculate the LLU price in accordance with the cost orientation principle taking into account the fact that some lines are more likely than others to be unbundled in the medium term? Please explain your response in detail.**

View of Respondents

3.140 Of the seven respondents two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.141 Of the remaining five respondents, three agreed with ComReg's assessment. These were Magnet, Smart, and Vodafone.

3.142 **Vodafone**, in agreeing with ComReg, stated that the alternative could allow for the over-recovery of costs by the SMP operator and this could ultimately distort competition.

3.143 **BT** referred ComReg to its answer to Question 8.

3.144 **Eircom** strongly disagreed with ComReg's proposal, which in its view is not only subjective, but has not detailed how ComReg would decide which lines are more likely to be unbundled. Equally, according to Eircom, ComReg's proposal "*is at odds with the principle of cost orientation and entirely inconsistent with eircom's current obligation of access*" and with ComReg's own WPNIA consultation.

3.145 In its introduction to its response to Questions 7 to 9, Eircom acknowledges that there should not be an over recovery of costs. However, neither should there be an under recovery of costs. According to Eircom, ComReg's proposal could lead to the latter. It also refers to the French approach to LLU pricing and highlights the existence of a Universal Service Obligation ("USO") fund.

3.146 In Eircom's view, this proposal would ultimately lead to geographically de-averaged retail prices which would directly contradict Government policy on national economic development. It contends that exchanges assessed by OAOs as being uneconomic to unbundle would be the same for Eircom. Therefore, if the LLU

price does not allow the recovery of its costs for the local access network, Eircom would have to reassess its pricing policies to avoid an under-recovery of costs.

- 3.147 Eircom then details how in its view a rural / urban divide would develop for retail customers, as OAOs would target customers in unbundled exchanges in urban areas. In order to compete, Eircom would be forced to review its geographically averaged pricing policy where it can and propose retail offers on a geographical basis.
- 3.148 According to Eircom, even if it maintained its current pricing, it would lose urban customers and the ultimate effect would be that Eircom's remaining rural customer base would have to make up the shortfall via price increases.
- 3.149 Eircom further asserted that ComReg had not considered the potential impact of its proposals in conjunction with The Department of Communications Energy and Natural Resources ("DCENR") plan for a retail price cap on broadband services in rural areas under the National Broadband Scheme ("NBS"). In Eircom's view the implementation of both proposals would mean that the LLU provider successful in the NBS tender could not recover its full economic broadband costs nationally, as it would have to charge below cost in urban areas to compete with other LLU operators while not being able, under NBS rules, to charge a price above the market prevailing rate set in urban areas.
- 3.150 Moreover, this proposal would, in Eircom's view, deter OAOs from unbundling in areas considered unlikely to be unbundled as if they did, the model would have to be updated to reflect the changed assumptions (that is, the increase in the number of lines assessed as likely to be unbundled) and would potentially lead to an increased LLU price.
- 3.151 Eircom then provided its view of the impact at a wholesale level as geographically de-averaged retail prices would result in geographically de-averaged wholesale offers in bitstream and SB-WLR due to the retail minus pricing regimes. It also claimed that leased lines would also be affected and provided an illustrative example.
- 3.152 Finally, Eircom made reference to the UK and France to support its assertions that an urban rural divide would be the inevitable result from ComReg's proposal. In relation to the UK, Eircom stated that the population dispersal between Ireland and the UK is very different, with the result that the ratio of urban – rural lines is also very different. Therefore, Ofcom's exclusion of a small number of lines where LLU might not be economic, which has not resulted in de-averaged prices, has no relevance to Ireland.
- 3.153 Moreover, Eircom dismisses the comparison with France on the grounds that the broadband markets are so different and concludes that in its view the situation in France does not support ComReg's proposal and provided its summary of the decision by ARCEP (the French telecommunications regulator).

#### ComReg's Preliminary Views in relation to Question 10

- 3.154 ComReg is still of the preliminary view that it should calculate the LLU monthly rental charge taking into account the fact that some lines are more likely than others to be unbundled in the medium term.

- 3.155 As set out in the previous Market Analysis on the WUA Market in June 2004 and as outlined in the recent Consultation Document No. 08/41<sup>11</sup> and in the Response to Consultation and Draft Decision Document No. 08/104<sup>12</sup>, ComReg set out that the WPNIA market is national in scope. ComReg’s proposals contained in Consultation Document No. 08/56 are consistent with this view.
- 3.156 ComReg does not consider that OAOs should be required to pay for the cost of lines that they would not be prepared to unbundle due to the length of lines, presence of pair gains, poor copper connections or other economic grounds such as the high cost of backhaul, during the proposed price control period. ComReg’s preliminary view on the significance of these lines (in the context of the overall number of lines) has been informed by Questions 14 and 16.
- 3.157 ComReg’s specific approach is set out in Section 5 of this document but, by way of introduction, ComReg would like to emphasise that it is of the view that NGN coverage plans cannot be considered for defining the areas where lines are more likely to be unbundled. This is because these plans may represent an unrealistic or unreliable indicator, at least within the proposed price control period.
- 3.158 In its response to this question, Eircom raises a number of concerns around the secondary impact of ComReg’s proposals – namely that they would lead to an under-recovery of costs. Eircom goes on to suggest that these costs would need to be recovered in a way that would disadvantage the rural population of Ireland (through higher Wholesale Broadband Access (“WBA”) and leased line charges, for example).
- 3.159 ComReg would like to emphasise that the purpose of this consultation is to set a reasonable price for unbundled assets. If Eircom can demonstrate that the proposed approach would lead to an under-recovery of costs in assets that do not have a realistic probability of being unbundled during the period of this review, then alternative options are available to Eircom including making an application through the USO fund pursuant to an application (with robust supporting evidence) by Eircom. However, ComReg considers that these questions should be addressed in a separate process as they are distinct from the core issue under consideration in this consultation.
- 3.160 As Eircom suggests, similar issues may apply in relation to NBS operators if greater urban competition affects their ability to fund the provision of services in rural areas. ComReg would again stress that this issue is distinct from the question of an efficient and cost oriented LLU price, and therefore, it is more appropriate to address this in a separate process. The NBS scheme was set up by the government through an entirely different independent process to allow for the provision of broadband to very remote areas of the country that were highly unlikely to get broadband through commercial means.
- 3.161 Eircom also noted that ComReg had not indicated by what means it had determined that a line was likely to be unbundled. ComReg would like to stress that it was not intended, in Consultation Document No. 08/56, to set out how an undecided

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<sup>11</sup> Market Analysis: Wholesale Unbundled Access, dated 11 June 2008.

<sup>12</sup> Market Review: Wholesale Physical Network Infrastructure Access (Market 4), Response to Consultation Document 08/41 and Draft Decision, dated 23 December 2008.

methodology would be executed. ComReg will set out its preliminary view as to how the lines could be assessed, having considered the responses received to this question as well as its preliminary view detailed in Section 5.

3.162 It is further claimed by Eircom that the proposed model would lead to de-averaging of retail tariffs because:

3.162.1 Lower LLU prices would stimulate more intense competition in urban areas requiring Eircom to review its urban pricing policy; or

3.162.2 If Eircom maintained a higher, but geographically averaged price, it would be uncompetitive in urban areas, meaning that it would lose market share and therefore, have to recover a higher proportion of network costs from rural customers.

3.163 ComReg would stress that the proposal set out in Consultation Document No. 08/56 and detailed in this document is for a single wholesale price for LLU. This is consistent with other pricing currently in place for WBA, irrespective of the geographic location of its customers. The retail market for broadband is not currently subject to regulation and, as such, retailers are free to set their own retail policy in line with their commercial objectives (subject to general legal requirements). It should also be noted that Eircom is already competing with a wired local loop operator that has deployed its network mostly in the large urban centres. The existence of this operator, for example, has not led Eircom to de-average its broadband prices.

3.164 That aside, ComReg agrees that lower LLU prices may act to stimulate competition in the provision of services and indeed, considers that this would act to enhance consumer welfare. ComReg does not agree with Eircom's second point as the LLU price is set to allow Eircom to recover the costs that it has efficiently incurred when providing access to the areas where it provides LLU infrastructure. In ComReg's view it is highly unlikely that the proposed LLU price would significantly impair Eircom's ability to recover its efficiently incurred costs within the proposed price control period. Moreover, as set out above, ComReg considers that there is an important difference between the determination of the appropriate LLU price and the issue of aggregate cost recovery. Should the LLU price be set such that it would lead to Eircom under recovering its efficient costs, then it may be appropriate to address this through the introduction of a USO fund, although this would have to be considered in the context of the current criteria set out in the USO regulations.

3.165 It is also unclear to ComReg why its proposal would lead to de-averaged retail prices for broadband since, as ComReg has articulated in Document No. 07/104<sup>13</sup>, Eircom currently recovers the cost of the access network through its narrowband services. The input cost ComReg uses in arriving at this conclusion is the BU-LRAIC of the *entire* network based on the 2004 model. (It should be noted that this input cost would not materially change as a result of the completion of the new version of the model). There should therefore be no need for Eircom to recover any part of the cost of the access network via broadband prices.

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<sup>13</sup> ComReg Document No 07/104 – Strategy Statement (2008 – 2010); published on 17 December 2007.

- 3.166 In respect of cost recovery via narrowband access the following observations appear pertinent.
- 3.166.1 Eircom currently recovers its access network in aggregate via narrowband services.
- 3.166.2 Retail prices are currently set on a geographically averaged basis nationally which means that Eircom probably over recovers in densely populated areas but under recovers in aggregate in some rural areas.
- 3.166.3 It is conceivable, that if full unbundling were to be taken up to such a material extent in urban areas leading to lower retail access prices nationally, then, the over recovery in those urban areas, which effectively subsidises some rural areas would diminish (as lines migrated to LLU operators). This could mean that in aggregate, nationally, Eircom would under recover its access network cost.
- 3.166.4 This could mean that a USO fund might be justified although this would have to be considered in the context of the criteria set out in the Universal Service Regulations<sup>14</sup>.
- 3.167 An important point not considered by Eircom is that competitive conditions already vary across Ireland but that this has not yet resulted in de averaged pricing. Broadband over cable and fixed wireless is already widely available in urban areas. No operators using these platforms are required to offer services in more expensive rural areas and for the most part (this is especially true of cable) they do not. If Eircom's assertions were correct one would have expected a move to de-averaged pricing already. In fact this has not happened: the empirical evidence does not support Eircom's view.
- 3.168 Eircom makes the further point that by excluding some exchanges from the cost assessment, ComReg will reduce the incentives for OAOs to unbundle in rural areas because of the risk that this could lead to an increase in the wholesale price. However ComReg notes that none of these exchanges are currently unbundled and it considers it highly unlikely that all these exchanges would be unbundled with the new proposed price. Consequently Eircom's concern is unlikely to have any material impact on roll-out within the proposed price control period.
- 3.169 Finally, in relation to the UK and France, Eircom states that:
- 3.169.1 ComReg's comparison with the UK is not meaningful because of differences in population dispersion; and
- 3.169.2 ARCEP has since rejected the split between urban and rural costs for setting LLU prices in France.
- 3.170 As regards to the UK, ComReg does not consider that differences in population dispersions are relevant to the technical context in which ComReg has regard to the Ofcom decision. ComReg refers to question 14 in this regard.
- 3.171 While Eircom is correct to note that ARCEP no longer draws a distinction between urban and rural costs when setting LLU prices, it is important to be clear why

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<sup>14</sup> S.I. No. 308 of 2003 'European Communities (Electronic Communications Networks and Services) (Universal Service and Users Rights) Regulation 2003.

ARCEP took that decision. According to ARCEP the decision to change the policy resulted from a combination of:

3.171.1 Its observation that an increasing proportion of rural exchanges were being unbundled. ARCEP noted that this was partly attributable to local authority involvement in broadband provision which had improved the economic viability of rural exchanges; and

3.171.2 Concerns over possible double-counting of costs in the context of USO financing.

3.172 Accordingly, ComReg does not consider that the change of policy by ARCEP is relevant to the approach that it is proposing at this time. Moreover, ComReg notes that the amended policy adopted by ARCEP set the LLU price:

3.172.1 “On the basis of an average line cost equal to the line cost for profitable areas”<sup>15</sup> the profitable areas being the profitable universal service areas.

3.173 Since it is likely that the exchanges France Telecom is unable to service profitably are also likely to be unprofitable for OAOs to unbundle, it is ComReg’s view that ARCEP’s approach is still consistent with the approach that ComReg is proposing.

#### Consultation Question 11

**Do you agree or disagree with ComReg’s preliminary view that the “medium term” for LLU should be 2 to 3 years from the date of any decision on LLU pricing?**

#### View of Respondents

3.174 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.175 **Vodafone** considered that the medium term should be 3 years which would give enough time to assess the validity of assumptions made in relation to LLU and alternative infrastructure investment

3.176 **Magnet** did not offer any specific views on what the medium term should be. Instead, Magnet provided its views on the relationship between LLU and alternative infrastructure investment, which is perceived to be mutually exclusive.

3.177 **BT**, while agreeing with ComReg’s suggestion of 2 to 3 years favoured a 4 year period. BT also highlighted its support for price ceilings.

3.178 **Smart** agreed with ComReg’s proposition.

3.179 **Eircom** combined its answers to Question 11 with those of 12, 15 and 17.

3.180 Eircom considered that prices should be set for the medium term and that the relevant market reviews should be carried out every 3 to 4 years. Such an approach would balance the needs of operators for certainty while facilitating technological innovation.

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<sup>15</sup> ARCEP (2005), ‘Consultation on copper-loop costing methods’, Same reasoning has been used in the following Decision from ARCEP n° 05-0834

- 3.181 It further agreed that the LLU price should only be reviewed prior to the expiration of the price control period if there are significant unforeseen circumstances. However, in Eircom's view such a review is only possible if the corrections concern unforeseen circumstances that do not require a market analysis to be carried out. It then provided an example of what, in its view, was an unacceptable circumstance for intervention and required a market review to be completed.
- 3.182 Eircom also pointed out that the proposed review period of 2 to 3 years was inconsistent with its interpretation of the ComReg's Consultation Document No. 08/104. In Eircom's view ComReg provided 5 years guaranteed access before Eircom could upgrade the Access Network for another generation technology.

#### ComReg's Preliminary Views in relation to Question 11

- 3.183 Having considered the views of respondents, ComReg is of the preliminary view that LLU prices should be set for a "medium term" of three years from the effective date of any final decision with a review in year 2.
- 3.184 This would allow for the necessary development of the LLU market and allows OAOs to invest in the infrastructure. During that time OAO's will have an opportunity to invest in their infrastructure, Eircom will have an opportunity to implement efficiencies, and alternative platform providers will also be provided with a level of certainty in relation to LLU market development. ComReg does not intend to intervene prior to year 2 of the proposed three year review period unless exceptional circumstances warrant such an intervention.
- 3.185 ComReg proposes that it would undertake a review of the LLU price in year 2. However, it would not intend to intervene prior to year 2 of the three year review period. In certain exceptional circumstances it might intervene. Examples of exceptional circumstances might be significant changes in underlying costs or price trends or a significant change in working line volumes. Such exceptional circumstances will be reviewed by ComReg on a case by case basis. As previously stated the extent of unbundling in Ireland will also be kept under review and in the unlikely event that an operator or operators unbundle exchanges over the next three years beyond what is envisaged in this proposal, then ComReg will take the necessary action to ensure Eircom recovers the appropriate costs of providing LLU services in those exchanges. As the current economic climate has moved significantly since 2008, ComReg believes this is the most prudent approach.
- 3.186 Finally, in relation to Eircom's interpretation of Consultation Document No. 08/104, ComReg confirmed explicitly in it that there was no intention to rigidly enforce a notice period, in relation to withdrawal of access to facilities. ComReg emphasised in Consultation Document No. 08/104, its intention to apply a notice period in a flexible manner, and to illustrate this, provided examples of the kinds of factors which could be taken into account. This means that while the notice period for withdrawal of access to facilities shall not be less than 5 years, a shorter notice period may be determined.
- 3.187 Please also refer to ComReg's response to Questions 12, 15 and 17.

#### Consultation Question 12

**Do you agree that a price should be specified for the duration of the "medium term"? Please explain your response in detail.**

#### View of Respondents

3.188 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.189 **Eircom** combined its answers to Questions 12 with those of 11, 15 and 17.

3.190 **Smart** agreed with ComReg's proposal and referred to its response to Question 11.

3.191 **Vodafone** agreed with ComReg's proposal and contended that the medium term should be 3 years.

3.192 **Magnet** did not offer a view on what the "medium term" should be. Instead it stated that the price should be set as low as possible and that it should be reviewed annually due to infrastructure rollout and economic and social change.

3.193 **BT** supported the proposal of prices being set for the medium term. It did not specify what this period should be.

#### ComReg's Preliminary Views in relation to Question 12

3.194 As stated in ComReg's response to Question 11, the preliminary conclusion is that the medium term should be for a period of three years from the date of any final decision, with a scheduled review in year 2.

3.195 ComReg would reserve the right to intervene and carry out a review prior to year 2 if, in its view, exceptional circumstances warrant such intervention. This is specifically referred to in ComReg's position in relation to Question 15.

3.196 Please refer also to ComReg's response to Questions 11, 15 and 17.

#### Consultation Question 13

**Do you agree or disagree with ComReg's preliminary preferred option, to calculate the costs by giving x% weighting to those exchange sites which may be unbundled by OAOs and also taking into consideration Eircom's NGN plans and 1-x% weighting to the other exchange sites where unbundling is unlikely to take place? Please explain your response in detail.**

#### View of Respondents

3.197 Of the seven respondents two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.198 **BT** stated that it did not have sufficient knowledge of the relevant information to make an informed response to this question. A key requirement for BT is regulatory certainty and price stability over the medium term. If, as indicated, the incumbent made significant changes to its network then regulation must be in a position to respond appropriately.

- 3.199 **Vodafone** agreed with ComReg's preferred option as the application of a weighting acknowledges the uncertainty surrounding the number of exchanges that could be unbundled.
- 3.200 **Magnet** disagreed with ComReg's proposal on the grounds that Eircom has not released its NGN plans and it underlined that if they have been released; they are only plans and may be unrealistic or unreliable in the timeframe set out.
- 3.201 **Smart** generally supported ComReg's preferred option.
- 3.202 **Eircom** disagreed with ComReg's preferred option. In order to ensure that Eircom does not under recover its costs, it would have to result in two different LLU prices for unbundled/urban areas and rural areas/long loops. Eircom referred to its response to Question 10 where it strongly opposed any proposal to set the cost of LLU which does not account for the entirety of its access network.
- 3.203 It criticised ComReg for not describing in detail its preferred option nor was there an explanation of how x% would be calculated which limited respondents ability to provide a meaningful response.

#### ComReg's Preliminary Views in relation to Question 13

- 3.204 ComReg is still of the preliminary view that it is appropriate to calculate the costs by giving x% weighting to those exchange sites which may be unbundled by OAOs and 1-x% weighting to the other exchange sites where unbundling is unlikely to take place over proposed price control period.
- 3.205 The application of this probability weighting ensures that all the working lines in the BU-LRAIC model contribute to the monthly LLU rental charge.
- 3.206 Consultation Document No. 08/56 sought the views of respondents in relation to the methodology of applying a weighting to exchanges that could be perceived as having a high probability of being unbundled, compared to those exchanges that could be perceived as having a low probability of being unbundled. In this consultation document, having set out its preliminary view that such a weighting is appropriate, ComReg will provide details of its preliminary view as to what x% should represent in Section 5 of this document.
- 3.207 ComReg is of the view that NGN coverage plans cannot be considered for defining the areas where lines are more likely to be unbundled, since these are only plans and may be unrealistic or unreliable with in the proposed price control period. Since the publication of Consultation Document No. 08/56 economic circumstances have changed significantly and proposed NGN plans may have changed and may change in the future depending on circumstances in the coming years.
- 3.208 In relation to Eircom's comments regarding two different prices for urban and rural areas, ComReg points to its response to Question 10 and would again stress that it is proposing a single national wholesale LLU monthly rental charge.

#### Consultation Question 14

**Do you agree or disagree with the proposal to complement ComReg's preliminary preferred option by excluding very long loops, as described under Option C above, where there is no possibility that they could support broadband within the timeframe of this review? Based on your experience in the market, what is the**

**maximum copper line length to support broadband? Please explain your response in detail.**

View of Respondents

3.209 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC;
- IFA

3.210 Of the remaining five responses, four agreed with ComReg's proposal to exclude very long loops.

3.211 **Smart** agreed with ComReg's proposal.

3.212 **BT** considered that DSL can work over copper pairs of up to 6km in length. Beyond 6kms, the usable bit rate drops significantly and the maintenance of synchronisation within the network can be difficult. Future technical progress may make this less of an issue. In principle, BT expressed concern around making adjustments that could induce price volatility.

3.213 **Vodafone** in agreeing with ComReg's proposal to exclude very long loops said it would complement Option B.

3.214 **Magnet**, in agreeing with ComReg's proposal, said that in their experience 3.5km was the maximum length that could support broadband.

3.215 **Eircom** opposed ComReg's proposal to exclude long loops on the basis that they could not support broadband. Unbundled loops can be used for narrowband services. Long loops can also be used for broadband where loop extension equipment is added. It is not clear that the exclusion of long loops can be set without reference to minimum performance targets and the capabilities of emerging technologies.

3.216 According to Eircom, a line's ability to support broadband can depend on a range of possibilities, amongst them line length, cable diameter and the presence of other services on the line.

3.217 Eircom states that it does not use line length when determining if a customer line is capable of supporting either retail broadband or bitstream. Instead, it measures by the attenuation of the line.

3.218 Eircom also referred to its responses to Question 10. It made reference to the French case and highlighted that France Telecom has been compensated by a universal service financing mechanism. Moreover, Eircom claimed that ComReg has failed to address the cost to Eircom of maintaining geographically averaged prices if it were not allowed to recover costs in average.

ComReg's Preliminary Views in relation to Question 14

3.219 ComReg acknowledges that the copper network can support narrowband services as well as broadband. However, as outlined in the introduction of Consultation Document No. 08/56, the ability of OAOs to offer services beyond those restricted to narrowband is an important mechanism for fostering competition.

3.220 In this regard, ComReg notes that there is some disagreement between the respondents over the appropriate line length, with Magnet reporting it to be 3.5km,

whereas Eircom in its submission to the Joint Committee on Communications, Energy, and Natural Resources<sup>16</sup>, stated that:

*“Regardless of which type of copper line is involved, there is a problem if the distance is more than approximately 5 km. The distance from an individual’s home or business is measured not as the crow flies but in terms of how the network runs. After a particular distance, the signal becomes so weak that it does not allow the modem to synchronise up for DSL broadband”*

3.221 ComReg also notes that Ofcom excludes lines in excess of 6.5km for the purposes of its own calculation.

3.222 ComReg considers that a loop length of 5km would take into account the allowable extension to service that the deployment of equipment would allow. While this is less than the 6.5km maximum loop length, as considered by Ofcom, ComReg is of the view that 5km represents an appropriate loop length for Ireland given for example, Eircom’s recent statements to the Joint Oireachtas Committee (quoted above). It also takes into account possible variations in copper quality between Ireland and the United Kingdom.

3.223 ComReg is therefore of the preliminary view that the maximum loop length to be considered for the calculation of the LLU price is 5km.

3.224 Nevertheless, in order to enhance the already conservative nature of its LLU price calculation, ComReg is provisionally planning to include an element of costs associated with long lines, utilising the x% and 1-x% approach that it is proposing in relation to small exchanges, to take into account the probability that some lines, albeit unlikely, may be used by OAOs for the sole purpose of providing voice services. This is unlikely for a number of reasons, namely any OAOs entering exchanges through LLU will be capable of providing voice over their broadband infrastructure, thereby limiting the provision of voice to the available broadband lines. The specific implementation of this approach is set out in Section 5.

#### Consultation Question 15

**Do you agree or disagree that there may be circumstances that might justify the review of the LLU price prior to the expiration of the suggested price control period? Please explain your response in detail.**

#### View of Respondents

3.225 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.226 **Eircom** combined its answers to Question 15 with those of 11, 12, and 17.

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<sup>16</sup>Please refer to

<http://debates.oireachtas.ie/DDebate.aspx?F=MAJ20090311.xml&Node=H2#H2>

for full minutes of this meeting on Wednesday 11 March 2009

- 3.227 The remaining 4 respondents agreed that there were circumstances which might justify the review of the LLU price prior to the expiration of the suggested price control period.
- 3.228 **Smart** agreed with ComReg's proposal, particularly with the lack of clarity in Ireland in relation to Eircom's NGN plans (and in particular its NGA plans).
- 3.229 **Vodafone**, in agreeing with ComReg, suggested that the circumstances should be exceptional and clearly set out prior to the commencement of any price control. It underlined that regulatory certainty was vital in providing operators with certainty with regard to their input costs.
- 3.230 **Magnet** also agreed with ComReg's preliminary conclusion and provided examples of circumstances that in its view could warrant an intervention prior to the cessation of the price control.
- 3.231 **BT** was of the view that any circumstances must be very exceptional. These might include the introduction of NGA. It would be better to set prices correctly at the start and avoid any later intervention.

#### ComReg's Preliminary Views in relation to Question 15

- 3.232 It is ComReg's preliminary view that intervention may be required if exceptional circumstances arise warranting the review of LLU prior to the expiration of the proposed price control period. Examples of these might include the following:
- 3.232.1 Significant changes in underlying costs or price trends; and
- 3.232.2 A significant change in the number of working lines.
- 3.233 Such exceptional circumstances will be reviewed by ComReg on a case by case basis. ComReg's preliminary view remains as set out in its response to Questions 11, 12 and 17 that the LLU monthly rental charge would be set for three years with a review scheduled in year 2. Subject to the type of exceptional circumstances discussed above, ComReg does not anticipate an earlier intervention.
- 3.234 Please refer also to ComReg's response to Questions 11, 12, and 17.

#### Consultation Question 16

**In order for ComReg to make fully informed decisions in relation to the above proposals please provide as much detail as possible on investment plans (i.e. Eircom or where you are an existing operator who has unbundled or have intentions to unbundle), both Core NGN and unbundling by exchange site over the medium term. Please provide both quantitative and qualitative detail where possible. (ComReg acknowledges the commercial sensitivity of this information and all responses will be held in the strictest confidence).**

#### View of Respondents

- 3.235 Of the seven respondents three did not offer any specific views or opinions on this question. They were:
- UPC;
  - IFA; and

- Vodafone.

3.236 **Smart, Magnet, and BT** provided some information with regard to the question above. As these were received by ComReg in confidence they are not discussed or disclosed further.

3.237 **Eircom** in its response to Question 16 did not believe that seeking voluntary comments was an appropriate method for ComReg to collect information.

3.238 Eircom has already provided considerable information to ComReg in relation to its plans for NGN/NGA and will continue to keep it informed.

#### ComReg's Preliminary Views in relation to Question 16

3.239 ComReg would like to thank respondents for the information that was received in response to this question. Given the confidential nature of the submissions made, this information is not discussed further as part of this document.

3.240 As part of its ongoing LLU process, ComReg has met with OAOs and other interested parties in order to establish their commitment to LLU going forward, the criteria that they would use in determining which exchanges to unbundle and any costs (other than the regulated costs) that they would incur. The nature of these discussions is confidential. Given the confidential nature of the submissions made, this information is not discussed further as part of this document. However, while the information provided is helpful it is not fundamental to deriving a cost oriented charge for LLU/SLU.

#### Consultation Question 17

**Do you agree or disagree with ComReg's preliminary view that LLU prices should be set in Ireland for a two to three year period from the effective date of any decision regarding LLU prices? Please explain your response in detail.**

#### View of Respondents

3.241 Of the seven respondents two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.242 **BT** referred ComReg to its response to Question 11.

3.243 **Eircom** combined its answers to Question 17 with those of 11, 12, and 15.

3.244 **Magnet** neither agreed nor disagreed with ComReg's preliminary view. Instead it stated that once the LLU price is set to the lowest rate the market will adjust accordingly.

3.245 **Smart** fully supported the preliminary view.

3.246 **Vodafone** considered that the period should be for three years. This would provide regulatory certainty and would also allow for the achievement of maximum efficiencies for the SMP operator. OAO's and their customers would benefit from improved costs in subsequent price control periods.

### ComReg's Preliminary Views in relation to Question 17

- 3.247 Having considered the views of respondents, as stated in its response to Question 11, ComReg is now of the preliminary view that LLU prices should be set for a "medium term" of three years from the effective date of any final decision with a review in year 2.
- 3.248 It is also ComReg's preliminary view to undertake a review of the LLU price in year 2. However stated in questions 11, 12 and 15, it does not believe that it would be appropriate to intervene prior to year 2 of the three year review but may do so in light of exceptional circumstances. Examples of exceptional circumstances include significant changes in underlying costs or price trends or significant changes in the number of working lines. Such exceptional circumstances would be reviewed by ComReg on a case by case basis as detailed in ComReg's response to Question 15.
- 3.249 Smart, BT and, Vodafone have all expressed the need for certainty in the market place. These respondents have considered that a period of three years is required as a minimum.
- 3.250 Please refer also to ComReg's response to Questions 11, 12 and 15.

### Consultation Question 18

**Do you agree or disagree that LLU prices should be stable over the period of the agreed price control, or should they increase annually by the rate of Consumer Price Index ("CPI")? Are there any other options that ComReg should consider? Please explain your response in detail.**

#### View of respondents

- 3.251 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:
- UPC; and
  - IFA.
- 3.252 In **Smart's** view prices should remain stable for the period, unless CPI exceeded a predefined threshold
- 3.253 **Magnet** referred to its answer to Question 17. It disagreed that the price should be linked to CPI. By not linking it, operators would be assured of certainty in expenditure and budget planning. According to Magnet, OAOs could also budget for investment in alternative infrastructure.
- 3.254 In its response, **BT** underlined that only LLU was subject to CPI increases. While BT agrees with the principle of adjusting prices for inflationary pressures, it does not believe automatic increases are justified and highlights a danger that a CPI plus regime will not incentivise Eircom efficiency. It points to the NGA and NGN rollout and concludes that Eircom could make considerable savings from using a single set of processes to offer equivalent solutions rather than both NGN and NGA.
- 3.255 According to **Vodafone**, CPI-X is the most appropriate price control mechanism in the setting of LLU prices as it allows adjustments annually in accordance with the change in CPI in the previous year. In Vodafone's view, this approach is superior to stable nominal LLU prices as it allows for unexpected high general price increases which would prevent full cost recovery by the incumbent (which are beyond the

control of the SMP operator) while also providing consumers with the benefit of expected efficiency gains (which are within the control of the SMP operator).

3.256 In its response, **Eircom** stated that it has found that the forward looking costs of operating the access network have tended to increase over time. This, along with the projected volumes connecting to the access network will indicate that the unit costs will increase over the period. Therefore, Eircom is of the view that CPI is a good proxy for such movements and the prices for LLU and SLU should be adjusted annually accordingly. Moreover, this approach is consistent with the previous price control regime.

3.257 **Eircom** proposed that the current regime should be extended to the completion of the WPNIA market analysis and proposed that LLU prices should be increased accordingly on 1 December 2008, to avoid a reduction in real terms.

#### ComReg's Preliminary Views in relation to Question 18

3.258 ComReg welcomes the range of views expressed by the different respondents.

3.259 While ComReg agrees with Vodafone and BT that efficiency incentives are an important part of its price control regime, it should be noted that the price derived by the BU-LRAIC model is on the basis of the costs that would be incurred by an efficient entrant over the timeframe of the review. Accordingly, ComReg does not consider it appropriate to introduce a further efficiency adjustment to the price control, unless exceptional circumstances arise.

3.260 ComReg also notes the importance that Magnet and others place on certainty over future price levels; while recognising the impact of inflation on the level of efficient costs that Eircom incurs.

3.261 Having taken account of these comments, ComReg is of the preliminary view that the appropriate solution is to set a stable LLU price that includes an inflationary adjustment for the underlying efficient costs incurred by Eircom. There are a number of ways that this may be done, but (as set out in Section 4) ComReg proposes to set the LLU price according to the inflation adjusted costs that would be incurred by an efficient operator in the middle of the proposed price control period.

3.262 ComReg believes this approach provides an appropriate balance between the desire of OAOs for stability in LLU prices and Eircom's request to have the cost of inflation recognised in its regulated prices.

3.263 There are many different measures of inflation that may be adopted and ComReg notes the divergent views amongst the respondents as to whether CPI is the appropriate metric. Having considered these responses, and examined the matter further ComReg is of the preliminary opinion that CPI is not the appropriate inflationary index to use in this context. This is because of ComReg's concern that CPI trends may not adequately reflect the actual price trends of the relevant assets and therefore, ComReg considers it appropriate to use a set of more specific price indexes/trends in the BU-LRAIC model.

#### Sub Loop Unbundling ("SLU")

3.264 Questions 19 to 23 inclusive related SLU.

3.265 Eircom commenced its review of this section by referring to section 6.2 of the report of Analysys Consulting Limited<sup>17</sup> on the viability of SLU. The report, Eircom noted, concluded that SLU was not as commercially attractive as LLU and that the SLU business case is challenging even in Dublin where the larger cabinets are to be found. Eircom stated that this did not appear to have been considered by ComReg.

3.266 ComReg would like to point out that it commissioned Analysys Consulting to provide a report in relation to SLU and it has considered, in full, all the points raised by Analysys Consulting in their report.

#### Consultation Question 19

**Do you agree or disagree that SLU is unlikely to be used outside the footprint of the cable network in the medium term? Please explain your response in detail**

#### View of Respondents

3.267 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.268 Of the remaining five respondents, four agreed with ComReg's assessment that SLU was unlikely to be used outside the footprint of the cable network in the medium term. These were Smart, Magnet, BT, and Vodafone.

3.269 **Smart** pointed out that there have been many studies on the viability of SLU and in particular VDSL (i.e. Very high bit rate Digital Subscriber Line).

3.270 **Magnet** agreed with ComReg's assessment, but considered that SLU should not be ruled out in the medium to long term.

3.271 In its response, **BT** stated that SLU would only be viable beyond the cable footprint if there was a niche market such as a business park with high value business customers. To avail of SLU in such a niche market, an operator would have to extend the fibre to its cabinet in the business park and obtain power to facilitate direct access to the customer. However, in BT's view it is unlikely that a connection to the incumbent's network could be avoided.

3.272 **Vodafone** agreed with ComReg's assessment and moreover, stated that even in urban areas, the take-up of SLU is likely to be challenging for OAOs

3.273 While **Eircom** disagreed with ComReg's assessment, it also believed that ComReg's conclusions were not based on proper analysis. In its view, there are a number of factors where a new SLU entrant would specifically target areas beyond the existing cable network. Eircom pointed out that many provincial towns have access networks with a high cabinet distribution, where the number of working lines in these cabinets is broadly in line with those in urban areas.

3.274 Furthermore, Eircom stated that the availability of state funded infrastructure (i.e. Metropolitan Area Networks ("MANs")) in these towns means that Eircom's ducts

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<sup>17</sup> Analysys – Final report for ComReg "The business case for sub-loop unbundling in Dublin".

and exchange buildings can be by passed. The absence cable networks in these areas also increases the potential for higher market share for SLU investors.

#### ComReg's Preliminary View in relation to Question 19

3.275 ComReg has considered the responses received and, remains of the preliminary view that SLU is unlikely to happen outside the cable footprint or the major urban areas. ComReg is of the preliminary view that these major urban areas are currently Dublin, Cork, Galway, Limerick and Waterford.

3.276 In its assessment<sup>18</sup>, Analysys Consulting concluded that only street cabinets with a minimum of 300 lines would be economically viable for SLU in Dublin. ComReg has also considered the investment required (other than the regulated monthly rental charge) by OAOs in order to avail of SLU. As it is not possible for an OAO to co-locate in Eircom's cabinets, it must build its own cabinet(s). This represents a significant upfront investment.

3.277 Given the current economic downturn and lack of capital for investment, ComReg is of the preliminary view that it is unlikely that OAOs would invest in cabinets beyond the major urban areas or cable footprint in the proposed price control period.

3.278 Finally, in relation to Eircom's point regarding the MANs, which are located outside the major urban areas, given the upfront costs required for SLU, while there may be access to backhaul independent of Eircom, via the MANs, ComReg is of the preliminary view that OAOs are unlikely to connect to this in the lifetime of the proposed review period. This preliminary view is further supported by the conclusions of the Anlaysys Consulting report for SLU.

#### Consultation Question 20

**Do you agree or disagree that BU-LRAIC provides an appropriate incentive for investment in local infrastructure for SLU? Please explain your response in detail.**

#### View of Respondents

3.279 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.280 Of the remaining five respondents, three agreed with ComReg's preliminary view that BU-LRAIC provides an appropriate incentive for investment in local infrastructure for SLU. These were Magnet, Smart, and Vodafone.

3.281 **Magnet**, in its response, also stated that BU-LRAIC excluded all inefficiencies.

3.282 In its response, **Smart** agreed with ComReg's proposition because BU-LRAIC created the best incentive to encourage investment, allowed Eircom to recover its costs and could be used for both LLU and SLU.

3.283 According to **Vodafone**, if BU-LRAIC is based on the appropriate engineering rules it would provide the correct incentives for investment in local infrastructure for

<sup>18</sup> Information Notice 08/10 published on 23 January 2009 – Sub Loop Unbundling Report Prepared by Analysys Consulting Limited for ComReg. ComReg Document 08/10a – Final Report for ComReg – Business Case for Sub Loop Unbundling in Dublin.

SLU. Furthermore, the calculation of the SLU price should be based on the same methodology as the LLU price.

3.284 **BT** stated that it required much greater detail in order to make an informed judgement as to whether BU-LRAIC is appropriate in the context of SLU. Moreover, BT stated that it has not found it economically viable to offer SLU in Ireland due to the high cost of backhaul.

3.285 **Eircom** disagreed with ComReg's position and referred to its response to Questions 1 and 3 as well as again referring to the timing of the completion of the WPNA consultation and applying its interpretation of the *Arcor* case to SLU.

ComReg's Preliminary View in relation to Question 20

3.286 ComReg remains of the preliminary view that BU-LRAIC remains the most appropriate method for assessing the cost of SLU in Ireland. Please refer to ComReg responses to Questions 2 and 3.

3.287 As SLU is a subset of LLU, the application of BU-LRAIC to its calculation is in ComReg's preliminary view, reasonable and consistent with the proposed approach taken by ComReg in relation to LLU.

Consultation Question 21

**In order for ComReg to make fully informed decisions in relation to the above proposals please provide as much detail as possible on investment plans (i.e. Eircom or where you are an existing operator who has unbundled or have intentions to unbundle), both Core NGN and unbundling by street cabinet over the medium term. Please provide both quantitative and qualitative detail where possible. (ComReg acknowledges the commercial sensitivity of this information and all responses will be held in the strictest confidence)**

View of Respondents

3.288 Of the seven respondents, three did not offer any specific views or opinions on this question. They were:

- UPC;
- IFA; and
- Vodafone.

3.289 **Smart, Magnet, and BT** provided some information in relation to the question above. As these were received by ComReg in confidence, ComReg is not in a position to provide any further details in this regard.

3.290 BT in its response referred to its answer to Question 16.

3.291 **Eircom** also referred to its answer to Question 16.

ComReg's Preliminary Views in relation to Question 21

3.292 ComReg would like to thank respondents for the information that was received in response to this question. Given the confidential nature of the submissions made, this information is not discussed further as part of this document. However, while the information provided is helpful it is not fundamental to deriving a cost oriented charge for LLU/SLU.

## Consultation Question 22

**Do you agree or disagree with ComReg's preliminary view that SLU prices should be set in Ireland for a two to three year period from the effective date of any decision regarding SLU prices? Please explain your response in detail.**

### View of Respondents

3.293 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.294 **Magnet** referred ComReg to its response to Question 17 and commented that the pricing methodology chosen should ensure the lowest price.

3.295 **Smart** was in agreement with ComReg.

3.296 **Vodafone** considered that the period should be for three years. This would provide regulatory certainty and would also allow the achievement of maximum efficiencies for the SMP operator. In addition, OAO's and their customers would benefit from improved costs in subsequent price control periods.

3.297 **BT** neither agreed nor disagreed with ComReg's position. While it stated its view that the necessary conditions to deploy SLU in Ireland are not in place; it recognised that changes via NGA may alter the viability of SLU. It suggested setting SLU prices in the context of aiding potential SLU seekers to evaluate their proposals and underlined its view that SLU would probably change significantly during the price control period which could represent an example of significant circumstances warranting intervention prior to the cessation of the price control..

3.298 **Eircom** referred ComReg to its response to Question 17.

### ComReg's Preliminary Views in relation to Question 22

3.299 It is ComReg's preliminary view that the SLU price control period should, like the LLU price control period, be set for a period of three years with a planned review in year 2. As elaborated in ComReg's response to Questions 15 and 17, ComReg may intervene prior to the end of the price control period.

3.300 Please refer also to ComReg's responses to Questions 11, 12, 15 and 17.

## Consultation Question 23

**Do you agree or disagree that SLU prices should be stable over the period of the agreed price control or should they increase annually by the rate of CPI? Are there any other options ComReg should consider? Please explain your response in detail.**

### View of Respondents

3.301 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.302 Three respondents, Magnet, BT, and Eircom referred ComReg to their responses to Question 18.

3.303 In **Smart's** view prices should remain stable for the period unless CPI exceeded a predefined threshold.

3.304 According to **Vodafone**, CPI-X is the most appropriate price control mechanism in the setting of SLU prices as it allows adjustments annually in accordance with the change in CPI in the previous year. In Vodafone's view this approach is superior to stable nominal LLU prices as it allows for unexpected high general price increases which would prevent full cost recovery by the incumbent while also providing consumers with the benefit of expected efficiency gains (which are within the control of the SMP operator).

ComReg's Preliminary views in relation to Question 23

3.305 ComReg remains of the preliminary view that the SLU monthly rental charge should be stable over the proposed price control period.

3.306 Please refer to ComReg's response to Question 18.

Consultation Question 24

**Do you agree, or disagree that the approach proposed by ComReg, in developing an expanded revised BU model, is a reasonable one given the length of time that has elapsed since the last model was constructed and the availability of more sophisticated tools for building a model of the Eircom access network? Please explain your response in detail.**

View of Respondents

3.307 Of the seven respondents, two did not offer any specific views or opinions on this question. They were:

- UPC; and
- IFA.

3.308 Four of the five remaining respondents agreed with ComReg's proposals. These were Magnet, Smart, Vodafone, and BT.

3.309 **Smart** further elaborated in its response that the most appropriate approach would be to use a model which most accurately reflected the true costs of Eircom in providing a service. Moreover, given the time that has elapsed since the development of the original model and the new information to hand it agreed with ComReg's proposal.

3.310 While it agreed with ComReg's proposition, **Vodafone** highlighted that a revised BU model would benefit from the availability of superior modelling tools that more accurately reflected the access network. It also suggested that the actual BU model, including assumptions and formulae should be open to inspection and consultation by stakeholders.

3.311 In its response, **BT** acknowledged that ComReg's proposal would accurately reflect the current costs in the market while also taking into account more advanced modelling tools.

- 3.312 **Eircom** underlined that the current model was not an “Eircom’s model” but one developed in conjunction with ComReg and industry via IAG2.
- 3.313 Moreover, in Eircom’s view the model being developed by ComReg could not be considered an expanded version of the previous one. The previous model was based on samples of Eircom’s access network which were then extrapolated to the whole network. The model currently being developed employs a new, and in Eircom’s view, radically different geo-marketing based tool to optimise the layout of the country before it commences to configure the network for housing areas and isolated houses.
- 3.314 While acknowledging that there have been developments in modelling tools and geo-location data, Eircom did not agree that the age of the existing model was sufficient to warrant its replacement. Furthermore, Eircom is unclear why ComReg embarked upon the development of a new model prior to the completion of Consultation Document No. 08/56 and the completion of the WPNIA market review.

#### ComReg’s Preliminary Views in relation to Question 24

- 3.315 ComReg remains of the preliminary view that the approach it has adopted is a reasonable one and notes that this is consistent with the view of four of the five respondents.
- 3.316 In its response, Vodafone requested that the BU model be open to full inspection and consultation by stakeholders. Given the fact that many of the model inputs are sourced from confidential information submitted by Eircom, adjusted where appropriate, ComReg is not in a position to enable all stakeholders’ access to the model due to the confidential nature of many of the inputs. However, ComReg has, through its Consultation Document No. 08/56 and this document, detailed the methodology proposed as well as how the model has been built, in so far as this is possible with such a complex and detailed model. It has also met bilaterally with operators in relation to certain cost inputs for the model as well as details of their future plans for LLU. Accordingly, ComReg has made the process as transparent as possible, given the restrictions associated with for example, confidential information.
- 3.317 The model developed by ComReg for this price review is based upon Microsoft Access as opposed to Microsoft Excel which was used in 2003. ComReg is of the view that given the size of the network being modelled Microsoft Access allows for greater processing power than Microsoft Excel. ComReg does not consider, as stated by Eircom in its response to Questions 1 to 3, that the model is radically different from the previous model. Furthermore, ComReg does not consider that it introduces regulatory uncertainty.
- 3.318 The process leading to the construction of the model has been discussed in detail with Eircom. Eircom has been provided many opportunities to review and critique the model and make suggestions for possible amendments which have indeed been accepted by ComReg if appropriate. The cost data and engineering rules applied are primarily those of Eircom and these have been discussed with Eircom to ensure the information has been understood and applied correctly. Eircom will also have full visibility of the latest model used to arrive at the proposed prices and will have the opportunity to comment further on this detail, however given the significant engagement to date and reviews carried out, ComReg does not expect any further

material comments on the model, other than those key inputs subject to this consultation.

- 3.319 ComReg considers that in light of the improved modelling tools that these should be incorporated into the modelling process. In particular, it considers that the use of geo-marketing tools to represent the entire country more accurately reflect how a new entrant would perceive the network to be rather than extrapolating data from a sample of existing exchanges. The sampled data would require adjustment and refinement to account for legacy issues in the deployment of Eircom's network.
- 3.320 While the use of geo-marketing may be a new application, ComReg does not consider that it is radical. Geo-marketing tools, such as Navteq and An Post's Geo-directory have been available for some time and ComReg is making use of the most up to date techniques possible. ComReg is also aware of other countries having used geo-marketing information and tools for the purpose of telecom networks cost modelling and as such this is not a novel approach undertaken by ComReg.
- 3.321 ComReg would also like to note that the majority of the cost data, price trends and engineering rules contained within the new version of the BU-LRAIC model are those of Eircom to ensure that the model built is as close to reality as possible and ensures the actual costs incurred by Eircom in aggregate are being recovered from the proposed charges.
- 3.322 ComReg is therefore of the preliminary view that the approach it is undertaking in developing a new version of the BU-LRAIC model is a reasonable one.

## 4 Local Loop Unbundling ('LLU') & Sub Loop Unbundling ('SLU') Costing Consultation

### Introduction

- 4.1 This section of the document sets out a summary of the lengthy and detailed process undertaken between ComReg and Eircom in arriving at a BU-LRAIC cost model which ComReg believes is appropriate for determining a revised LLU & SLU monthly rental charge while taking into account the actual costs incurred by Eircom.
- 4.2 In October 2007 ComReg engaged TERA Consultants ("TERA") to develop an independent efficient operator BU-LRAIC model of the copper access network in Ireland and to assist in determining a revised LLU and SLU monthly rental charge.
- 4.3 In November 2007 ComReg began its engagement with Eircom so that a bilateral, interactive process could commence on the project. Limited engagement was also undertaken with OAOs.
- 4.4 Initially a number of data requests were submitted to Eircom and OAOs in order to obtain the relevant cost data to be considered as part of the modelling exercise. The data requests submitted to Eircom included a request for granular information on the copper local loop, information on the overhead and underground infrastructure currently in place and also details on asset costs and operating costs. In addition, Eircom provided the engineering rules applied by it in the deployment of its current copper access network. Basically, the engineering rules are the guidelines or rules used by Eircom in the deployment of its current copper access network.
- 4.5 Following a review of the data provided by Eircom and OAOs, ComReg decided, based on the granularity and direct relevance of the data provided by Eircom, that the cost data and engineering rules applied by Eircom should be used as a starting point for the BU-LRAIC cost model exercise. However, a number of adjustments were also made to reflect current market costs and the engineering rules of an efficient operator.
- 4.6 A significant number of workshops were held between Eircom and ComReg over the past 18 months. These workshops included a review of the data submitted by Eircom and discussions to ensure that the data had been applied correctly in the BU-LRAIC cost model. Eircom was given an opportunity, as part of these discussions to set out the current network structure, the engineering rules applied by it in the current network and also to discuss the main factors driving the costs of the current network.
- 4.7 The sections below include the following details:
  - 4.7.1 *Background to the BU-LRAIC Cost Model:* This section includes the details of the site visits undertaken by ComReg and Eircom so as to allow ComReg to understand the current copper access network and how it is deployed in Ireland. It also includes the work performed by Geocible<sup>19</sup> in mapping the roads and buildings through the country for the purposes of the BU-LRAIC cost modelling exercise.

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<sup>19</sup> French based geo-marketing company, contracted by TERA Consultants.

- 4.7.2 *BU-LRAIC Cost Modelling Exercise*: This section includes the main principles applied within the model in determining the relevant capital cost and operating cost of the modelled network.

#### Background to the BU-LRAIC Cost Model

#### 4.8 **Actual Network Deployment**

- 4.9 The sections below include the high levels details relating to the actual network deployment.

#### 4.10 **Site Visits**

- 4.11 ComReg and Eircom carried out a number of initial site visits in order for ComReg to gain an understanding of how the current copper access network is deployed in Ireland. The selected sites were chosen by Eircom as being representative of the following characteristics:

4.11.1 A rural/small urban community;

4.11.2 A large urban community containing both housing and commercial/industrial buildings; and

4.11.3 A new housing estate.

- 4.12 In parallel with the site visits, ComReg and Eircom reviewed maps of the local access infrastructure, walked parts of the local network and discussed such features as deployment of chambers, rules governing underground and overhead infrastructure and final drops within the different sites. These visits allowed ComReg to gain an understanding of the current Eircom engineering rules and how they are applied in practice.

- 4.13 Given the high level of one-off housing in Ireland, ComReg undertook a number of short site visits to more rural areas of the network in order to gain an understanding of how access infrastructure is deployed in these areas. These visits allowed ComReg to form a preliminary view that where there were less than 50 buildings in a housing area, the deployment of infrastructure overhead was the norm.

#### 4.14 **Comparison of the BU-LRAIC Model with Reality**

- 4.15 In order to ensure the robustness of the BU-LRAIC cost model, it was decided to compare the copper access network infrastructure as it is currently deployed by Eircom with the BU-LRAIC cost model to ensure that the model was relatively consistent with the infrastructure in place on the ground. This exercise was carried out at a national level and also at a local level for a number of selected sites. Due to issues of commercial sensitivity it is not possible to elaborate on the detail of this exercise. However, ComReg is satisfied that the reconciliation performed at both a national and local level is reasonable. Where differences have been noted between what would actually have been built against what a desk top model would build, these differences have been discussed between Eircom and ComReg and ComReg is of the view that these differences have been explained and are understood.

#### 4.16 **Geo-marketing**

- 4.17 Geocible was engaged to map the roads/streets and buildings of Ireland for the purposes of building a BU-LRAIC model. Geo-marketing uses digital maps to determine the various roads and buildings throughout the country. The digital



areas can be quite small and centred around a small village. Others, are quite large, and can include a number of different towns and villages. Housing areas may contain multiple Main Distribution Frames (“MDFs”). The access model is constructed to deploy the network within a housing area to its nearest MDF or MDFs. It deploys infrastructure to an MDF in the most efficient manner, with trenches (and overhead or underground final drops). Isolated houses are primarily “one off” houses or very small clusters of houses. Most of these have been located by Geocible in the rural parts of Ireland. Isolated houses have to be connected to their nearest MDFs and the access model is constructed to deploy these connections in the most efficient manner possible, mainly with overhead infrastructure.

- 4.21 Having identified the developed housing areas and the isolated houses, Geocible assessed the length of roads and types of roads associated with each housing area or isolated house. The definition of road types was produced by Navteq<sup>22</sup>. The lengths of road were used within the access model to deploy an optimised network.
- 4.22 ComReg is of the preliminary view that the creation of housing areas and the calculation of length of roads and numbers of buildings is a suitable method to be used in assessing the deployment of infrastructure. A number of bilateral discussions were held between ComReg and Eircom in this regard. ComReg is satisfied that the basis used provides a reasonable estimation of the length of roads and the number of buildings throughout the country.

#### BU-LRAIC Cost Modelling Exercise

##### 4.23 Overview

- 4.24 As set out above, ComReg engaged TERA, in October 2007, to develop an independent efficient operator BU-LRAIC model of the copper access network in Ireland and to assist ComReg in determining a revised LLU monthly rental charge. Over the past 18 months a significant amount of interaction has taken place between ComReg, TERA and Eircom. These interactions have involved a series of discussions and workshops that have allowed TERA and ComReg to populate a model which reflects that of an efficient operator while also reflecting the reality of the Eircom network in so far as possible. The model has been constructed in visual basic access (“VBA”). Eircom was given the opportunity to review the model extensively over the past number of months. All issues raised by Eircom as part of its review were further considered by ComReg and, where necessary, the model was amended. ComReg is of the preliminary view that the model is fit for purpose and is sufficiently robust to allow ComReg to propose a new monthly LLU cost per line.
- 4.25 A significant amount of the information obtained in relation to this BU-LRAIC cost modelling exercise is commercially sensitive data. ComReg is not in a position to disclose confidential data. However, this section sets out the main principles and parameters<sup>23</sup> applied to the current BU-LRAIC cost model, in order to allow operators to provide their views on the key areas to be consulted upon. The main principles on which the BU-LRAIC cost model is based are included in the sections below under ‘Capital Costs’ and ‘Operating Costs and, Indirect Capital Costs’.

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[http://developer.navteq.com/site/global/dev\\_resources/155\\_technical\\_library/core\\_map/10\\_cor\\_emap.jsp](http://developer.navteq.com/site/global/dev_resources/155_technical_library/core_map/10_cor_emap.jsp)

<sup>23</sup> A parameter defines certain characteristics of systems or functions.

#### 4.26 **Specification Document**

4.27 As part of the modelling exercise a detailed “specification document” was prepared by ComReg and TERA discussing how the BU-LRAIC model was constructed. The main sections in the specification document are as follows:

- Geomarketing;
- Modelling of an optimised network;
- Engineering Rules;
- Unit prices; and
- Costing data.

4.28 This document was shared with Eircom, in confidence, prior to the programming of the model. A coding document, setting out the code used for the programming of the model, was also shared with Eircom (in confidence). Both, the specification document and coding document have been the subject of detailed discussion with Eircom since 2008. ComReg has considered all comments made by Eircom in relation to these documents and where appropriate, ComReg has amended the documents to take account of Eircom’s views.

#### Capital Costs

##### 4.29 **Overview**

4.30 In constructing the capital element of the BU-LRAIC cost model a set of engineering rules have been used. The BU-LRAIC cost model is substantially based upon the engineering rules provided by Eircom and currently in use. However, some of the information supplied by Eircom in relation to the capital costs has been adjusted accordingly to reflect how an efficient operator would build an entire network today.

4.31 As stated above, the costing data and indeed, other relevant information obtained from Eircom and OAOs for the modelling exercise, is commercially sensitive data and as a result, can not be disclosed. However, all of the parameters contained within the model were discussed in detail during numerous workshops with Eircom and also as part of further meetings and correspondence between ComReg and Eircom. The key parameters which ultimately determine the level of the costs in the model are set out below so that operators can provide their views in this regard. The sections below are discussed under capital costs and operating costs and indirect capital costs.

##### 4.32 **Capital Cost Parameters**

##### 4.33 **Tilted Annuities:**

4.34 In regulatory cost models and in accounting systems, investments are depreciated to derive annual depreciation charges of the assets. There are several types of depreciation formulas that can be used to derive annual depreciation charges, such as straight line depreciation which is normally used in accounting systems. However, in regulatory cost models, and especially in BU models, the preferred methodology is often the “tilted annuity formula” because of the way that this method accounts for

future prices<sup>24</sup>. This approach is chosen by many NRAs in Europe including ARCEP (France), NITA (Denmark), BIPT (Belgium) and PTS (Sweden).

4.35 If asset prices are falling, an operator will know that deploying its network in the future rather than today, will result in a lower cost base. Conversely, its costs base would be reduced by investing sooner, when asset prices are rising.

4.36 Thus, in an efficient market, operators should account for the future movements of prices when deciding on the timing of potential investments. ComReg therefore considers it important that regulated charges mirror this market behaviour in order to provide appropriate make/buy signals for both Eircom and the OAOs.

4.37 One way of achieving this is through a tilted annuity formula because:

4.37.1 If prices are falling then the tilted annuity formula allows a lower depreciation charge in the early years of an asset's life and allows higher charges in later years, with the effect of making it relatively more expensive to invest in the short-term.

4.37.2 Similarly, if prices are rising then the tilted annuity formula allows higher depreciation charges in the early years and lower charges in the later years, making it relatively less expensive to invest in the short-term.

4.38 ComReg is of the preliminary view that this is a reasonable method of ensuring the appropriate level of cost recovery, as well as providing efficient investment incentives, over the timeframe of the review. The implementation of the tilted annuity formula is discussed further in the 'Price Trends' and 'Average Payment Terms' sections below.

#### 4.39 **Price Trends**

4.40 Given the proposed application of the tilted annuity formula, it is also necessary for ComReg to take a view on the future price trends for the relevant LLU assets. In doing so, ComReg considers that it is appropriate to focus on long-term price trends because:

4.40.1 Long-term prices better reflect the considerations made by investors when considering potential deployments; and

4.40.2 There are practical difficulties with generating robust short-term price forecasts, particularly, in the current market context.

4.41 Accordingly, ComReg considers it appropriate to utilise price forecasts that are directly relevant to the assets in question, rather than applying more generic price indices such as CPI. The assets do not evolve on CPI as it is not the appropriate inflationary index to use in this context. ComReg is of the view that CPI trends may not adequately reflect the actual price trends of the relevant assets and therefore considers that the evolution of costs based on asset price trends to be a more reasonable basis to use.

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<sup>24</sup> See for example PTS, Sept 2007, Model Reference Paper (rev B) Guidelines for the LRIC bottom-up and top-down models, IBPT, Bottom-up model for interconnection description of the methodology, Prepared by BIPT In collaboration with Bureau van Dijk Management Consultants, 08 June 2004, ARCEP, April 2005, Consultation on copper local-loop costing methods, IRG, January 2006, Principles of Implementation and Best Practice regarding the use of current cost accounting methodologies as applied to electronic communication activities.

- 4.42 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.
- 4.43 In the case of non-copper based assets, ComReg has considered three different approaches to determining the relevant price trends :
- 4.43.1 Price trends assessed in the 2003 version of the LLU BU model, which had been observed over the period 2000 to 2003;
- 4.43.2 Price trends observed over the longer historical period from 2000 to 2007;and
- 4.43.3 Forecasts of the asset cost evolution over the future period 2008-2012, based on economists' forecasts on labour inflation, CPI or Harmonised Index of Consumer Prices ("HICP").
- 4.44 As stated above, ComReg is of the preliminary view that it is appropriate to focus on long-term price trends and therefore considers that the second of these options is more appropriate than the first.
- 4.45 ComReg has tested the reliability of the third option by considering whether previous changes in asset prices matched previous changes in the CPI [or HICP]. ComReg found that these indices did not accurately explain previous price movements as, for example, between 2000 and 2007 average labour inflation was between 5% and 6% per year, but trench digging prices increased by between 8% and 15% per year.
- 4.46 On this basis, ComReg is of the preliminary view that the second option is the most appropriate method of estimating future price changes. However, ComReg is of the preliminary view that it would be unrealistic to exclude consideration of the cyclical movements in the economy and therefore, proposes to base its assessment of future prices on the full economic cycle, which it does not expect to be completed until 2012.
- 4.47 In order to achieve this and as illustrated by the equation below, ComReg proposes to adjust the historical price trend by the ratio of forecast price inflation to historical price inflation. Thus, if inflation between 2000 and 2007 was 4% per annum, and forecast inflation from 2008 to 2012 was 2% per annum, the historical price trend of non-copper assets would be reduced by half ( $2\%/4\% \times 100 = 50\%$ ) on the 2008 to 2012 period.
- 4.48 In ComReg's view the advantage of this approach is that it is closely linked to the path of historical prices, while simultaneously including a measure to account for the current economic slowdown.

**Average price trend 2008-2012**

=

$$\text{Average price trend 2000-2007} \times \frac{\text{Average labour inflation (or CPI) 2008-2012}}{\text{Average labour inflation (or CPI) 2000-2007}}$$

- 4.49 For copper cables, ComReg again considers that long-term price forecasts represent the most appropriate basis for its assessment. There is a global market for copper and

there are many analysts providing forecasts on copper prices<sup>25</sup>. ComReg's internal analysis indicates that these forecasts are likely to provide a reasonable basis on which to estimate the future price of Eircom's copper-based assets. Based on its analysis of the price forecasts made by the 21 Analysts<sup>26</sup>, ComReg proposes to adopt a 5% price trend for copper in each year of the proposed price control period. Copper cables are made of copper and material, the 5% price trend is only applied to the "copper" part of copper cables, the "material" part price trend being assessed through the approach described above.

**Q. 1. Do you agree that the period from 2000 to 2012 is a reasonable length of time to evaluate the price trend data for the copper access network assets? Please state the reasons for your response.**

**Q. 2. Do you agree that the basis used for forecasting price trends for copper and the other local loop assets (i.e. poles, trenches, chambers, MDFs, street cabinets, etc) appears reasonable? Please state the reasons for your response.**

4.50 *Average payment terms*

4.51 An additional element to consider in setting the depreciation profile, (tilted annuity formula) is the timing of the revenue receipts after an investment has been made.

4.52 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).

4.53 In discussion with ComReg, in relation to the design of the BU-LRAIC model, Eircom stated that it would take 5 years to deploy a network in Ireland and therefore (on the basis that the contractors would need to be paid regularly for their services) the average payment terms would be 2.5 years.

4.54 If this view were correct it would imply a significantly higher cost of network deployment than is implied by the approach that other NRAs have adopted. However, from an operational point of view, ComReg does not consider the need to wait for the national network coverage before launching services in a given area. In ComReg's view services can be launched locally.

4.55 Nevertheless, ComReg has considered three options/concepts in determining the appropriate payment terms in the Irish context, they are outlined below.

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<sup>25</sup> Copper price forecasts and associated price trends, (source: Consensus Economics).

<sup>26</sup> These 21 analysts are Metal Bulletin Research, Barclays Capital, Credit Suisse, Merrill Lynch, Macquarie Bank, Prometeia, Econ Intelligence Unit, Investec, ABARE, ABN Amro, JP Morgan, ANZ, Deutsche Bank, Commonwealth Bank, IHS Global Insight, Morgan Stanley, UBS, BIPE, Citigroup, Wilson HTM, Oxford Economics. See ENERGY & METALS CONSENSUS FORECASTS, Consensus Economics, January 2009.

#### 4.56 **Option 1**

4.57 Option 1 considers that revenues are realised the same time as investments are made; therefore the assumption is that a network is instantaneously built and operational. This option is consistent with the approach adopted by ARCEP (France) in its LLU cost model<sup>27</sup>. Please see Appendix C for details of the tilted annuity formula adopted by ARCEP.

#### 4.58 **Option 2**

4.59 Option 2 considers 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. This option is consistent with the approach adopted by BIPT<sup>28</sup> in Belgium. Please refer to the tilted annuity formula adopted by BIPT in Appendix C.

#### 4.60 **Option 3**

4.61 Option 3 considers 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. This option is consistent with the approach adopted by PTS<sup>29</sup> in Sweden. Please refer to tilted annuity formula adopted by PTS in Appendix C.

4.62 For the reasons given above, it is ComReg's view that the the payment of contractors' invoices, the operational launch of the network and the generation of revenues, generally occur at approximately the same time. However, in order to be conservative, ComReg proposes to use the Belgian formula which considers a 6 month time lag between the out payments of the investment and revenue generation.

#### 4.63 **Asset Lives**

4.64 On 17 February 2009, ComReg published Consultation Document No. 09/11 on the regulatory asset lives of Eircom. As part of this review ComReg extensively reviewed among other assets, with the assistance of an external consultant<sup>30</sup>, the asset lives of the copper access network. On the basis of the responses received to Consultation Document No. 09/11, and further consideration given by ComReg to all the points raised, the revised asset lives have been incorporated into the BU-LRAIC cost model. ComReg does not expect the proposals set out in Consultation Document No. 09/11 to change and these have been used in the proposed LLU and SLU monthly rental charges set out in this document. However, in the unlikely event that the proposed asset life changes do not come into effect this could have a material impact on the LLU and SLU monthly rental charges proposed in this document.

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<sup>27</sup> ARCEP Decision 05-0834, published 15 December 2005.

<sup>28</sup> Description du modèle des coûts top-down pour le calcul des tarifs d'interconnexion », IBPT, November 2006.

<sup>29</sup> PTS Document: Dnr 07-3652/23. Guidelines for the LRIC bottom-up and top-down models, published 12 September 2007.

<sup>30</sup> RGL Forensics.

#### 4.65 *Cost of Capital*

4.66 The cost of capital (also referred to as Weighted Average Cost of Capital (“WACC”)) is another parameter of the tilted annuity formulas. The objective of including the WACC is to allow a sufficient return to investors and to provide an incentive for current or potential investment. In ComReg Document No. 08/35<sup>31</sup> ComReg set out the cost of capital for Eircom at a rate of 10.21%. This value has been used as an input to the tilted annuity formula.

#### 4.67 *Development of Underground and Overhead Distribution Points*

4.68 Eircom’s existing infrastructure is deployed using a combination of overhead and underground deployment techniques. These choices reflect the technical issues of deploying infrastructure in different parts of the country, as well as the evolving planning rules that have made it increasingly difficult for Eircom to use overhead methods. In particular, Eircom has been required to deploy its network fully underground for most developments undertaken since 1977.

4.69 When designing the BU-LRAIC model ComReg had to take a view on the appropriate proportion of the network that a hypothetical efficient operator would deploy overground or underground. ComReg has considered three options:

4.69.1 Deploy the network fully underground;

4.69.2 Deploy the network fully overground; or

4.69.3 Deploy the network using the approximate overground/underground mix as Eircom does in reality.

4.70 In order to determine which of these approaches is the more appropriate, it is in the first instance necessary to consider how they fit with ComReg’s overarching regulatory and statutory objectives. The relevant objective in this context is the provision of efficient investment incentives for current market players as well as those that may consider entering the market in the future.

4.71 It is ComReg’s preliminary view that the deployment of two competing access infrastructures in a given area would not normally tend to increase consumer welfare, except where there is sufficient differentiation in the technologies that the benefits of additional consumer choice outweighs the significant additional costs of having a second network.

4.72 For these reasons, ComReg’s preliminary view is that while cable represents a viable competing infrastructure to Eircom’s copper access network, it is unlikely to be efficient for non-cable OAOs to employ a competing access network by means of a scorched node approach where Eircom has already deployed its network. For green field sites<sup>32</sup> it may be efficient for any of the competing operators to deploy the relevant access network.

4.73 More generally, if ComReg were to set excessive LLU prices it would tend to encourage inefficiently high levels of investment by both Eircom and the cable

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<sup>31</sup>Document No 08/35; Response to Consultation and Decision Notice on Eircom’s Cost of Capital (Decision No. D01/08); published on 22 May 2008.

<sup>32</sup> Green field sites are sites which do not already have any telecoms network infrastructure in place.

operators, since the make/buy decisions of the latter group would be distorted. It could also be expected to result in inefficiently low levels of investment by non-cable OAOs since, even with a high LLU price; it is unlikely to be viable for them to deploy a competing access network.

4.74 In contrast an excessively low LLU price would tend to result in inefficiently low levels of investment in infrastructure by Eircom and the cable operators, as well as inefficiently high levels of local-loop unbundling.

4.75 Cable operators typically deploy a lower proportion of their assets overground than Eircom and therefore ComReg is of the preliminary view that the first of these approaches would tend to provide cable operators with incentives to engage in inefficiently high levels of investment.

4.76 Conversely, the second option may provide cable operators with inefficiently low investment incentives because at least part of their network is likely to require underground deployment (particularly for large-scale roll-outs). Moreover, it is unlikely to provide Eircom with efficient incentives for future deployment as it does not reflect the actual planning rules that Eircom can expect to face for subsequent investments.

4.77 Finally, ComReg's proposal for the potential implementation of the third option is to apply the following general rules:

4.77.1 Within housing areas, the model deploys underground infrastructure up to the final drop. At this point, the model differentiates between new housing developments and existing houses. For houses located within new housing developments, final drops are delivered through underground infrastructure. For existing housing, the final drop is delivered overhead.

4.77.2 Within isolated areas, the model generally deploys infrastructure overhead, including the final drop.

4.78 ComReg's preliminary view is that this third option strikes an appropriate balance between the need to provide sufficient incentives to invest, while avoiding incentivising inefficient investments. By setting the mix of overground/underground deployment according to the current mix in Eircom's actual copper network, it does not introduce a distortion to the investment decisions of the cable operators. Furthermore, by assuming that all new investments would be deployed underground, it retains efficient forward-looking incentives for Eircom.

#### 4.79 *Civil Works Costs*

4.80 The model includes the capital costs associated with the construction of the copper access network. Contractor cost information was obtained from Eircom so that ComReg could assess the relevant market rate to apply within the model to account for civil works. ComReg is of the preliminary view that the Eircom contractor rates should reflect competitive current market rates as it is the national fixed telecoms provider. In addition, ComReg considered the fact that these rates are in most cases based on negotiations with the relevant contractor for capital work carried out in different areas throughout the country. As part of the review of the Eircom contractor rates, ComReg considered a number of options and on that basis, ComReg determined what it considered to be a reasonable contractor rate for inclusion within the model. ComReg is of the preliminary view that the current contractor cost in the

model is reflective of the competitive market rates and the fact that labour costs are reducing.

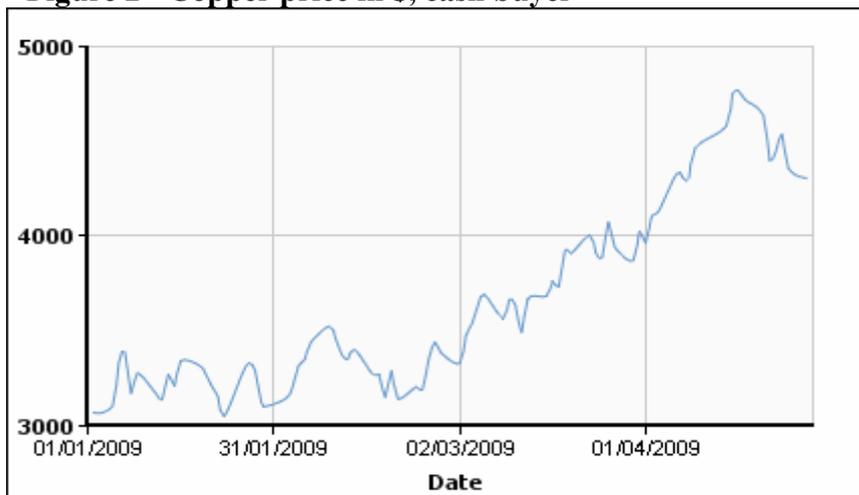
4.81 In order to be conservative and on the basis that in general the workforce in Ireland has recently taken significant reductions in salaries ComReg has as part of the BU-LRAIC modelling exercise factored reductions in labour rates to account for this. ComReg is of the preliminary view that the current telecommunications contractor cost in the model is reflective of probable future competitive market rates and the fact that labour costs are reducing over the next three years. This also reflects the benefits that might arise from deploying a new and larger network.

**Q. 3. Do you agree that it is reasonable to consider that contractor costs will reduce over the proposed three year price control period? Please state the percentage (%) which you expect labour costs to reduce over this period.**

4.82 *Copper Cable Costs*

4.83 One of the main assets of the copper access network is copper cable. The copper cable price partially varies with the copper price. ComReg has used information provided by Eircom on the copper cable price as it is dependent on the copper price. ComReg acknowledges that the copper price can fluctuate significantly so it proposes to use the April 2009 copper price to derive the 2009 copper cable prices. The evolution of the copper price in the London Metal Exchange ('LME') market is provided below and it appears that the average price in April is around \$4,500. Even if an efficient operator would tend to avoid buying copper at peak level, it appears more conservative to take the average value in April 2009, rather than the average value of the copper price from January 2009, until now.

**Figure 2 - Copper price in \$, cash buyer**



Source: <http://www.lme.co.uk/copper.asp>

4.84 *Evolution of Working Line Volumes*

- 4.85 While Eircom's working lines have been increasing for many years, ComReg notes that this rate of increase has been gradually slowing and, indeed, there was a small decrease in the number of Eircom's working lines in the last year. This was confirmed by the reduction in working lines reported as part of the recent ComReg Quarterly Report data.
- 4.86 Changes to the number of working lines may be affected by a range of factors from short term economic fluctuations, to longer-term structural factors such as fixed-mobile substitution ("FMS") and increasing levels of broadband penetration.
- 4.87 ComReg has undertaken detailed discussions with Eircom to establish its future trends in the number of working lines. Most of these discussions are confidential and their details cannot be disclosed in this document. However, in ComReg's view the recent decline in the number of lines is predominantly a short-term phenomenon.
- 4.88 However, ComReg believes that increased broadband penetration and higher speeds may stimulate demand for fixed line services over the coming years. ComReg believes that the successful entry of LLU operators will act as a key stimulant to this demand.
- 4.89 Having taken the above into account, ComReg is of the preliminary view that the number of lines will actually stabilise in 2010.

**Q. 4. Do you believe that the volumes of working lines will increase, decrease or remain static over the proposed price control period? Please state in percentage (%) terms your views on the likely movements with detailed calculations, if necessary.**

4.90 *Working Capital*

- 4.91 Working capital represents the difference between the current assets and the current liabilities of a company. It also reflects a company's ability to meet its short-term or day to day financial obligations. Working capital is independent of the capital investment of a network. However, working capital can be difficult to measure and calculate due to the subjective nature of some of its component parts. In addition, working capital can change over time and can fluctuate between positive and negative working capital.
- 4.92 ComReg is of the preliminary view that working capital should not form part of the BU-LRAIC cost model used to determine the LLU monthly rental charge. Determining the appropriate level of working capital can be highly subjective and difficult to assess.
- 4.93 ComReg also considered a number of models built by other countries and whether working capital was included in them, where publicly available documentation was available in this regard. It was noted that in December 2008 the Australian Competition and Consumer Commission<sup>33</sup> published details on its access and core

<sup>33</sup> [www.accc.gov.au/content/index.phtml/itemId/857897](http://www.accc.gov.au/content/index.phtml/itemId/857897)

model which did not include working capital. In France, ARCEP, has consistently excluded the inclusion of working capital unless its calculation was audited. PTS (Sweden) in its 2006 publication of “Hybrid Model User Guide” refers to a calculation for working capital, but states that “based on empirical evidence from the top-down model the cost of working capital has been set to zero.”

4.94 ComReg also considered the fact that the earlier version of the LLU model from 2002/03 did not include a working capital adjustment. ComReg is of the preliminary view, for the reasons set out above that working capital should still not be included in the current BU-LRAIC model used to determine the LLU monthly rental charge.

**Q. 5. Do you agree with ComReg’s preliminary view that working capital should not be included in the BU-LRAIC cost model used to determine the LLU monthly rental charge? Please state the reasons for your response.**

4.95 *Long-term Damage Costs*

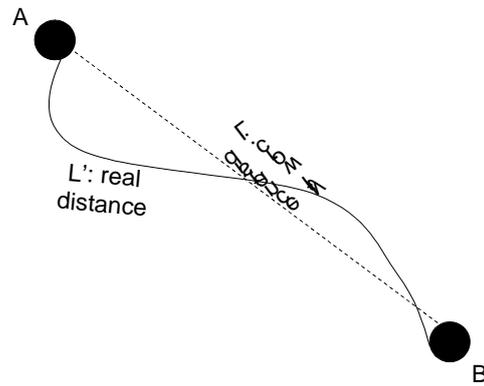
4.96 The local County Councils charge operators for deploying infrastructure on roads or footpaths. It appears that these charges are on an ad-hoc basis and not based specifically on a set charge. Therefore, ComReg is of the preliminary view that in order to account for these costs within the model it appears reasonable to take an average of the long-term damage charges incurred by Eircom over the past few years. It should be noted that ComReg has not applied long term damages to isolated housing areas for the following reasons:

- (a) The network in these areas are primarily deployed overhead; and
- (b) When it is deployed underground it is deployed on the grass verge and not on roads or footpaths.

4.97 *Non-linearity factor*

4.98 Geocible, in the course of the mapping exercise computed a ‘non-linearity factor’ to take account of the bends in the roads. This parameter is particularly relevant in rural areas. Since the algorithm used inside housing areas inherently deploys cable on non-linear distances, this is applied outside housing areas only. Geocible computed the distance between a number of points on Irish roads chosen at random, to derive a non-linearity factor. The results of the non-linearity factor have been incorporated in the model. ComReg is of the preliminary view that it appears reasonable that the model should account for the fact that there are bends on the non-linear nature of roads, especially in rural areas.

**Figure 3 - Non Linearity Factor**



**Non Linearity factor =  $L'/L$**

**4.99 *Maximum distance between chambers inside a housing area and isolated area***

4.100 The engineering rules supplied by Eircom in relation to housing areas indicated a maximum possible distance between chambers within a housing area. The model is currently calibrated with this maximum value. However, in deploying underground network, the model considers the location of buildings within the housing area and calculates an appropriate distance between the chambers on that basis. As a result the model has calculated chamber distances for linking housing areas to MDFs. ComReg is of the preliminary view that the maximum distance incorporated within the BU-LRAIC cost model is reasonable.

4.101 In isolated housing areas the model places infrastructure overhead. However, at some point the isolated area and the housing area must be linked at which point the infrastructure is based underground.

4.102 The engineering rules supplied by Eircom in relation to isolated areas indicate a maximum possible distance between chambers within an isolated area. This value has also been incorporated into the model. The model is also calibrated to deploy infrastructure overhead, where possible, in isolated areas.

**4.103 *Duct Inefficiency and Spare Capacity***

4.104 In order to determine the maximum number of cables that can be pulled into a single duct, the inner surface of the duct can be compared to the sum of the outer surface of cables that needs to be laid down in this duct. However, from a mathematical perspective, the sum of cable surfaces cannot equal the inner surface of the duct due to the existence of interstices<sup>34</sup>. It is not possible to fill the duct to its maximum. As a consequence, ComReg considered an adjustment to account for a level of duct inefficiency.

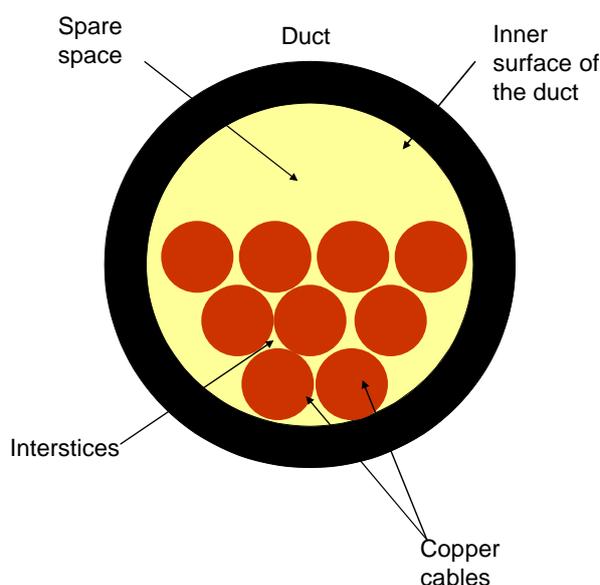
4.105 ComReg also considered the fact that in each duct there may be a level of spare capacity for future requirements. In planning for future demand, ComReg

<sup>34</sup> Interstices means the space between the cables.

considered that an operator would estimate the duct requirement. ComReg is of the preliminary view that it would not be cost effective to build the same size of duct nationally. In some cases the duct would become fully utilised while in other cases there may only be a small proportion of the duct in use. ComReg has considered an adjustment within the model to take account of spare capacity.

4.106 With these two parameters in mind, ComReg has proposed that the duct occupancy rate never exceeds 70%.

**Figure 4 - Illustration of Duct Occupancy**

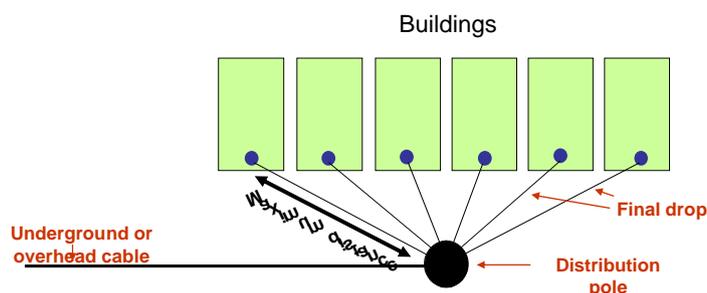


**4.107 *Maximum Distance for Underground and Overhead Final Drops***

4.108 During the modelling exercise, ComReg examined a maximum distance for an underground final drop from a chamber having an underground distribution point. This concept is based on Eircom's engineering rules. This engineering rule enables one to dimension the number of distribution points required. ComReg has also considered an average distance for underground final drops, in order to determine the amount of underground final drop cable required.

4.109 ComReg has also examined a maximum distance for an overhead final drop from an overhead distribution point installed on a pole. This concept is based on Eircom's engineering rules. This engineering rule enables one to dimension the number of distribution points required and to consider the average distance for an overhead final drop from a pole to a house or a building.

**Figure 5 - Maximum distance between distribution points and buildings**



#### 4.110 *Sharing between Core and Access*

4.111 In the national telecoms networks there is, in reality, an element of sharing of duct between the core and access networks. Although both networks serve different telecom needs it can be more cost effective to combine the duct. For example, the duct in the copper access network might serve a road along which the core network is travelling to another location. Rather than dig two trenches, the duct of both are combined. ComReg is of the preliminary view that it is important to consider this concept and a parameter has been adopted within the model to account for the sharing of access duct with the core network. In order to accommodate this within the model, Eircom has, for each MDF, provided an estimate of the length of trench that is shared between the core network and the access network.

#### 4.112 *Percentage of Streets with Double Trenching*

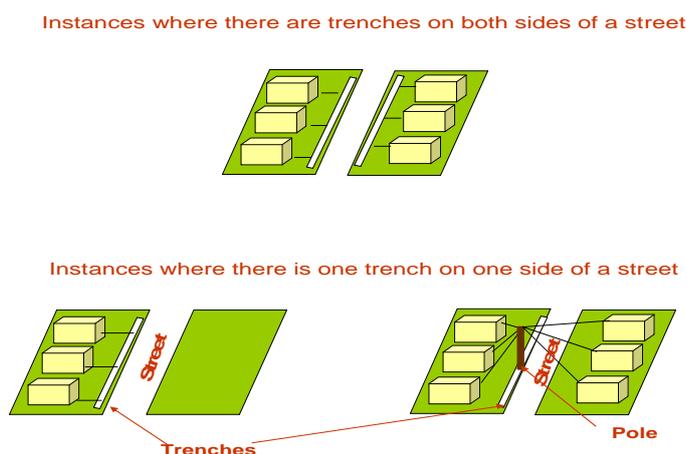
4.113 As the diagram below illustrates, where there are houses on both sides of the road, an operator could deploy its infrastructure by utilising a single trench with overhead cables or by installing a trench on each side of the road (double trenching) for the final drop.

4.114 The need for double trenching will be highest where planning rules restrict the use of overhead deployment and on wider roads where overhead deployment is more challenging.

4.115 ComReg's model assumes that double trenching is used on *all* of the larger roads within housing areas as well as a proportion of the minor roads within those areas.

4.116 ComReg considers that its approach is reasonable as it results in the model calculating a slightly higher total trench length than Eircom has in reality. Moreover, the double trenching assumptions are broadly consistent with the observations ComReg made when undertaking site visits during the initial stages of the LLU project.

**Figure 6 - Trenches on both sides of a street and a trench on one side of the street**



#### 4.117 *Pole Distance*

4.118 In the modelling exercise ComReg has considered that telegraph poles are spaced at a certain distance apart. Eircom's engineering rule on pole distance has been used to model this parameter. The average pole distance in the Eircom network appears reasonable.

### Operating Costs and Indirect Capital Costs

#### 4.119 **Overview**

4.120 In setting the LLU price in 2004, one of the major areas of disagreement, between Eircom and ComReg, related to the relevant operating costs of providing a LLU service. Eircom insisted on using its actual costs, even though it acknowledged that the costs did not reflect the cost of an efficient network. At the time, ComReg proposed, to use benchmarked data with particular emphasis on data from other European countries. However, Eircom was opposed to this. Alternatively, ComReg used an analysis of the Local Exchange Carriers ("LECs") data set produced in a consistent manner across the thirty-one LECs in the United States of America. ComReg and its consultants, at the time, conducted an econometric analysis of the LECs' data in support of Eircom's LLU pricing submissions.

4.121 The sections below include high level details of ComReg's review of Eircom's actual operating costs and indirect capital costs, taken from Eircom's HCA accounts, for the financial years 2007 and 2008. In addition, ComReg's review of Eircom's BU model of the operating cost and indirect capital cost is outlined. The review of the Eircom's operating costs and indirect capital costs involved extensive bilateral interaction between ComReg and Eircom. This enabled ComReg to gain a high level understanding of the actual costs incurred by Eircom in providing a LLU and SLU service and ultimately, to form a preliminary view on the reasonable level of costs to be recovered as part of a BU-LRAIC model.

#### 4.122 **ComReg Request for Costing Information**

4.123 On 31 October 2008, ComReg issued a detailed information request to Eircom setting out the detailed and disaggregated information that was required to enable a complete and proper review of both the operating costs and indirect capital costs.

The data requested related to the financial year 2007 and 2008. However, due to the level of detail required and the time constraints involved, it was decided instead that Eircom would build a BU model of the operating costs and indirect capital costs of an efficient new operator providing a LLU and SLU service.

4.124 In the intervening period, several meetings were held with Eircom to ensure that ComReg understood the data that was used in the model. The operating cost data provided by Eircom was split between the three services, that is, narrowband, provisioning and repair, provided via the copper access network. The data also detailed the various cost categories relevant to providing these services. Given the confidential nature of the information provided, ComReg cannot disclose the cost values reviewed.

4.125 Based on a review of the costs submitted by Eircom, it was clear to ComReg that the main costs driving the operating costs included staff costs for maintaining and running the network, storm damage costs, the cost of managing the network and the corporate overheads of the business. Eircom also provided ComReg with the details of the sub-cost categories for a sample of the main costs above. This allowed ComReg to obtain a high level view of the type of costs incurred within the main cost categories and the relevance of these cost categories to the provisioning of a LLU and SLU service. ComReg used its knowledge obtained, in discussions with Eircom and the high level review carried out on the actual HCA costs, to inform it of the relevance of the various operating costs within the Eircom model. ComReg was then able to decide on the relevant costs and the level at which these costs should be recovered within the model and the non-relevant costs to be excluded from the model. Set out below is a high level overview of ComReg's review.

#### 4.126 **Review of Eircom Operating Cost and Indirect Capital Cost Model**

4.127 On 20 March 2009 Eircom submitted its model of the operating cost and indirect capital cost model to ComReg for review. This submission followed on from a number of meetings and workshops held between ComReg and Eircom on an initial draft of the model. It should be noted that the starting point within the operating cost and indirect capital cost model is the actual access costs taken from Eircom's HCA accounts. However, a significant number of adjustments were subsequently made to these costs to ensure that the modelled costs reflected the costs of an efficient new operator providing a LLU service.

#### 4.128 ***Operating Costs:***

4.129 The main operating cost elements within the model included the staff costs necessary for the efficient running of the optimised capital network. As part of the analysis of the staff costs ComReg considered, given the current economic climate, that labour costs were currently reducing and that it was conservative to assume that labour costs would reduce over the next three years. An adjustment has been considered within the model to account for an expected labour cost reduction over the three year timeframe of the proposed price control period.

**Q. 6. Do you agree that it is reasonable to consider that labour costs will reduce over the proposed three year price control period? Please state the percentage (%) which you expect labour costs to reduce over this period.**

4.130 One of the main parameters considered in determining the relevant staff numbers for the BU-LRAIC model was the appropriate Line Fault Index (“LFI”)<sup>35</sup> of the capital network. ComReg considered a number of options in relation to the LFI of the modelled network. One option considered by ComReg was the LFI of the current Eircom network at approx 15-20%. However, ComReg is of the preliminary view that this is not appropriate as this is related to a legacy network built many years ago, with under investment in recent years. Another option considered by ComReg related to the separate decision taken by ComReg in the Universal Service Obligation – Quality of Service Performance Targets<sup>36</sup> of the target LFI of 12.5%. However, ComReg is of the preliminary view that the target LFI of 12.5% is related to the current Eircom network which is not a new network and is a target which was set to an achievable level based on the current high level of faults. A third option considered by ComReg related to a maximum LFI of 8%. Based on the analysis performed and based on data received from Eircom on the current performance of new network builds and recently renewed network it has been observed that the line faults are much lower than the line faults of the old network, for example in a brand new housing development where all infrastructure is underground the average LFI would be much lower than where the infrastructure is based on a mixture of overhead and underground. ComReg is of the preliminary view that a maximum LFI of 8% may be more appropriate on the basis that the modelled network relates to that of an efficient network. At the beginning of this section ComReg set out the inputs to the modelled network which are based on new capital spend including new poles, new trenching, etc. and these new capital inputs would be expected to be more resilient than the existing network in place which includes poles and trenches which were in place for many years. ComReg is of the preliminary view, that it is reasonable to say that the model and the capital cost of building it would lead to a much lower LFI than the target LFI of 12.5%. Based on analysis performed as part of the overall LLU review, ComReg is of the preliminary view that a maximum LFI of 8% may be more appropriate for an efficient network.

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<sup>35</sup> LFI refers to the number of line faults per 100 lines.

<sup>36</sup> ComReg Document No. 08/37 (Decision No. D02/08).

**Q. 7. Do you agree that the LFI of the current Eircom network is not an appropriate basis on which to set the operating costs of a BU-LRAIC model in determining the LLU and SLU monthly rental charge? Please state the reasons for your response.**

**Q. 8. Do you agree that the LFI of an efficient BU-LRAIC model, used to determine the LLU and SLU monthly rental charge, should be based on an LFI not exceeding 8%? Please state the reasons for your response.**

4.131 Other costs contained within the model included the cost of the support staff necessary to assist the front line staff necessary within the model. The support staff included those involved in network planning and design, IT, HR, finance, corporate division and legal division. ComReg assessed the level of these costs to ensure that an appropriate level of them was recovered in the LLU monthly rental charge.

4.132 *Indirect Capital Cost:*

4.133 In addition to the investment incurred for building the network, ComReg is of the preliminary view that an operator would also incur costs relating to planning and designing the network and the costs of inspecting the capital work completed.

4.134 As part of ComReg's assessment of the appropriate level costs to be considered within the model in this regard, Eircom provided costing information related to network planning and design and the costs incurred in carrying out inspection work during 2008. The costing information provided was as a percentage of its 2008 investments. However, ComReg is of the preliminary view that Eircom's current investments would be different from the investments of a new local loop operator. ComReg is therefore of the view that an efficiency adjustment is necessary to the Eircom costing data as Eircom is investing in the upgrade of its current network as opposed to the build of a new network. In addition, ComReg is of the preliminary view that consideration must be given to the fact that planning of a new network does not have to take account of the existing copper network, as is the case for Eircom. Furthermore, a new efficient operator, building a new local loop, would probably benefit from higher economies of scale than Eircom. ComReg has considered the points set out above in determining the appropriate efficient level of planning and network design and inspection costs within the BU-LRAIC model.

4.135 In summary, ComReg is of the preliminary view that a reasonable level of operating costs and indirect capital costs are included within the BU model to reflect the operations of an efficient operator.

**Q. 9. Do you agree with the overall preliminary approach taken by ComReg above in relation to the basis used in determining the capital costs and operating costs used in the BU-LRAIC model for determining the monthly rental charges of LLU and SLU services in Ireland? Please state the reasons for your response.**

4.136 **Fault Clearance Charge**

4.137 Currently the Eircom fault clearance charge is included as a separate charge in the Access Reference Offer (“ARO”) price list. ComReg is of the preliminary view that the current pricing structure should remain in place, that is the LLU monthly rental charge is a separate charge to the fault clearance charge. By including the fault clearance costs in the LLU monthly rental charge the cost per line per month may increase by approximately 10%.

4.138 ComReg is also of the preliminary view that a separate charge acts as an incentive to OAOs when reporting faults to ensure any possible checks have been carried out on their network prior to reporting them to Eircom.

**Q. 10. Do you agree that the fault clearance charge should remain a separate charge from the LLU monthly rental charge? Please state the reasons for your response.**

4.139 The current charge for fault clearance in the ARO price list is €109, excluding line testing. Based on ComReg’s review of the fault clearance charge as part of the overall LLU review, ComReg is of the preliminary view that the fault clearance charge modelled on a BU basis should not exceed a maximum of €109 (excluding line testing) and not exceed a maximum of €117 (including line testing).

## 5 Proposed Local Loop Unbundling ("LLU") and Sub Loop Unbundling ("SLU") Monthly Rental Charge

### Introduction

- 5.1 The section below sets out ComReg's consideration of the various costing methodologies available to it in terms of determining a LLU and a SLU charge per line. Set out also are the details of the main parameters used in modelling the capital costs, the operating costs and the indirect capital costs. Based on the extensive modelling exercise carried out by ComReg and the detailed review and discussions held between ComReg and Eircom, ComReg's proposal for a LLU and SLU charge per line per month are set out below.
- 5.2 ComReg proposes to convert the LLU costs arising from the proposed BU-LRAIC model into a single charge for LLU. Evidence from Ireland and other European countries indicates that strong economies of scale mean that entrants need to be confident of securing a significant number of lines before it becomes viable to unbundle a given exchange. This makes it difficult for OAOs to invest in smaller exchanges where the number of potential customers is commensurately lower. There are other factors such as long-lines or high backhaul costs in some areas that may reduce the probability that a given exchange or line represents an economically viable unbundling opportunity for OAOs.
- 5.3 As described in the Consultation Document No. 08/56, ComReg considers it important and proportionate to take account of the fact that some lines or exchanges are less likely to be unbundled by OAOs within the proposed price control period. Consequently ComReg's proposed approach to implementing the methodology is as follows:
- 5.3.1 *Step 1:* Distinguish between those exchanges that are more or less likely to be unbundled. ComReg considers it appropriate to draw this distinction based on the number of lines at a given exchange. In ComReg's view small exchanges are much less likely to be unbundled than large exchanges within the proposed price control period.
  - 5.3.2 *Step 2:* Adjust the estimated cost of small and large exchanges to exclude the majority of costs associated with long lines. This is necessary because long-lines are not suitable for broadband services and ComReg considers it unlikely that OAOs will unbundle lines that are unable to support those services.
  - 5.3.3 *Step 3:* Calculate the LLU price based on the weighted average cost of small and large exchanges.

### Step 1: Distinguishing between small and large exchanges

- 5.4 The current LLU pricing regime sets a LLU rental charge based on 100% of working lines. ComReg is of the preliminary view that it is appropriate to calculate the costs by giving  $x\%$  weighting to those exchange sites which may be unbundled by OAOs and  $1-x\%$  weighting to the other exchange sites where unbundling is considered unlikely to take place. The application of this probability weighting ensures that all the working lines in the BU-LRAIC model contribute in some form to the monthly LLU rental charge.

- 5.5 In order to implement this approach, it is necessary for ComReg to take a view on those exchanges that, because of their economic characteristics, are more or less feasible for an OAO to unbundle within the proposed price control period.
- 5.6 Unbundling exchanges takes time and is capital intensive because of the backhaul and Digital Subscriber Line Access Multiplexer (“DSLAM”)<sup>37</sup> equipment that OAOs need to install. In ComReg’s preliminary view, the high-fixed costs that are involved mean that OAOs will tend to focus on unbundling large exchanges where they can benefit from economies of scale. Indeed, the LLU experience in Ireland to date shows that the smallest exchange currently unbundled has in excess of 2,700 lines, putting it amongst the largest 11% of all exchanges. In some areas, high backhaul costs may also act as a significant barrier to unbundling by OAOs. An example is the exchange in Temple Bar, Dublin, which is one of the largest exchanges in the city, but it is located in the middle of a major tourist area with cobbled streets and other historical features. Consequently OAOs are likely to face significant practical and financial difficulties in installing their own backhaul facilities to such exchanges and are unlikely to unbundle at these exchanges unless there is a high density of working lines.
- 5.7 These findings appear to be consistent with the evidence from other jurisdictions as, for example, OAOs do not normally unbundle exchanges with less than 1,600 lines in France, or 2,500 lines in the UK. Moreover, ComReg notes that both ARCEP and Ofcom have recognised the importance of economies of scale in determining whether an exchange can be unbundled.
- 5.8 There are currently approximately 1,200 exchanges in Ireland. However a large proportion of these exchanges are in remote areas of Ireland and serve a small number of houses/businesses and, for the reasons given above, ComReg considers it highly unlikely that an OAO would unbundle at those exchanges within the proposed price control period.
- 5.9 More specifically, ComReg is of the preliminary view that exchanges with less than 1,600 lines are unlikely to represent feasible targets for OAOs to unbundle during the proposed price control period.
- 5.10 ComReg notes that drawing the distinction between large and small exchanges at 1,600 lines:
- 5.10.1 Is in fact significantly lower than the number of lines coming from the smallest exchange currently unbundled in Ireland.
- 5.10.2 Is consistent with its estimates of the smallest exchanges that are unbundled in France and lower than that in the UK, despite the extended periods of regulated access in both countries.
- 5.10.3 Would mean that, in the context of current levels of unbundling, only 35% of those exchanges considered likely to be feasible for unbundling in the period (i.e. those exchanges with more than 1,600 lines) currently contain any unbundled DSLAM;

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<sup>37</sup> A DSLAM allows telephone lines to make faster connections to the internet. It is a network device, located in the exchange of a service provider, that connects multiple customer Digital Subscriber Lines (‘DSLs’) to a high speed internet backbone line using multiplexing techniques.

- 5.10.4 Appears to be conservative based on the interviews that ComReg has held with OAOs that are currently active in the market; as well as those that are considering entering the market.
- 5.11 A distinction drawn at 1,600 lines implies that 68% of total lines are included in the 'large' exchanges deemed reasonably feasible for unbundling during proposed price control period.

**Q. 11. Do you agree that exchanges with working lines in excess of 1,600 is a reasonable cut-off for those exchanges that are unlikely to be economically viable for OAOs to unbundle in the timeframe of the proposed price control period? Please state the reasons for your response.**

#### Step 2: Adjusting for long lines

- 5.12 As set out under the methodologies in Section 3, ComReg considers the ability of OAOs to provide broadband as an essential pre requisite for their ability to unbundle lines. According to Eircom, it is not feasible to provide broadband services on lines in excess of 5km and therefore ComReg considers it appropriate to apply a lower weight to the costs associated with lines in excess of that length in its determination of the LLU price. ComReg notes that this approach is similar to that adopted by Ofcom in the UK.
- 5.13 ComReg proposes to implement the approach for adjusting long lines in a conservative manner.
- 5.14 Firstly, ComReg notes that both long and short lines share a common infrastructure. For example a long line may start by sharing a trench with short lines, before moving into a dedicated trench as it gets further away from the exchange.
- 5.15 There are many different way of apportioning those common costs but, in order to be conservative, ComReg only proposes to calculate the cost of short lines on a *stand alone basis*. In other words, ComReg proposes that the LLU price (which for the reasons given below will be weighted towards the cost of short lines) should cover the full costs associated with the relevant infrastructure, even though some of that infrastructure is shared with long lines.
- 5.16 Secondly, in order to further enhance the conservative nature of the calculation, ComReg proposes to include an element of the incremental cost of long lines in its calculation. ComReg is not aware of any direct precedent about the proportion of long-line costs that should be included in this calculation and therefore, believes this will be a question of the exercise of expert judgement on ComReg's part.
- 5.17 As described further below, there is a precedent in relation to the proportion of small exchanges that might be included in the LLU price calculation and, therefore, ComReg proposes to apply this approach to calculate the proportion of long lines to include. The specific calculation is set out in the following section.

5.18 Finally, ComReg wishes to emphasise that it will keep this matter under review and may decide to review the calculation, should evidence emerge of a significant level of unbundling of lines in excess of 5km, pursuant to this consultation.

**Q. 12. Do you agree that it is unlikely that an OAO would unbundled a line unless it was able to provide broadband services over that line; and do you agree that 5km represents the maximum line-length that may be used for those services? Please state the reasons for your response.**

**Q. 13. Do you agree that ComReg's proposal is conservative in that it includes an element of the costs associated with lines in excess of 5km?**

Step 3: Calculating the weighted average price

5.19 Having determined the costs of large and small exchanges (taking into account the low probability of lines in excess of 5km being unbundled), the final step in ComReg's calculation is to determine a single, national, LLU price.

5.20 ComReg notes that all of the exchanges unbundled in recent years have more than 1,600 lines. However, in order to be conservative, ComReg proposes to allow for an element of costs associated with small exchanges (those with less than 1,600 lines), even though it considers it highly unlikely that a significant number of them could feasibly be unbundled within the proposed price control period.

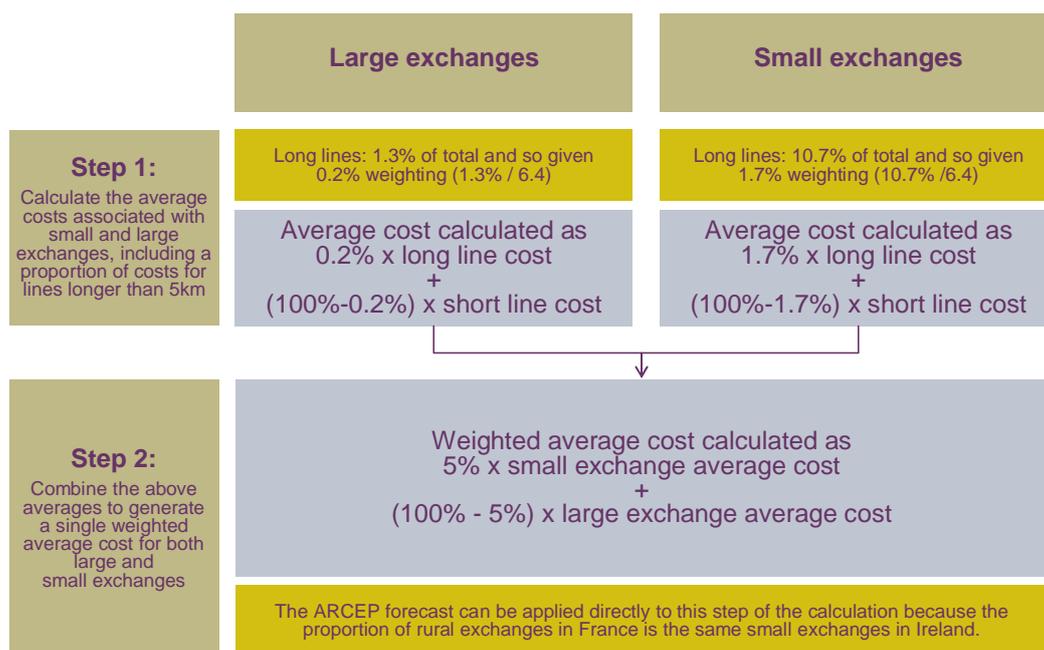
5.21 ComReg notes that ARCEP forecast that, in 2002 before the LLU take-up in France, 95% of lines unbundled would be in high-density areas and 5% would be in low-density areas.

5.22 In the course of interviews with OAOs, they have broadly confirmed that they are less likely to unbundle small exchanges for economic reasons, mainly to do with the number of lines in each exchange. The proportion of high density exchanges / low density exchanges in Ireland is similar to that in France. ComReg considers that the situation in France in this particular respect is a valid precedent and reference point for ComReg's proposals. Accordingly, it is ComReg's preliminary view that it would be reasonable for it to adopt the ratio (95:5) as ComReg believes this provides a reasonable and proportionate balance to the approach being proposed on the costs that should be included within the LLU price being proposed.

5.23 Thus the proposed price would be set on the underlying assumption that as the number of unbundled exchanges changes over time, the proportion of unbundled lines in small exchanges with less than 1,600 lines will remain below 5%. More specifically, ComReg proposes to calculate the LLU price based on a weighted average of the costs of lines in large and small exchanges such that:

5.23.1  $LLU\ price = 95\% \times \text{Cost of lines in large exchanges} + 5\% \times \text{Cost of lines in small exchanges}.$

- 5.24 Applying such a weighting to exchanges ensures that a conservative view is maintained in that it ensures that 100% of the lines are contributing to the charge (albeit that they are given different weights in the calculation).
- 5.25 ComReg is also of the view that this approach can be used to determine the appropriate weight to apply to the costs associated with lines in excess of 5km.
- 5.26 As previously mentioned the proportion of high density exchanges / low density exchanges in Ireland is similar to that in France. In France approximately 30% of lines are in low-density areas and ARCEP forecast that 5% of lines unbundled following its reforms would be in those areas. As set out above, and following a detailed review of the number of exchanges and the corresponding number of working lines in each exchange in Ireland, ComReg proposes to apply a 5% weighting to the cost of those exchanges, which is 6.4 times (32%/5%) lower than their occurrence in Ireland. ComReg proposes to apply the same approach to determine the appropriate weighting for lines that are in excess of 5 km.
- 5.27 Thus, as indicated in the below diagram, the costs associated with large and small exchanges are first calculated by dividing the proportion of long lines in each (1.3% and 10.7% respectively) by the weighting factor (6.4). The weighted average costs of both type of exchange is then calculated as:
- 5.27.1 Average large exchange line cost =  
 $(1.3\%/6.4) \times \text{long-line cost} + (1 - 1.3\%/6.4) \times \text{short-line cost}$
- 5.27.2 Average small exchange line cost =  
 $(10.7\%/6.4) \times \text{long-line cost} + (1 - 10.7\%/6.4) \times \text{short-line cost}$
- 5.28 The second stage of the calculation produces a weighted average cost based on the 95:5 figure described previously. Thus:
- 5.28.1 Average exchange cost =  
 $95\% \times \text{Average large exchange line cost} + 5\% \times \text{Average small exchange line cost}$



**Q. 14. Do you agree with ComReg’s proposed weightings, as set out above, used in relation to the cost associated with long lines and small exchanges? Please state the reasons for your response.**

### LLU Proposed Charge per Line

5.29 Set out in the table below is the proposed options in relation to the monthly rental charge for LLU. The charges reflect the parameters discussed in Section 4 and also the factors discussed in this section including loop length, the percentage of lines likely to be unbundled and the percentage probability of exchanges being unbundled. On the basis of the details set out in the sections above, ComReg is of the preliminary view that option 4 below, is the most appropriate option as it considers that OAOs are more likely to unbundle exchanges with 1,600 lines and above and that OAOs are more likely to unbundle line lengths of up to 5kms.

Options	Details	LLU monthly rental charge €
1	100% working lines	16.52
2	68% of working lines considered probable for LLU with probability weighting applied (95:5)	12.51
3	Exclude lines in excess of 5kms with the long line probability weighting applied	15.62
4	Option 2 and 3 together (i.e. 68% of lines and exclude lines in excess of 5kms with the relevant probability weightings applied)	12.18

**Q. 15. Do you agree that the charge at option 4 is the most appropriate charge for setting the LLU monthly rental charge going forward? Please state reasons for your response.**

#### SLU Proposed Charge per Line

- 5.30 ComReg, having considered the responses received to Consultation Document No. 08/56, is of the preliminary view that SLU is unlikely to happen outside the cable footprint or the major urban areas. ComReg is of the preliminary view that these major urban areas currently represent Dublin, Cork, Galway, Limerick and Waterford.
- 5.31 Following a report conducted by Analysys Consulting, it was concluded that only street cabinets with a minimum of 300 lines would be economically viable for SLU in Dublin. ComReg has also considered that the investment required (other than the regulated monthly rental charge) by OAOs in order to avail of SLU would be significant as it is not possible for an OAO to co-locate in Eircom's cabinets and OAOs therefore must build their own cabinet. This represents a significant upfront investment.
- 5.32 Given the current economic downturn and lack of capital for investment, ComReg is of the preliminary view that it is unlikely that OAOs would invest in cabinets beyond the major urban areas or cable footprint in the proposed price control period.
- 5.33 The charges set out below reflect the costing parameters discussed in Section 4 and also consideration for the fact that only street cabinets with a minimum of 300 lines would be economically viable for SLU. ComReg is of the preliminary view that option 2 is the most appropriate option given that it reflects the fact that only street cabinets with a minimum of 300 lines would be economically viable for SLU.

Options	Details	SLU monthly rental charge €
1	100% cabinets	14.57
2	5 main cities and Street cabinets greater than 300 lines	9.79

**Q. 16. Do you agree that the charge at option 2 results in the most appropriate charge for setting the SLU monthly rental charge going forward? Please state the reasons for your response.**

Proposed Price Control Period

**5.34 Proposed Timeframe of Price Control**

5.35 Further to the responses to Consultation Document No. 08/56 in relation to the period of the next price review, ComReg is of the preliminary view that the LLU and SLU charge should be set for a period of three years from the effective date of any final decision with a review in year 2. ComReg is of the preliminary view that the proposed price control period of three years will allow for the necessary development of the LLU market. During that time OAOs will have an opportunity to invest in their infrastructure, Eircom will have an opportunity to implement efficiencies, and alternative platform providers will also be provided with a level of certainty in relation to LLU market development. ComReg does not intend to intervene prior to year 2 of the proposed three year price control period unless exceptional circumstances warrant such an intervention.

5.36 ComReg further believes that a three year price review is more conservative given the current economic climate and the level of uncertainty regarding future costs and volumes.

5.37 In any event ComReg may intervene if exceptional circumstances arise which warrant such an intervention. Examples of exceptional circumstances might include significant changes in underlying costs or price trends or a significant change in working line volumes. Any exceptional circumstances will be reviewed by ComReg on a case by case basis.

**Q. 17. Do you believe that given the current economic circumstances that a proposed price control period of three years with a review in year 2 is the most prudent option? Please state the reasons for your response.**

## 6 Draft Decision

### 1 STATUTORY AND LEGAL POWERS

1.1 This Direction is made by ComReg, pursuant to the following:

- i. Section 10 of the Act of 2002;
- ii. Regulation 10 (5) of the Access Regulations;
- iii. Regulation 14 (4) of the Access Regulations;
- iv. Regulation 15 (2) of the Access Regulations;
- v. Regulation 17 of the Access Regulations; and
- vi. The SMP Decision, in particular, but not limited to, sections 3, 9 and 13 thereof.

1.2 This Direction is also made by ComReg having regard to and having taken in to account the following:

- i. Section 12 of the Act of 2002;
- ii. Regulation 14 of the Access Regulations;
- iii. The Policy Directions made by the Minister for Communications, Marine and Natural Resources on 21 February, 2003 and 26 March 2004;
- iv. The submissions received in relation to ComReg Document No.08/56, ComReg Document No.09/39 and ComReg Document No. [●] ;
- v. The analysis and reasoning set out in ComReg Document No. 08/56, ComReg Document No. 09/39 and ComReg Document No. [●] which shall, where necessary, be construed together with this Direction; and
- vi. The Model, which shall, where necessary, be construed together with this Direction.

### 2 DEFINITIONS

2.1 In this Direction:

**“Access Regulations”** means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003, as amended by the European Communities (Electronic Communications Networks and Services) (Access) (Amendment) Regulations 2007 and as at any time subsequently amended;

“**Act of 2002**” means the Communications Regulation Act, 2002 as amended by the Communications Regulation (Amendment) Act, 2007 and as at any time subsequently amended;

“**ARO**” means the most up to date version of the Access Reference Offer published by Eircom;

“**ComReg**” means the Commission for Communications Regulation, as established under section 6 of the Act of 2002;

“**ComReg Decision No. D15/04**” means ComReg Decision No. D15/04 entitled “*Decision Notice and Direction – Local Loop Unbundling: Review of Eircom’s ULMP Monthly Rental Charge*”, dated 5 November 2004 (Document No. 04/110);

“**ComReg Document No. 08/56**” means ComReg Document No. 08/56 entitled “*Consultation - Proposals for Local Loop Unbundling Pricing Methodologies*”, dated 10 July 2008;

“**ComReg Document No. [●]**” means [●];

“**Eircom**” means Eircom Limited and its successors and assigns;

“**LLU**” means local loop unbundling;

“**Model**” means the costing model, developed by ComReg (in consultation with Eircom) for the purpose of deriving the price of LLU and SLU, which has all necessary legal effect, including but not limited to the purpose of determining cost orientation and Eircom’s compliance with its obligation of cost orientation under section 9 of the SMP Decision;

“**OAO**” means other authorised operator;

“**SLU**” means sub-loop unbundling; and

“**SMP Decision**” means ComReg Decision No. D8/04, entitled “*Designation of SMP and SMP Obligations - Market Analysis: Wholesale unbundled access (including shared access) to metallic loops and sub-loops*”, dated 15 June 2004 (Document No: 04/70).

### **3 SCOPE AND APPLICATION**

3.1 This Direction applies to Eircom.

3.2 This Direction is binding upon Eircom and Eircom shall comply with it in all respects.

### **4 REVISED LLU AND SLU PRICES**

4.1 Eircom is hereby directed to charge no more than the following prices for LLU and SLU, as derived from the Model:

- i. LLU – € [●] per line per month; and
  - ii. SLU – € [●] per line per month.
- 4.2 Section 4.1 shall apply to all relevant invoices issued by Eircom to OAOs in respect of LLU or SLU, 30 days after the effective date and to all relevant invoices issued by Eircom to OAOs in respect of LLU or SLU at any time thereafter.

## **5 PUBLICATION OF PRICES IN THE ARO**

- 5.1 The prices referred to in section 4.1 shall be in substitution for the prices for LLU and SLU, as currently published in the Access Reference Offer (“ARO”).
- 5.2 Eircom shall publish the revised prices for LLU and SLU referred to in section 4.1, in its ARO and on its wholesale website, 30 days after the effective date.

## **6 REVOCATION OF COMREG DECISION NO. D15/04**

- 6.1 Subject to section 6.2, ComReg Decision No. D15/04 is hereby revoked, 30 days after the effective date.
- 6.2 Section 6.1 shall not come in to operation if this Direction is appealed, or otherwise the subject of legal proceedings and if a stay or suspension in respect of this Direction (or a section or provision or portion of this Direction) has been ordered by a Court, or if this Direction (or a section or provision or portion of this Direction) is quashed or found unlawful or invalid by a Court, or remitted by a Court to ComReg.

## **7 SEVERANCE AND MAINTENANCE OF PROVISIONS**

- 7.1 If any section or provision or portion of this Direction is found by a Court to be invalid or prohibited by the Constitution, or otherwise judged by a Court to be unlawful, void or unenforceable, that section, provision or portion of this Direction shall, to the extent required, be severed from this Direction and rendered ineffective as far as possible without modifying the remaining section(s), provision(s) or portion(s) of this Direction, and shall not in any way affect the validity or enforcement of this Direction.

## **8 STATUTORY POWERS NOT AFFECTED**

- 8.1 For the avoidance of doubt, nothing in this Direction shall operate to limit ComReg in the exercise and performance of its statutory powers or duties under any primary or secondary legislation (in force on or prior to or after the effective date of this Direction) from time to time as the occasion requires.
- 8.2 Without prejudice to section 8.1, ComReg may, at its sole discretion, review and if it considers necessary, amend, continue in force, replace, or revoke this Direction or the Model (or both) whether in whole or in part, in particular, if exceptional

circumstances arise. Exceptional circumstances may include, but are not limited to the following: significant changes in underlying costs or price trends or significant changes in working line volumes.

## **9 EFFECTIVE DATE**

- 9.1 This Direction shall be effective from the date of its publication and shall remain in force until further notice by ComReg.

**JOHN DOHERTY  
CHAIRPERSON  
THE COMMISSION FOR COMMUNICATIONS REGULATION  
THE [●] DAY OF [●] 2009**

**Q. 18. Do you believe that the draft direction is clear, precise, and intelligible from a legal, technical and drafting perspective? Please state the reasons for your response.**

**Q. 19. Respondents are invited to comment on the draft direction from a legal, technical and drafting perspective as set out above.**

## 7 Regulatory Impact Assessment

### Introduction

- 7.1 Regulatory Impact Assessment ('RIA') is an analysis of the likely effect of proposed new regulation or regulatory change. The RIA should help identify regulatory options, and should establish whether 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 regulation options on different stakeholders.
- 7.2 ComReg's approach to the RIA is set out in the Guidelines published in August 2007, in ComReg Document 07/56 & 07/56a. In conducting the RIA ComReg will take into account the RIA Guidelines<sup>38</sup>, adopted under the Government's Better Regulation programme. The RIA Guidelines are not legally binding upon ComReg. However, in conducting the RIA ComReg will have regard to them, 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. In conducting a RIA ComReg will take into account the six principles of Better Regulation that is, necessity, effectiveness, proportionality, transparency, accountability and consistency. To ensure that a RIA is proportionate and does not become overly burdensome, a common sense approach will be taken towards RIA. As decisions are likely to vary in terms of their impact, if after initial investigation a decision appears to have relatively low impact, then ComReg would expect to carry out a lighter RIA in respect of those decisions.
- 7.3 ComReg would like to point out that as it is not imposing a new regulatory obligation on an undertaking, it is not mandatory for it to provide a RIA. However it has been decided to do so in order to demonstrate that it considered and evaluated the alternative options available, with due regard to necessity, effectiveness, proportionality, transparency, accountability and consistency.
- 7.4 In determining the impacts of the various regulatory options, current best practice appears to recognise that full cost benefit analysis would only arise where it would be proportionate or in exceptional cases where robust, detailed and independently verifiable data is available. Such a comprehensive review will be taken when necessary.
- 7.5 The main objectives of this review are:
  - 7.5.1 Consider the responses to ComReg Consultation Document No. 08/56 (Section 3);
  - 7.5.2 Consult on the main parameters which determine the capital cost, operating costs and indirect capital costs of the BU-LRAIC model for LLU and SLU (Section 4); and
  - 7.5.3 Consult on the basis used to determine the monthly LLU and SLU rental charge per line (Section 5).

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<sup>38</sup> See "RIA Guidelines: How to conduct a Regulatory Impact Analysis", October 2005, [www.betterregulation.ie](http://www.betterregulation.ie)

## Identify and Describe the Regulatory Options

- 7.6 Eircom is already subject to an LLU access obligation. The existing LLU charge was set using a model that was constructed in 2003. One regulatory option is therefore to continue to use the current regulatory model in the next price control period.
- 7.7 However, in Consultation Document No. 08/56 ComReg consulted on various possible methods for an updated model of the appropriate LLU and SLU charge per line. In Section 3 of this document ComReg has set out its preliminary view that a BU LRAIC model is the most appropriate methodology to use. ComReg has set out that there is not sufficiently robust information available to undertake a top-down approach in Ireland. Nevertheless, in line with the ECJ judgement in relation to the Arcor case, ComReg has undertaken cross-checks to ensure the reliability of the model outputs, where these are feasible and proportionate. This has been noted in Section 3 and 4 of this document.
- 7.8 The new version of the BU-LRAIC model is a more sophisticated, and accurate, version of the 2003 pricing model. However in implementing the new version of the model, ComReg is proposing to adjust the way it analyses costs, so as to enhance competition and consumer welfare in Ireland.
- 7.9 More specifically, ComReg is proposing to introduce a weighting to reflect the economic and practical difficulties that OAOs would face if they attempted to unbundle the smaller of the Irish exchanges or lines that could not sustain broadband services. ComReg's proposed cost treatment in this regard is set out in option 2 and 3 below.
- 7.10 The three options set out below were considered by ComReg in determining the most appropriate basis for setting a cost oriented LLU and SLU monthly rental charge.

### ***Option 1 – Continue to use the 2003 LLU costing model***

- 7.11 As set out in ComReg Consultation Document No. 08/56, the use of the existing model in its entirety would mean that the methodologies applied were 6 years old and in need of review and a consultation with industry. In addition, the existing model was based on a sample of exchanges. The sample selected accounted for approximately 10% of exchanges (or MDFs) covering 5 geo-types of areas in Ireland. These samples were then extrapolated to represent the entire Eircom access network. In view of the more advanced mapping systems that have now become available, ComReg proposes to map the entire access network using a geo-directory, thereby giving a much higher level of granularity and accuracy than previously achieved. This, in ComReg's view, will be a clear improvement on the existing model.
- 7.12 The use of the existing model requires OAOs to contribute towards the costs of exchanges that they do not have a realistic probability of unbundling within the proposed price control period, which undermines the obligation of cost-orientation. ComReg considers that this will tend to limit effective competition and distort the investment incentives of both Eircom and the OAOs.
- 7.13 Moreover, to the extent that the aggregation process in the existing model does not accurately reflect the actual efficient costs incurred by Eircom, it may not provide the most appropriate set of incentives for Eircom or the OAOs.

- 7.14 As set out above ComReg do not believe that the continued use of the existing model is either transparent or proportionate as it may lead to the over-recovery of costs by Eircom. In addition, ComReg is of the preliminary view that the existing model may not be consistent with the *Arcor* judgment.

***Option 2 – Use the new version of the BU-LRAIC model to determine the monthly cost per line for LLU and SLU based on all working lines***

- 7.15 The existing model, as set out in option 1, calculated the LLU and SLU monthly charge based on the assumption that all lines were equally likely to be unbundled and therefore should have equal weight when undertaking the cost calculation.
- 7.16 Option 2 proposes to maintain the cost treatment of basing the monthly charge per line on all working lines when developing the new version of the BU-LRAIC model.
- 7.17 Option 2 may result in comparatively low take-up of LLU in Ireland and may be part of the reason that OAOs are currently contributing to the cost of exchanges that they are unlikely to unbundle within the proposed price control period.
- 7.18 Option 2 may result in a charge which is not cost oriented. This may create competitive distortions if the decision to include all lines in the cost assessment is perceived as an interim measure, resulting in uncertainty about the longer-term path of prices. ComReg is of the preliminary view that this may not lead to effective competition due to the method by which the price is calculated, that is including working lines which may not be unbundled over the proposed price control period.
- 7.19 ComReg believe that the current low level of LLU is unsatisfactory and there is a need to ensure that the correct regulatory framework is in place to facilitate effective competition. ComReg does not believe that this option fulfils this objective.

***Option 3 – Use the new version of the BU-LRAIC model to determine the cost per line for LLU and SLU based on the probability of OAOs unbundling at certain exchanges, unbundling certain lines and considering a maximum loop length***

- 7.20 ComReg is of the preliminary view that option 3 more closely aligns the LLU and monthly charge with the costs of those exchanges that have a reasonable probability of being unbundled during the proposed price control period. The specific implementation of this proposed approach is set out in Section 5 of this document but, by way of introduction, ComReg notes that other regulators have recognised the difficulty that OAOs may have in unbundling certain lines and this has been considered by them in setting the monthly rental charge for LLU.
- 7.21 The advantage of option 3 is that it facilitates efficient entry by OAOs by ensuring the LLU monthly charge is more appropriately linked to the costs that the OAOs incur or contribute to. ComReg believes that this provides a more effective and transparent regulatory environment. In addition, ComReg is of the preliminary view that this is consistent with practice in other EU member states.
- 7.22 Given the current low level of LLU activity in Ireland, ComReg considers that option 3 is necessary in terms of the potential benefits that it can deliver including enhanced choice and lower retail charges.

- 7.23 While LLU is most likely to occur initially in cities and other densely populated areas, ComReg considers that OAOs may unbundle a wider range exchanges in less densely populated areas over the longer-term. In ComReg’s view these proposals will benefit consumers throughout Ireland in both the long-term and short-term. One reason for this is that Eircom’s national pricing policy means that price reductions resulting from increased urban competition should directly benefit consumers living in more rural areas. While OAOs are not mandated to operate a flat national pricing structure, most do so anyway, and so their customers should also benefit from enhanced competition, wherever they live in Ireland.
- 7.24 Furthermore, ComReg observes that many of the existing OAOs offer services nationally using a combination of LLU or indirect access. ComReg anticipates that new entrants as a result of LLU reform may behave in a similar manner, leading to further enhancements to competition in both urban and rural areas.
- 7.25 ComReg also notes that these outcomes are consistent with the government’s objective to promote investment in broadband services.
- 7.26 However, while option 3 has a number of advantages, Eircom has raised concerns that this approach would lead to an under-recovery of its efficiently incurred costs. This is discussed further below. In addition, Eircom also appears to be concerned that a reduction in LLU charges could result in it losing a proportion of its market share. In this regard ComReg would emphasise that it is Eircom’s responsibility to maintain its own market share by ensuring the competitiveness of its retail propositions.
- 7.27 In the development of the model ComReg has afforded Eircom every opportunity to comment and assist it in arriving at a fit for purpose model for LLU and SLU price setting purposes. ComReg is of the view that the interaction with Eircom over the past 18 months has ensured a fully transparent process and the purpose of this consultation is to ensure full transparency at an industry level.
- 7.28 ComReg believe that the proposals set out are proportionate in that they allow Eircom to recover the costs of providing a LLU service while also incentivising further competition which will ultimately benefit consumers.

### Impact on Stakeholders

In determining the impact on stakeholders, in relation to the regulatory options above, ComReg considered the following:

<b>Option 1 – Continue to use the 2003 LLU costing model</b>		
<b>(a) Impact on incumbent</b>	<b>(b) Impact on OAOs</b>	<b>(c) Impact on consumer</b>
(i) Existing model may not provide appropriate efficiency incentives for incumbent.	(i) Existing model may not provide appropriate make/buy incentives for OAOs.	(i) Consumers may be subject to higher retail charges.
(ii) The existing model may not ensure cost oriented charges.	(ii) Existing model creates some uncertainty about future charges.	
	(iii) OAOs pay for the cost of lines that are unlikely to be unbundled.	

<b>Option 2 – Use the new version of the BU-LRAIC to determine the monthly cost per line for LLU and SLU based on <u>all</u> working lines</b>		
<b>(a) Impact on incumbent</b>	<b>(b) Impact on OAOs</b>	<b>(c) Impact on consumer</b>
(i) More appropriate incentives provided by increased sophistication in modelling process.	(i) More appropriate incentives provided by increased sophistication in modelling process.	(i) Limited short-term impact on consumers. Some increase in long-term welfare through improved incentives arising from new model.
(ii) The new version of the model may not ensure cost oriented charges.	(ii) OAOs continue to pay for exchanges that they are unlikely to be able to unbundle during proposed period of the price control.	(ii) Consumers may be subject to higher retail charges.
	(iii) Limited scope for new, efficient, entry by OAOs.	
<b>Option 3 – Use the new version of the BU-LRAIC model to determine the monthly cost per line for LLU and SLU based on the probability of OAOs unbundling at certain exchanges, unbundling certain lines and considering a maximum loop length</b>		
<b>(a) Impact on incumbent</b>	<b>(b) Impact on OAOs</b>	<b>(c) Impact on consumer</b>
(i) Reduction in average wholesale charge to reflect cost of providing LLU.	(i) Incentive to OAOs to increase their LLU footprint to an increasing number of exchanges.	(i) Price reductions may occur on retail services.
(ii) Provides an incentive to increase efficiencies.	(ii) Wholesale charges being charged will conform with the cost orientation principle.	(ii) New consumers will be encouraged to purchase additional services (particularly broadband).
(iii) May increase incentive to invest in NGN so as to be able to offer a wider range of competitive services.	(iii) Wholesale charges more geared to cost and competitive pricing. This will encourage efficient entry by OAOs.	(iii) Combination of national pricing structure and additional WBA entry should benefit consumers across the whole of Ireland.
(iv) Assurance of compliance with cost orientation principle for LLU and SLU.	(iv) OAOs will not be discouraged from investing in alternative infrastructure.	(iv) Increased level of competition at a retail level as OAOs offer a wider range of services.
	(v) If LLU becomes widespread may need to consider the impact of any associated business cases on introduction of a USO fund	

7.29 For the reasons set out above, ComReg considers that the opportunity to develop a more sophisticated approach to setting the LLU and SLU monthly charge outweighs any benefits there may be from retaining the current model. Consequently, ComReg is of the preliminary view that option 1 and option 2 are not appropriate on the basis that both of these approaches may lead to charges which are not in compliance with

the cost orientation obligation. The principle advantage of option 3 is that it more closely aligns the LLU and SLU monthly rental charges with the costs that OAOs incur or contribute to. In ComReg's view the change to the existing approach represents an important opportunity to facilitate efficient entry by OAOs. Further LLU entry by OAOs should benefit consumers through lower charges and increased choice in both rural and urban areas. Despite the advantages of option 3, ComReg is mindful of Eircom's concern that the change in approach may lead to a net under-recovery on some of its local loop assets. However, ComReg considers that there is an important distinction between the appropriate cost-oriented LLU and SLU monthly charge and any secondary implications that this may have for over-all cost recovery. As such, ComReg considers that these issues would need to be addressed by a separate process, rather than within the current consultation.

7.30 On balance, ComReg considers that the net benefits from option 3 outweigh the net benefits associated with options 1 and 2.

**Q. 20. Respondents are requested to provide views (if any) which ComReg should consider in completing its Regulatory Impact Assessment.**

## 8 Submitting Comments

All comments are welcome, however it would make the task of analysing responses easier if comments were referenced to the relevant question numbers from this document.

The consultation period will run from 8 May 2009 to 12 June 2009 during which the Commission welcomes written comments on any of the issues raised in this paper.

Having analysed and considered the comments received, ComReg will review the issues raised from the Consultation Document and publish a report in the coming months on the consultation which will, inter alia summarise the responses to the consultation.

In order to promote further openness and transparency ComReg will publish all respondent submissions to this consultation, subject to the provisions of ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24.

### **Please note**

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.

As it is ComReg's policy to make all responses available on its web-site 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

Such Information will be treated subject to the provisions of ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24

## Appendix A: Consultation Questions

### List of Questions

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- Q. 2. Do you agree that the basis used for forecasting price trends for copper and the other local loop assets (i.e. poles, trenches, chambers, MDFs, street cabinets, etc) appears reasonable? Please state the reasons for your response. .... 52
- Q. 3. Do you agree that it is reasonable to consider that contractor costs will reduce over the proposed three year price control period? Please state the percentage (%) which you expect labour costs to reduce over this period. .... 56
- Q. 4. Do you believe that the volumes of working lines will increase, decrease or remain static over the proposed price control period? Please state in percentage (%) terms your views on the likely movements with detailed calculations, if necessary. .... 57
- Q. 5. Do you agree with ComReg's preliminary view that working capital should not be included in the BU-LRAIC cost model used to determine the LLU monthly rental charge? Please state the reasons for your response. .... 58
- Q. 6. Do you agree that it is reasonable to consider that labour costs will reduce over the proposed three year price control period? Please state the percentage (%) which you expect labour costs to reduce over this period. .... 64
- Q. 7. Do you agree that the LFI of the current Eircom network is not an appropriate basis on which to set the operating costs of a BU-LRAIC model in determining the LLU and SLU monthly rental charge? Please state the reasons for your response. .... 65
- Q. 8. Do you agree that the LFI of an efficient BU-LRAIC model, used to determine the LLU and SLU monthly rental charge, should be based on an LFI not exceeding 8%? Please state the reasons for your response. .... 65
- Q. 9. Do you agree with the overall preliminary approach taken by ComReg above in relation to the basis used in determining the capital costs and operating costs used in the BU-LRAIC model for determining the monthly rental charges of LLU and SLU services in Ireland? Please state the reasons for your response. .... 66
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Q. 18. Do you believe that the draft direction is clear, precise, and intelligible from a legal, technical and drafting perspective? Please state the reasons for your response. ....	78
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Q. 20. Respondents are requested to provide views (if any) which ComReg should consider in completing its Regulatory Impact Assessment. ....	84

## Appendix B: Legislative and policy background

### 1. Eircom's legal obligation: Position of SMP, access to LLU and cost orientation

Eircom has SMP in the market for LLU by virtue of Section 3 of ComReg Decision No. D8/04. Eircom continues to have SMP until ComReg determines that Eircom no longer has SMP, following a market analysis, or until ComReg Decision No. D8/04 is replaced or revoked.

Under Section 9 of ComReg Decision No. D8/04, Eircom has a legal obligation of cost orientation, in relation to the price of LLU. The designation of Eircom with SMP in the LLU market, as set out in ComReg Decision No. D8/04, was made pursuant to the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2003 (“the Framework Regulations”).<sup>39</sup>

Eircom's obligation of cost orientation in respect of LLU as set out in ComReg Decision No. D8/04, was imposed on it pursuant to the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003 (“the Access Regulations”).<sup>40</sup>

ComReg is required to conduct market analysis in relation to 11 different markets that are described by the EU Commission as susceptible to *ex ante* regulation in the Recommendation on Relevant Markets.<sup>41</sup> The Recommendation on Relevant Markets was published on 17 December 2007 and updated an EU Commission Recommendation of 11 February, 2003 that had listed 18 different markets susceptible to *ex ante* regulation.

Accordingly, on 23 December 2008, ComReg published ComReg Document No. 08/104 entitled “*Response to Consultation Paper - Market review: Wholesale physical network infrastructure access (Market 4). Response to ComReg Document 08/41 and Draft Decision*” (“ComReg Document No. 08/104”). ComReg Document No. 08/104 thoroughly analysed the conditions of competition on the market for wholesale physical network infrastructure access (“WPNIA”). The WPNIA market is a market that includes LLU, although it is in fact a broader market than LLU. ComReg Document No. 08/104 found that Eircom has a position of SMP. ComReg Document No. 08/104 was also notified to the European Commission in accordance with all legislative requirements. The European Commission did not exercise its right of veto in respect of ComReg's findings and has in all material respects agreed with them. In any event, Eircom currently has SMP in the market for LLU by virtue of section 3 of ComReg Decision No. D8/04.

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<sup>39</sup> Those Regulations 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 (“the Framework Directive”).

<sup>40</sup> Those Regulations 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 (“the Access Directive”).

<sup>41</sup> EU 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 the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services.

The proposals set out in this consultation would also be relevant and applicable to the WPNIA market.

If Eircom is ultimately found not to have SMP in the WPNIA market, it would not in general, be legally permissible to impose an obligation of cost orientation on Eircom (subject to Article 5 of the Access Directive). In those circumstances, the matter of an appropriate methodology and a model underlying a cost orientation obligation, may cease to be relevant, at least for the purpose of SMP obligations (but not necessarily for the purposes of *ex post* application of competition law, for example).

This consultation, relates ultimately to Eircom's SMP price obligation of cost orientation with regard to the prices it charges for LLU.

## **2. ComReg's statutory functions and objectives**

Under section 10 (1) (a) of the Communications Regulation Act, 2002, ComReg has an express statutory function as follows:

*"...to ensure compliance by undertakings with obligations in relation to the supply of and access to electronic communications services, electronic communications networks and associated facilities and the transmission of such services on such networks."*

Eircom has an obligation of cost orientation in the LLU market and ComReg must therefore, ensure compliance by Eircom with this obligation.

Section 12 (1) (a) of the Communications Regulation Act, 2002 provides that the objectives of ComReg in exercising its functions in relation to the provision of electronic communications networks, electronic communications services and associated facilities are:

- (i) To promote competition;
- (ii) To contribute to the development of the internal market; and
- (iii) To promote the interests of users within the Community.

The above statutory objectives are clearly related to the exercise by ComReg of its function of ensuring compliance by Eircom with its obligation of cost orientation.

In pursuance of the objective of the promotion of competition, ComReg is required to take all reasonable measures aimed at achieving this objective, including:

- (i) Ensuring that there is no distortion or restriction of competition in the electronic communications sector; and
- (ii) Encouraging efficient investment in infrastructure and promoting innovation.

In pursuance of the objective of contributing to the development of the internal market, ComReg is required to take all reasonable measures aimed at achieving this objective, including:

- (i) Removing remaining obstacles to the provision of electronic communications networks, electronic communications services and associated facilities at Community level; and
- (ii) Ensuring that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services and associated facilities.

In pursuance of the objective of the promotion of the interests of users within the Community, ComReg is required to take all reasonable measures aimed at achieving this objective, including:

- (i) Encouraging access to the internet at reasonable cost to users.

Regulation 6 (1) of the Access Regulations provides that ComReg shall, acting in pursuit of the objectives set out in section 12 of the Communications Regulation Act, 2002, encourage and, where appropriate, ensure, in accordance with the Access Regulations, adequate access, interconnection and interoperability of services in such a way as to:

- (a) Promote efficiency;
- (b) Promote sustainable competition; and
- (c) Give the maximum benefit to end-users.

### **3. ComReg's powers under the Access Regulations**

ComReg has statutory powers under Regulation 10 (5) of the Access Regulations, to issue directions requiring Eircom to make changes to a reference offer to give effect to obligations imposed under the Access Regulations and to publish the reference offer with such changes.

Under Regulation 17 of the Access Regulations, ComReg may, for the purpose of further specifying requirements to be complied with relating to an obligation imposed by or under the Access Regulations, issue directions to an undertaking to do or refrain from doing anything which ComReg specifies in the direction. Eircom has an obligation of cost orientation imposed on it under ComReg Decision No. D8/04, pursuant to the Access Regulations.

Under Regulation 14 (4) of the Access Regulations, where an operator has obligations regarding the cost orientation of its prices (such as Eircom has) ComReg may, where appropriate require prices to be adjusted.

Under Regulation 15 (2) of the Access Regulations, ComReg may “...*amend or revoke any obligations imposed by it...*”

Accordingly, ComReg has all the necessary statutory functions, powers and objectives to determine a new LLU price as a requirement for Eircom to comply with, in furtherance of its legal obligation of cost orientation in relation to the price it charges for LLU.

#### **4. Other legislative provisions**

ComReg is obliged under Regulation 14 (3) of the Access Regulations to ensure that any cost recovery mechanism, or pricing methodology that it imposes, serves to promote efficiency and sustainable competition and to maximise consumer benefits.

Regulation 14 (3) of the Access Regulations also provides that ComReg may take account of prices available in comparable competitive markets. It should be noted that these provisions mirror those at EU level, as set out under Article 13 (2) of the Access Directive.

Recital 19 of the Access Directive provides that:

*“...the imposition by national regulatory authorities of mandated access that increases competition in the short-term should not reduce incentives for competitors to invest in alternative facilities that will secure more competition in the long-term”.*<sup>42</sup>

The Access Directive also provides that:

*“National regulatory authorities shall ensure that any cost recovery mechanism or pricing methodology that is mandated serves to promote efficiency and sustainable competition and maximise consumer benefits.”*<sup>43</sup>

Article 8 of the Framework Directive requires ComReg to promote competition by amongst other things:

- Ensuring that users, including disabled users, derive maximum benefit in terms of choice, price, and quality.
- Ensuring that there is no distortion or restriction of competition in the electronic communications sector.
- Encouraging efficient investment in infrastructure, and promoting innovation.

These objectives are also reflected in national legislation by section 12 of the Communications Regulation Act, 2002.

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<sup>42</sup> Recital 19.

<sup>43</sup> Article 13 (2).

## 5. Policy Directions

Policy directions were issued to ComReg by the Minister for Communications, Marine and Natural Resources on 21 February, 2003 and 26 March 2004. In that regard section 13 (1) of the Communications Regulation Act, 2002 provides that:

*“In the interests of the proper and effective regulation of the electronic communications and postal markets, the management of the radio frequency spectrum in the State and the formulation of policy applicable to such proper and effective regulation and management, the Minister may give such policy directions to the Commission as he or she considers appropriate **to be followed by the Commission in the exercise of its functions.** The Commission shall comply with any such direction.”* (Emphasis added).

The policy directions are very significant in the context of the policies that ComReg is pursuing.

Policy direction No. 3 of 2003 in relation to broadband provided that:

*“The Commission shall, in the exercise of its functions, take into account the national objective regarding broadband rollout, viz, the Government wishes to ensure the widespread availability of open-access, affordable, always on broadband infrastructure and services for businesses and citizens on a balanced regional basis within three years, on the basis of utilisation of a range of existing and emerging technologies and broadband speeds appropriate to specific categories of service and customers.”*

Policy direction No. 4 of 2003 in relation to industry sustainability provided that:

*“The Commission shall ensure that in making regulatory decisions in relation to the electronic communications market, it takes account of the state of the industry and in particular the industry’s position in the business cycle and the impact of such decisions on the sustainability of the business of undertakings affected.”*

Policy direction No. 9 of 2003 in relation to consistency across technological platforms provided that:

*“The Commission shall ensure that regulatory obligations imposed upon undertakings engaged in the provision of similar electronic communications services but using different technologies are consistent, taking into account any different conditions that may exist, including the existence of market power.”*

A general policy direction in 2004 required ComReg to focus on competition. It stated as follows:

*“ComReg shall focus on the promotion of competition as a key objective. Where necessary, ComReg shall implement remedies which counteract or remove barriers to market entry and shall support, in all ways possible, entry by new players to the market and entry into new sectors by existing players. ComReg shall have a particular focus on:*

- *Market share of new entrants.*
- *Price margins on offer to operators at the wholesale level with the goal to ensure that such price margins will incentivise and advance competition.*
- *Price level to the end user.*
- *Competition in the fixed and mobile markets.*
- *Possibilities for incentivising alternative technology delivery platforms to support competition.”*

The reasons for that policy direction were stated as follows:

*“The creation of sustainable competition between other authorised operators (OAO) and incumbents across different technical platforms and markets will benefit the economic and social development of Ireland by increasing the choice and decreasing the price to consumers and businesses. There is a need to continue to increase competition in the Communications Sector.”*

A further policy direction provided that:

*“ComReg shall use regulatory and enforcement tools, where necessary, to support Government initiatives and remove regulatory barriers, if any exist, to such initiatives to develop broadband. In encouraging the further rollout of broadband ComReg shall have a particular focus on:*

- *The residential and SME sectors.*
- *Balanced regional development and.*
- *Incentivising broadband provision on alternative platforms.”*

The reasons for that policy direction were stated as follows:

*“The development of broadband is a key enabler to enhance and maintain Ireland’s economic and social development. It is important that the regulatory environment underpins the development of available, affordable and competitive broadband services.”*

## **6. ComReg strategy statement**

ComReg’s own strategy statement for 2008 - 2010 (ComReg Document No. 07/104 published 17 December, 2007) sets out ComReg’s goals for the period. One of those goals is the creation of conditions suitable for competition and to promote innovation.

## Appendix C: Annuity Formulas

The following formula has been used in various countries with different value of I:

$$A_1 = I \times \frac{1}{(1+w)^i} \times \frac{w-p}{1 - \left(\frac{(1+P)}{(1+w)}\right)^N}$$

Note:

- *A<sub>1</sub>*, the annual charge is year one (used for price calculation)
- *I*, the investment value of the asset
- *w*, the cost of capital (parameter)
- *P*, the real annual change in the price of the asset
- *N*, the useful life of the asset

### 1) ARCEP, France, April 2005, Consultation on copper local-loop costing methods with $k=0$

$$A_1 = I \times \frac{1}{(1+w)} \times \frac{w-p}{1 - \left(\frac{(1+P)}{(1+w)}\right)^N}$$

### 2) PTS, Sweden, Sept 2007<sup>44</sup>

$$A_1 = I \times \frac{w-p}{1 - \left(\frac{(1+P)}{(1+w)}\right)^N}$$

### 3) BIPT, Bottom-up model for Interconnection<sup>45</sup>, November 2006

$$A_1 = I \times \frac{1}{\sqrt{1+w}} \times \frac{w-P}{1 - \left(\frac{(1+P)}{(1+w)}\right)^N}$$

<sup>44</sup> Model Reference Paper (rev B) Guidelines for the LRIC bottom-up and top-down models

<sup>45</sup> Description of the methodology prepared by BIPT in collaboration with Bureau van Dijk Management Consultants

## Appendix D: Updated Competition Assessment in the Market for Wholesale Unbundled Access

The existing SMP designation and decision on obligations

1. A Decision Notice on Wholesale Unbundled Access (including shared access) to metallic loops and sub-loops was published on 15 June 2004.<sup>46</sup> (“the WUA Decision”) The notified Wholesale Unbundled Access (“WUA”) market included the following products:
  - Fully unbundled local metallic path (“ULMP”).
  - Shared loops (line sharing).
  - Fully unbundled sub-loops.
  - Shared sub-loops.
  - Co-location.
  - Associated facilities.
2. WUA and wholesale broadband access (“WBA”) were considered to fall within distinct product markets, due to differences in functionality and pricing. ComReg considered that access via alternative technologies such as cable and fixed wireless access (“FWA”) were excluded from the WUA market on the grounds that they would be unlikely to pose a competitive constraint in the WUA market within the period of the review. Accordingly, ComReg formed the view that there was a distinct relevant market in Ireland for WUA (including shared access) to metallic loops and sub-loops for the purpose of providing broadband and voice services.
3. Having regard to the market definition and the associated SMP analysis carried out at that time, ComReg considered that Eircom had 100% share of the WUA market, and that this was unlikely to change over the lifetime of the review. The threat of competitive constraint posed by potential competition and countervailing power over the review period was considered to be low, due to high barriers to entry and expansion in the WUA market.
4. On that basis, Eircom was designated with SMP. ComReg imposed a number of obligations upon Eircom in relation to the provision of WUA. One such obligation imposed on Eircom was that of price control and cost orientation. Since the publication of the WUA Decision in June 2004, ComReg has been involved in the implementation of those obligations.<sup>47</sup>

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<sup>46</sup> Designation of SMP and Decision on Obligations- Market Analysis: Wholesale Unbundled Access (including shared access) to metallic loops and sub-loops. ComReg Decision D8/04, dated 15 June 2004.

<sup>47</sup> For example, on line share ComReg 04/111 and ComReg 05/22; and Consultation on the Rental price for Shared Access to the Unbundled Local Loop (ComReg Document Number 08/23).

### Proposed amendment to the LLU pricing methodology

5. The WUA Decision set out the principles to guide the implementation by ComReg of a detailed price control methodology. ComReg notes that the proposal to amend the LLU pricing methodology does not constitute a material change to the price control and cost orientation obligation in the WUA Decision. Rather, the proposed change relates only to the methodology and implementation of the existing price control and cost orientation obligation established by ComReg in the WUA Decision. The proposed change therefore does not require amendment of the actual price control and cost orientation obligation established in the WUA Decision.
6. 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 market and by encouraging efficient investment in infrastructure. The proposal is consistent with, and falls within, the scope of the existing obligation of price control and cost orientation.

### Analysis of Wholesale Physical Network Infrastructure Access Market

7. ComReg is in the process of conducting a full analysis of the Wholesale Physical Network Infrastructure Access ("WPNIA") market. This market was introduced by the European Commission in December 2007<sup>48</sup> as an updated and technology-neutral version of the WUA market. The updated WPNIA market is technology neutral, and is not limited to metallic loops and sub loops (as was the case in the previous WUA market). Therefore, the WUA market, defined in the WUA Decision, is contained within the broader WPNIA market. Accordingly, the final WPNIA market analysis decision will ultimately supersede the WUA decision which remains in force.
8. On 23 December 2008 ComReg published its Response to Consultation and Draft Decision for the WPNIA market analysis<sup>49</sup> (the "Response and Draft Decision document 08/104").
9. ComReg was of the preliminary view that Eircom still has SMP on the expanded WPNIA market, with a market share at or approaching 100%. Metallic loops still account for all but a very small number of access paths that fall within the WPNIA market. It is therefore reasonable to assume that, in the context of the existing WUA Decision that is solely based on metallic loops, Eircom continues to have a market share at or close to 100%.
10. ComReg's preliminary view as set out in the Response and Draft Decision document 08/104 is that the barriers to entry and expansion within the WPNIA market remain high, due to the high cost and lengthy timeframe associated with building a fixed broadband network. As a result, the competitive threat posed by potential competition remains limited. ComReg's preliminary view is that countervailing power in the

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<sup>48</sup> EU 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 the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services.

<sup>49</sup> Market Review: Wholesale physical network infrastructure access (Market 4). Response to ComReg Document 08/41 and Draft Decision available [Here](#)

WPNIA market also remains limited for the reasons set out in the Response and Draft Decision document 08/104.

11. ComReg's preliminary conclusion is that Eircom has SMP in the WPNIA market.
12. ComReg notified the European Commission of the proposed SMP designation in accordance with Regulation 20 of the Framework Regulations. In its response letter to ComReg, the European Commission approved ComReg's proposal in the Response and Draft Decision document 08/104 to designate Eircom with SMP in the WPNIA market (foregoing the right to veto ComReg's draft decision). The European Commission invited ComReg to reconsider its treatment of fibre in defining the product market, but noted specifically that its invitation did not affect the regulatory outcome with respect to the SMP designation.
13. In view of its analysis of the WPNIA market, ComReg considers that:
  - Countervailing power in the existing WUA market remains limited;
  - Barriers to entry and expansion within the WUA market remain high;
  - The threat posed by actual and potential competition remains limited;
  - Eircom has a market share at or close to 100% in the existing WUA market; and
  - Competition problems would be likely to occur in the WUA market in the absence of effective remedial obligations.
14. Based on the up-to-date analysis conducted by ComReg on the WPNIA market and, having regard to the subsequent approval of that preliminary view by the European Commission, ComReg is of the view that Eircom's existing SMP designation in the WUA market as set out in the WUA Decision is an appropriate instrument on which to amend the LLU pricing model.

#### Conclusion

15. This appendix note assesses whether the competitive conditions that are present within the WUA market justify the continued imposition of a price control obligation on Eircom.
16. ComReg considers that the competitive conditions in the WUA market, as observed by ComReg and described in the WUA Decision, remain present 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 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.