



Next Generation Access ('NGA'):

Remedies for Next Generation Access Markets

Response to Consultation and Final Decision

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ComReg Decision D03/13

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Chapter 1

1 Introduction

- 1.1 This decision in respect of the regulation of next generation access is made against the background of a number of important developments: in particular during a transition to fibre and in the context of the European Digital Agenda ('EDA') targets. The EDA sets targets for achieving increased penetration of super fast broadband in Europe by 2020¹, with a view to driving economic growth and competitiveness throughout the single market. In addition, on 31 August 2012 the Irish Government announced a National Broadband Plan ('NBP') which sets out to achieve the EDA targets, with the potential implementation of a State subsidy scheme for fibre deployment, where a commercial case for investment is unlikely.
- 1.2 On 28 July 2011, Eircom announced its plans to upgrade its existing copper access network with a next generation access ('NGA') program that will pass 900,000 homes and 100,000 businesses in a multi-year rollout². The deployment will cover up to one million premises and will be delivered over five phases investing €400m in fibre infrastructure. A number of phases are now under way and 150,000 premises have been passed to date. The targeted completion date for the first 500,000 premises is mid 2013, with a target of 750,000 homes passed by the close of 2013. One million premises are expected to be completed by December 2014³.
- 1.3 Through industry fora, the wholesale product set for NGA has been shared with industry over the last twelve months. On the 20th November 2012⁴, Eircom published on its wholesale website, the prices and product terms and conditions for NGA. It is expected that there will be a trial of services in ten exchange areas in the first quarter of 2013, with commercial services due to commence in the second quarter of 2013.

¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A Digital Agenda for Europe. Brussels, 26.8.2010. COM(2010) 245 final/2.

² http://pressroom.eircom.net/press_releases/article/eircom_Announces_Over_100M_Investment_in_Phase_1_of_Planned_Fibre_Rollout/.

³ <http://www.nextgenerationnetwork.ie/ngn-access>.

⁴ <http://www.nextgenerationnetwork.ie/ngn-access>.

- 1.4 Through analysis of the relevant markets Eircom has been found to have significant market power ('SMP') in the markets for Wholesale Physical Network Infrastructure Access ('WPNIA') and Wholesale Broadband Access ('WBA'). In ComReg Decision No. D05/10⁵ (the "WPNIA Decision") and ComReg Decision No. D06/11⁶ (the "WBA Decision") ComReg imposed SMP obligations for current generation and next generation WPNIA and WBA services and facilities pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations⁷.
- 1.5 In both the WPNIA Decision and the WBA Decision, ComReg imposed obligations that applied to Eircom in the context of NGA but ComReg stated that it would consult further on their detailed specification and further implementation. This was then carried out in ComReg Consultation Document No. 12/27: Next Generation Access ('NGA'): Proposed Remedies for Next Generation Access Markets⁸ (hereinafter referred to as "ComReg Document No 12/27" or "The Consultation"). This is our response and final decision for WPNIA and WBA, which contains the Decision Instruments in Annex 1 and Annex 2.
- 1.6 The objectives for this response to consultation and Decisions, is to focus on meeting ComReg's statutory functions including the regulation of the market for wholesale physical network infrastructure access which has been identified as Market 4 of the European Commission's Recommendation of 17 December 2007 on relevant product and services markets within the electronic communications sector susceptible to *ex ante* regulation (the 'Recommendation')⁹ (the "WPNIA market") and the market for wholesale broadband access (Market 5 of the Recommendation (the "WBA market")).

⁵ Response to Consultation and Decision Document entitled "Wholesale (Physical) Network Infrastructure Access (Market 4)" (Document No.10/39).

⁶ Response to Consultation and Decision Document entitled "Market Review: Wholesale Broadband Access (Market 5)", (ComReg Document No. 11/49).

⁷ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the Access Regulations).

⁸ ComReg Document No 12/27; Consultation and Draft Decision on Next Generation Access: Proposed Remedies for NGA Markets; 4 April 2012 (Hereinafter referred to as "ComReg Document No 12/27" or "The Consultation").

⁹ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 344, 28.12.2007, p. 65).

- 1.7 Since the Consultation, ComReg Document No. 12/27, European policy for the digital agenda has evolved. A recent statement by the Commissioner, Vice President Kroes, on 12th July 2012¹⁰, emphasises the importance of stimulating fibre investment or at least ensuring that there are no regulatory barriers to investment. The European Commission has further set out its regulatory approach for next generation remedies with a draft Recommendation on “Consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment”; which was sent to BEREC for opinion in December 2012. This is expected to be adopted in the first half of 2013¹¹. This draft recommendation addresses the application of the non-discrimination obligation and wholesale access pricing methodologies, for both copper and fibre access networks in the context of NGA investments. Leading on from the policies set out in the European Commission’s NGA Recommendation¹², the aim of the draft recommendation is to promote efficient investment and innovation, in new and enhanced infrastructure and ensure a level playing field for competition.
- 1.8 The European Commission has also communicated its regulatory policy and position on NGA through a number of Decision letters to National Regulatory Authorities (‘NRAs’), following the Article 7 process. In particular the guidance given in the Commission recommendation to Finnish NRA, FICORA¹³ and the Commission Decision to Malta Communications Authority (‘MCA’)¹⁴ has helped inform our decision making. Our approach to the regulation of NGA takes into account these developments and considers the policy set out in the EDA Targets; the NGA Recommendation; and the current guidance from the European Commission¹⁵.

¹⁰ Hereinafter referred to as the “12th July Statement”.

¹¹ Hereinafter referred to as “Recommendation on non-discrimination and costing methodologies”. <http://ec.europa.eu/digital-agenda/en/news/commission-seeks-berec-opinion-draft-recommendation-consistent-non-discrimination-obligations>.

¹² Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (Text with EEA relevance) (2010/572/EU) (the “NGA Recommendation”).

¹³ Cases FI/2012/1328-1329: Markets for wholesale physical network infrastructure access at a fixed location and wholesale broadband access.

¹⁴ Case MT/2012/1374

¹⁵ Hereinafter referred to as “Recommendation on non-discrimination and costing methodologies”. <http://ec.europa.eu/digital-agenda/en/news/commission-seeks-berec-opinion-draft-recommendation-consistent-non-discrimination-obligations>.

- 1.9 Oxera consultants assisted ComReg in this review, by examining the appropriate pricing principles and methodologies to adopt in the context of NGA. Oxera's non-confidential report entitled "Eircom's next generation access products – Pricing principles and methodologies"; has been separately published in tandem with this decision at ComReg Document No 13/11a. A further analysis has been completed by Oxera as part of this review, which examines the prevalence and impact of retail pricing constraints in broadband markets. A non-confidential version of the report entitled "Assessment of Retail Pricing Constraints" (the "Oxera Report on Retail Constraints") has been separately published at ComReg Document No 13/11b. TERA consultants assisted ComReg with the application of the pricing principles and methodologies in terms of the pricing structure for NGA products and services.
- 1.10 A 14 week consultation period was provided for and eleven submissions were received in response.
- 1.11 The eleven respondents were: BT; Magnet; E|Net; ALTO; Eircom Group; Telefonica O2; Vodafone; ECTA; Imagine; Digiweb and UPC (together the 'Consultation Responses'). Over the course of this consultation period, ComReg has met with industry and the European Commission to ensure transparent and informed decision making. We would like to thank industry and respondents to the Consultation, as substantial contributions, including as regards the Decision Instruments, were made as part of this process. The industry input and responses to the Consultation Document No. 12/27 have been closely considered during the progress of this review and responses have been published on our website¹⁶.
- 1.12 Furthermore, having considered the views of interested parties and reviewed the draft text of the NGA WPNIA and WBA Decision Instruments, ComReg has made a number of structural and textual changes in the final Decisions. These have been made with a view to improving the clarity of the Decision Instruments and do not affect the substance of the Decisions as published in draft form in the Consultation Document.
- 1.13 This document is structured as follows:
- Section 2 of this document contains the executive summary.
 - Section 3 of this document contains the regulatory challenges.

¹⁶ "Submissions received in response to the Consultation on NGA", ComReg Document No 12/27 can be found in ComReg Document No 12/97: NGA non-confidential submissions to ComReg 12/27 received from respondents: dated 31 August 2012.

- Section 4 of this document contains the obligation to provide access in the WPNIA market.
- Section 5 of this document contains the obligation to provide access in the WBA market.
- Section 6 of this document contains the conditions of access common to the WPNIA market and the WBA market.
- Section 7 of this document contains the obligation of non-discrimination in the WPNIA market and the WBA market.
- Section 8 of this document contains the obligation of transparency in the WPNIA market and the WBA market.
- Section 9 of this document contains the obligations relating to the provision of NGA Services.
- Section 10 of this document contains the obligation of price control in the WPNIA and WBA markets.
- Section 11 contains the regulatory impact assessment (the "RIA").
- Annex 1 contains the Decision Instrument relating to NGA in the WPNIA Market.
- Annex 2 contains the Decision Instrument relating to NGA in the WBA Market.

Chapter 2

2 Executive Summary

- 2.1 Subsequent to Eircom's initial announcement of its NGA programme in July 2011¹⁷, Eircom has committed to rolling out fibre to the cabinet ('FTTC') over five phases, to be completed by the end of 2014. Eircom plans to invest approximately €400 million in the upgrade to fibre. This will deliver an initial NGA footprint of 750,000 by the end of 2013¹⁸ and a final footprint of one million premises by December 2014¹⁹. Phase Four comprises of 50 exchanges, and will see a further 350,000 premises passed with fibre, in addition to the 350,000 premises previously announced in Phases 1-3. So far 150,000 premises are passed with fibre and a total of 350,000 premises are expected to be able to avail of the new 40Mbps services provided by Eircom by mid-2013.
- 2.2 On 20 September 2011, Eircom presented to the industry further details of its plan to deploy NGA²⁰. This was followed, on 26 September 2011, by initiation of the Eircom's fibre pilot programme²¹. Over the course of the last year, Eircom has engaged with ComReg and the industry through industry fora. On 20th November 2012, Eircom published the relevant information the wholesale NGA product set including the product descriptions, Service Level Agreements (SLAs), processes and pricing.
- 2.3 The network architecture to be implemented by Eircom will be FTTC. This is where fibre optic cable is rolled out to a street side cabinet with the final connection from the cabinet to a home or premises over a legacy copper sub-loop. In addition, Eircom plans to deploy vectoring technology in its cabinets to further increase the speeds possible on the copper sub-loop and facilitate a greater breadth of customer base, capable of achieving higher speeds. The full copper network will remain in place and voice services will be provided over the PSTN.

¹⁷

http://pressroom.eircom.net/press_releases/article/eircom_Announces_Over_100M_Investment_in_Phase_1_of_Planned_Fibre_Rollout/

¹⁸ http://www.eircomwholesale.ie/News/NGA_Phase_4

¹⁹ <http://www.nextgenerationnetwork.ie/ngn-access>

²⁰ See <http://www.nextgenerationnetwork.ie/ngn-access>.

²¹ The pilot involves the build out of fibre optic cables using Fibre to the Home and Fibre to the cabinet to 16,000 homes and business served by Sandyford, Wexford town, Dundrum and Priory park exchanges for further details see. <http://www.fibrepilot.ie/index>.

- 2.4 In the Fixed Broadband Market, Digital Subscriber Line ('DSL') continues to be the main form of broadband access, equating to almost 66% of fixed broadband subscriptions in Q3 2012²². This reflects a decline from 75% of the market in 2009, mainly due to the strong growth of cable subscriptions. However, Eircom's market share of DSL broadband lines has not changed significantly over the years and is circa 71% of the retail DSL broadband market. Of the overall Fixed Retail Broadband Market Eircom has approximately 42%; OAOs have approximately 31.1% and UPC is estimated to hold approximately 27% market share²³. Cable subscriptions have experienced strong growth of over 25% year-on-year²⁴ over the last number of years.
- 2.5 The largest cable provider in Ireland, UPC, is investing heavily in its cable network that is capable of providing broadband and Voice over Broadband ('VoB') services, it is investing over €500m to upgrade its fibre power network to DOCSIS 3.0²⁵. The cable operator offers bundles of TV/broadband/telephony with entry level speeds of 50 Mbs (upgraded on 17th of September from an entry level of 25 Mbs) and ranging to top level speeds of 150 Mbs²⁶. Its total broadband subscriber base was estimated to be 283,400 in June 2012 and these broadband subscribers are concentrated in urban areas mainly. On 17th of September, UPC announced an upgrade to speeds offered, with an entry level broadband offering of 50 Mbs ranging to top speeds of 150Mbs²⁷. With the recent speed upgrades, UPC will have over 600,000 households capable of achieving 100 Mbs and over 725,000 attaining 30 Mbs access. While Eircom's NGA investment strategy in urban areas can be considered to some extent defensive to UPC's fibre rollout, Eircom intends to rollout NGA to areas beyond where UPC is currently present i.e. beyond the UPC cable footprint. Eircom's core strategy is to roll out FTTC in conjunction with vectoring, to offer broadband speeds comparable with that of the entry level speeds of the cable operator UPC.

²² ComReg Quarterly Key Data Report: Q3 2012, ComReg Document No 12/134 dated 12 December 2012.

²³ ComReg Quarterly Key Data Report: Q3 2012, ComReg Document No 12/134 dated 12 December 2012, see page 37.

²⁴ Although in Q3 2012 cable growth YoY was 20.9%.

²⁵ <http://www.upc.ie/pdf/UPCwelcomesNationalBroadbandPlan.pdf>.

²⁶ UPC recently identified that Ireland is ranked 7th globally in average download speeds, three times faster than the global average and significantly faster than the average speeds in the United States who came in at 12th". As identified by a study done by Akamai.

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- 2.6 Commercial activity in the fixed broadband market has shown significant developments in the last two years and is likely to evolve further over the coming 18 months to two years. BT is the main local loop unbundling ('LLU') operator in the Irish market and provides Vodafone with wholesale Bitstream services to service Vodafone's retail customer base. BT has recently signed an agreement with British Sky Broadcasting Group plc ('Sky') to provide WBA services. On 26th of July Sky announced that it intends to offer retail broadband bundled packages later in 2013²⁸, via the provision of Bitstream provided by BT. BT has unbundled approximately 60 exchanges and is in the process of extending their LLU footprint by a further 29 exchanges, for completion in the very near term. The majority of BT's current unbundling is on line share. The total number of LLU lines at Q3 2012 was at 59,495, with 45,676 provided with LLU line share and 13,819 on full LLU²⁹. LLU underpins approximately 5.0% of the fixed broadband market. The planned expansion by BT of LLU will mean that the LLU footprint will be largely be congruent with the planned NGA footprint area³⁰.
- 2.7 On 31st August 2012 the Irish government announced a National Broadband Plan to achieve the EDA targets. The plan foresees both State and private funding to meet these targets, whereby:
- "The total funding involved for any State intervention is indicatively estimated at €350 million, €175 million of which will come from public funding sources with the other €175 million from the successful commercial bidder(s) emerging from a public procurement process. State funding will only arise where it is clear that the market will not deliver".*
- 2.8 This will occur over a multi-year roll out and commits to making high speed broadband accessible for every business and home in the country with targets of 70Mbps – 100Mbps to half of the population by 2015; 40Mbps to a further 20% of population; and a minimum of 30 Mbps for every remaining home. Crucially, the planned investment for the NBP is to focus on non-commercial areas only, in other words, where the market fails to deliver³¹. ComReg has taken into consideration the goals of the European Commission and of the commitment by the Irish Government to broadening the reach of high-speed broadband availability in Ireland.

²⁸ At the Sky official launch on 18th January 2013, it was stated that "Sky will soon introduce broadband and home phone services for Irish customers, representing another significant milestone in its product offering".

²⁹ ComReg Quarterly Key Data Report: Q3 2012, ComReg Document No 12/134 dated 12 December 2012.

³⁰ NGA Footprint Area can be taken to mean Eircom's planned NGA roll out.

³¹ According to the "National Broadband Plan for Ireland" this can be taken to mean that "this investment will focus on the 50% population band which is beyond the predicted scope of commercial investment in cable and high speed broadband rollout using fibre. It will also take account of higher

- 2.9 On 15 August 2012, BT announced its interest in trialling FTTC via sub-loop unbundling in semi-urban locations, to deploy 80Mbps VDSL broadband. This would mirror a similar fibre strategy deployed in Northern Ireland, where approximately 89% of lines are connected to a fibre-enabled street cabinet and which was achieved in fact through a State funded co-investment scheme.
- 2.10 A recent development on the roll out of fibre infrastructure is the announcement by ESB to roll out fibre to the home (FTTH) to urban and semi-urban areas. ESB, the incumbent power network company is seeking a joint-venture ('JV') partner to deliver this investment, which will focus on areas outside of the main cable/LLU footprint, though it has stated that it will be in urban and semi-urban areas. ESB is currently seeking a joint venture partner with expertise in the retail communications market (see e-tenders 10th September 2012). If completed, ESB will offer fibre roll out on an open access basis with a view to the retail market being serviced by the JV partner.

2.1.1 ComReg's approach to NGA remedies:

- 2.11 Increasing commercial activity in the WBA and WPNIA markets indicates a significant degree of change in the market as NGA is imminent and industry and investors identify opportunities for growth and expansion. Investment in infrastructure based competition continues to emerge but remains at a sensitive stage of development. An expanding presence in the WPNIA market will mean that the constraint from copper-based assets (to Eircom's NGA based assets) is set to grow. ComReg takes a technology neutral approach to market development, prioritising competition over the support of a particular technology or platform. In fact, ComReg believes that supporting competition at all levels of the ladder of investment with the correct "buy or build" signals, will eventually lead to greater fibre uptake, under the right conditions of a properly functioning wholesale market.
- 2.12 Consistent with the principle of proportionality, which requires that the means used to attain a given end should be no more than what is appropriate and necessary to attain that end, ComReg has undertaken an incremental assessment of remedies (from the lightest to the most intrusive).

speed wireless solutions provided commercially in this band, ensuring that the State funded investment will only arise where it is clear that the market will not deliver".

- 2.13 Our approach considers market developments and takes into account the policy set out at a European level in the EDA Targets; the NGA Recommendation; and the recent 12th July Statement by the Commissioner, Vice President Kroes. European Commission policy underpins the importance of stimulating fibre investment or at least to ensure that there are no regulatory barriers to investment in fibre. In this context, the market is at a pivotal stage of development; given that the main form of wholesale competition for NGA will be in the broadband market, it is appropriate to support further roll out of LLU, providing opportunities for multiple suppliers of WBA/bitstream and a technology neutral approach.
- 2.14 ComReg's view is that the regulatory environment must be flexible enough to encourage NGA investment, particularly with respect to pricing. However, for pricing flexibility to be possible certain conditions must be in place.
- Firstly, there must be sufficient competitive pricing pressure from independent platforms. Such platforms, in our opinion, include cable and the constraint exercised by LLU (copper-based services having been defined as part of the same market as a chain substitute).
 - Second, there must be adequate assurance that the incumbent's obligation of non-discrimination has been adequately and transparently implemented, such that the incumbent cannot discriminate against wholesale customers, and that there are assurances that there are sufficient safeguards to competition.
 - Third, there must be assurance that the incumbent cannot create a margin squeeze at the retail level.
 - Fourth, the ladder of investment must be respected in an NGA environment. Network investment by alternative operators, to the deepest level possible, must continue to be encouraged where it makes sense.
- 2.15 ComReg's assessment is that the Irish market is in transition and is at a pivotal stage of development. Evidence of increased competition across platforms has been observed in areas where NGA is planned and there are indications of increased LLU based activity. The concentration of this commercial activity is in exchanges roughly congruent with the forecasted NGA footprint area.

2.16 Nevertheless the current market share of LLU based supply is low and there is very limited use of full unbundling. Furthermore, although the incumbent has announced plans to improve its wholesale performance by way of internal reforms these plans are not yet fully proven³². In summary, ComReg believes that while the market is not ready for complete deregulation in terms of NGA pricing; however there are sufficient retail pricing constraints from cable and prospectively from LLU based retail and wholesale services (if the right regulatory protections are in place) to warrant granting a mechanism for pricing flexibility. This can be achieved by allowing the incumbent flexibility on wholesale NGA pricing in the WBA market subject to a margin squeeze test against retail prices, while ensuring no foreclosure of LLU based retail or wholesale services. We take reassurance from the evidence of prevailing retail pricing pressure and focus on creating a level playing field with stringent non-discrimination measures. Therefore, with regard to non-discrimination, Eircom will have, *inter alia*, an obligation of equivalence of input (“EOI”) for systems and certain processes for NGA services. We consider this combination of measures (pricing flexibility and equivalence of inputs) to be consistent with the available guidance from the European Commission.

2.17 LLU investment continues to play a role in driving investment in infrastructure, at the deepest layer of the network. Moreover, NGA will not be rolled out to all homes in urban areas, therefore LLU investment can offer a wider spread of broadband provision to customers both within and outside the NGA footprint. Given that NGA has not yet been rolled out and will be introduced on a phased basis, LLU-based competition remains important for the foreseeable future. In order to stimulate investment in NGA or at least ensure that there are no regulatory barriers to investment, sufficient flexibility is needed to provide scope to react to market demand, since demand and appropriate price points are uncertain at the early stages of market development. In particular, a pricing regime which is flexible and not overly intrusive is essential to mirror market-based incentives, by allowing the incumbent to respond to observed prices and demand levels. Transparency and regulatory stability will also provide an environment for continued platform competition and investment from the cable operator. We consider this regime for the regulation of NGA as a structure that supports the development of infrastructure-based competition that can adapt as the market transitions to fibre.

2.18 In summary, the approach to NGA pricing is as follows:

³² See paper entitled “Discussion Document for Industry, Eircom Group, Proposed Programme of Voluntary Wholesale Reforms” dated 9 December 2011.

- A ceiling for NGA prices in WBA (Market 5) will be calculated by reference to a margin squeeze test against retail prices;
- Copper and fibre based services will be priced consistently relative to their cost of provision. This implies a lower bound on NGA prices below which they cannot fall without a corresponding reduction in LLU (and SLU) prices;
- A test to ensure replicability of retail services, providing an economic space between the various wholesale modes of provision of NGA (for example between NGA bitstream and VUA).

2.19 ComReg infers from market activity that a range of alternative investors could emerge and it is paramount to continue to foster material investment by the incumbent or by alternative operators. The importance of supporting LLU based competition means that the relativity between copper and fibre pricing will need to be maintained to support competition based on LLU inputs, supporting the principle of technology neutrality. Specifically this means that as well as imposing a ceiling on NGA prices by reference to retail prices, copper-based competition and indeed, a properly functioning wholesale market, is paramount during the transition to a fibre network.

2.20 Wholesale prices must be closely monitored and sufficient economic space must be left between different wholesale products, even when there is significant pricing pressure at the retail level, ensuring that the retail market remains competitive with choice for the consumer.

2.21 In line with our analysis in the Consultation, we continue to consider that Eircom could strategically foreclose an innovative competitor (where non-price discrimination could be used) at the wholesale level, or by virtue of applying a margin squeeze (which is particularly sensitive between the VUA and bitstream layers of the market). If not controlled, LLU and VUA players could be squeezed out of the wholesale market during a phase when they are actively climbing the ladder of investment, thereby reducing the number of alternative providers of retail services³³. While transitioning from LLU to VUA it is crucial to implement a pricing mechanism which supports alternative network investment while concurrently incentivising next generation investment.

³³ Concerns around Eircom's treatment of wholesale customers emerged in the investigation on a case of non-compliance on wholesale inputs over the Eircom "White label – PSTN product".

- 2.22 Given evidence of retail pricing constraints in urban areas and the likely future retail and wholesale pricing strategy of the incumbent, ComReg is of the view that a remedy involving a margin squeeze approach, with pricing flexibility for retail prices and wholesale inputs measured against cost based WPNIA inputs, facilitates emerging competition and investment and minimises any distortion from regulatory intervention. In this regard, ComReg commissioned research to analyse the extent of which Eircom currently experiences pricing constraints in the retail broadband market (and the likelihood of these continuing in an NGA environment). We have concluded on the basis of evidence submitted through the consultation; available market data; and the analysis provided by Oxera, that retail pricing constraints are present and are likely to prevent excessive pricing of NGA based services in the fixed retail broadband market. The margin squeeze approach would focus on both the risk of (1) retail to wholesale margin squeeze and (2) a wholesale to wholesale margin squeeze. These tests are discussed in detail as part of the price control obligation in Chapter 10.
- 2.23 ComReg's view is that the margin squeeze approach ensures that wholesale operators are not squeezed out of the market over the period of transition to fibre based services. As a wider LLU footprint develops, users of VUA services will be able to compete at the retail level, using a combination of VUA inputs and their own backhaul investments. At this point of market development, this approach is required to safeguard competition, until further infrastructure investment has taken place by alternative market players and it is evident from Eircom's performance that it is committed to developing a wholesale business on a non-discriminatory basis. For this to happen, operators will require greater certainty around the delivery of a higher standard of non-discrimination, EoI or equivalence of output ('EoO') from Eircom, where appropriate. Where these conditions are met over the medium term, ComReg may then be in a position to relax some of the margin tests currently proposed at the wholesale level. ComReg intends to keep this under review.
- 2.24 When identifying the appropriate price control mechanism, ComReg considered the market dynamics observable in the retail broadband market. In urban areas, where UPC cable broadband is present, there is evidence to suggest that UPC exerts retail pricing pressure on Eircom's retail broadband prices. Please refer to Chapter 10, subsection 10.4.3 for further analysis. UPC has gained market share at the expense not only of Eircom and other retail broadband providers but also by acquiring new customers not previously subscribing to a retail fixed broadband service. Eircom has enhanced its perceived value of existing bundled packages in order to compete and these seem to be targeted mainly at those sets of customers more likely to switch to an alternative platform, mainly UPC.

- 2.25 This retail pricing pressure has been passed through to a limited extent to the wholesale level. For example, Eircom has reduced the prices for its suite of Bitstream access products and usage of the entire Bitstream Managed Backhaul product set³⁴. In November 2012 Eircom published a wholesale price reduction for both LLU and SLU. The wholesale price of LLU is being reduced from €12.41 to €9.91 and SLU has fallen by €1.50 to €9.03, nationally. The price reduction brings the price of LLU closer to the European average and should have a positive impact on competition at the wholesale level. This is discussed further below in the context of the price control obligation in Chapter 10. Competitive broadband offers, in particular from alternative retail broadband providers, should ensure that Eircom is not in a position to price excessively for its retail broadband packages. From this point of view, ComReg is confident that given the retail constraints in urban areas, the risk of excessive pricing at the retail level is low.
- 2.26 Although Vodafone has argued that retail constraints are not significant and therefore cost orientation is the correct approach to NGA pricing, ComReg believes that a cost orientation for next generation WBA is not appropriate at this nascent stage of market development. Volatility and unpredictability of demand, at both the retail and wholesale level means that significant risks are associated with a cost based approach. As demand for NGA manifests and market players react to the introduction of new products, a price control which facilitates flexibility at the retail level, would be more appropriate. The European Commission has noted its support to ComReg on its pricing approach and the need to incentivise investment in next generation as extensively as possible, cost orientation risks creating uncertainty, potentially causing disequilibrium between demand and supply for next generation services. Any imbalance would stymie the extent of the potential network roll out at a time when investment in NGA is in response to retail demand and competition. This is discussed in Chapter 10.
- 2.27 The flexible pricing regime requires that sufficient economic space is provided when pricing wholesale inputs, to ensure replicability of retail products by alternative operators. This measure, coupled with strict notification and compliance obligations along with adequate transparency and non-discrimination, will offer protection to competition and will facilitate market led investment of NGA.

³⁴ http://www.eircomwholesale.ie/News/Bitstream_Price_Cuts/; price reductions are on the following products: Bitstream Sprint IP, Bitstream Zoom IP, Bitstream Turbo IP Plus and 24MB Bitstream Managed Backhaul.

- 2.28 It is ComReg's experience that competition is best protected not just through an appropriate pricing regime, but also through a stringent non-discrimination regime. This is heightened by a lack of transparency as to how the non-discrimination obligation is complied with under the current regime. While Eircom has given voluntary commitments to reform, ComReg believes that an enhanced standard of provision of EoI is necessary for NGA services in Market 5, to ensure that Eircom cannot pursue non-price foreclosure of wholesale competition. In addition, ComReg is mandating an improved standard of compliance, transparency and control for the provision of services to a standard of at least EoO, which is the default standard, for all other services. This may create an opportunity to create a more level playing field and therefore to relax some of the complexity of the NGA margin squeeze tests in the future.
- 2.29 ComReg's fundamental objective is to stimulate competition and investment in next generation technology including NGA (by both Eircom as the incumbent and other operators), to enable choice and higher broadband speeds for retail consumers. Our approach to stimulating competition is technology neutral, which means that we are ambivalent to the technology supporting competition, (whether copper, fibre or cable based) recognising the role for the constraining effect of current generation copper based competition, particularly while the market for NGA services is still evolving.
- 2.30 ComReg's approach to Sub Loop Unbundling ('SLU') favours investment by any operator committed to rolling out NGA and provides a process which aims to be flexible, transparent and credible.
- 2.31 Furthermore, the pricing of access aims to strike a balance between competing incentives whereby it offers flexibility to encourage NGA investment, but only in circumstances where alternative players are offered comparable opportunities to compete, in the presence of an effective non-discrimination obligation. This should allow the market to evolve, whereby certain interventions could be scaled back in the future.
- 2.32 The consideration of market conditions would indicate that the approach set out by ComReg enables a market led transition to fibre. ComReg is of the view that it is not necessary to set wholesale prices with a view to artificially stimulating demand for fibre. Furthermore, given that WPNIA inputs will be priced based on cost orientation in accordance to the copper access model ('CAM'), the cost of maintaining a legacy network will incentivise a natural migration to a more efficient network, over time.
- 2.33 Ancillary charges including connection fees, migrations and other related charges in the both the WPNIA and WBA markets will be subject to cost orientation.

- 2.34 As regards access obligations, access (as appropriate) to NGA Bitstream services, Virtual Unbundling with or without Multicast and Civil Engineering Access will be mandated as part of this decision.
- 2.35 Furthermore, SLU will be available on a reasonable request basis outside areas which have been deemed susceptible to a State subsidy scheme. Where FTTC is deployed and vectoring is in place, imminent or credibly scheduled, the obligation to provide SLU on a mandatory basis would be removed to ensure that any investment in vectoring can be facilitated to facilitate higher speed services. In place of mandatory SLU, access will be available where it is deemed as reasonable according to the criteria described below. An important exception to the rule is contemplated for non-commercial areas susceptible to a government subsidy scheme, where SLU will continue to be mandatory. The objective of the conditionality around SLU is to incentivise credible investment; timely deployment; and management of competing demands. We set out criteria which shall be used by industry to assess a request for access. These criteria have been developed based on feedback from industry through the Consultation. The following cumulative criteria will be used to assess “reasonableness”, where a request for SLU is made to Eircom.
- 2.36 The obligation of access to the subloop will be available as follows:

A request will be considered **unreasonable** if:

- FTTC/Vectoring roll out has taken place or is imminent or credibly scheduled by an operator deploying FTTC.
- The SLU operator fails to commit to next generation wholesale access (VUA/Bitstream).
- The SLU operator fails to commit to bandwidth enhancing technology where it is possible.

A request will be considered **reasonable** if:

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

- 2.37 SLU will be available on a mandatory basis in areas which have been deemed susceptible to a State subsidy scheme.

- 2.38 The conditionality of the request for reasonableness will be triggered when Eircom notifies ComReg and OAOs under Section 10 of the Access Regulation of network roll out plans for specific cabinet upgrades. A phase would be deemed imminent (which will trigger the withdrawal of mandatory SLU) only on visibility of implementation plans and timing of NGA roll out, in accordance with Eircom meeting its transparency obligations.
- 2.39 Implementation progress will be monitored and sufficient transparency will be required to ensure clarity of the scope of the obligation and to avoid operators gaming the stated criteria to get priority access to specific cabinets. Eircom will be required to provide geographic coordinates and planned and actual activation of cabinets, such that deployment of NGA and vectoring can be monitored. In particular, Eircom's performance will be assessed based on planned and implemented vectoring enablement of cabinets. A request for access is made to Eircom in the first instance and the criteria are outlined in these Decisions for industry to apply when making a request. That said, ComReg maintains the power to determine a dispute and most likely would do so on the basis of the criteria set out.
- 2.40 Conditionality of SLU access can only be triggered where Eircom submits credible plans and ensures visibility to industry of planned and implemented NGA and vectoring (as per Chapter 8, sub-section 8.1.4); upon this notification the areas affected become the NGA footprint area. Beyond the NGA footprint area, it will be considered reasonable for an alternative operator to gain access to a sub-loop, should the request meet the requirements outlined above. An obligation to provide access based on a reasonable request is the preferred option to ensure that no artificial regulatory barriers are created.
- 2.41 The approach outlined by ComReg should facilitate any demand for SLU by alternative operators, beyond the NGA footprint area and in particular where it is mandatory for a government subsidised area. However, it will be incumbent on Eircom to announce, commit and verify committed NGA/vectoring cabinets to establish its NGA footprint area, where the mandate to provide SLU will be withdrawn.

- 2.42 Progress of Eircom's NGA rollout will be monitored by ComReg. Additionally, the conditionality over SLU access will be contingent on Eircom providing a fully functioning wholesale product and reference offer for SLU, for cabinets requested outside the NGA footprint area, where the obligation is currently mandated. Evidence of the use of market power, through exclusionary behaviour, will necessarily form part of the assessment in terms of reasonableness. ComReg will monitor the degree to which Eircom cooperates in facilitating trials for a potential Government tender for SLU in non-NGA areas. For instance, ComReg would expect to treat requests for limited trials with no material impact on Eircom's plans (whether because of limited duration or small number of cabinets) as reasonable.
- 2.43 Finally, ComReg is mandating a variety of enhanced transparency obligations which are described in more detail in the main body of the paper.

Chapter 3

3 Regulatory Challenges

3.1 Guiding principles

- 3.1 Contained in the NGA Recommendation is a set of principles³⁵ which strive to strike a balance between stimulating investment and protecting competition, including that:
- Access-based competition will continue to be facilitated and the ladder of investment principle applied.
 - Risk incurred will be properly reflected in the regulated access price, giving an impetus to investment.
 - Risk incurred by regulated undertakings could result in price flexibility in cases of FTTH, giving an impetus to investment.
 - NRAs can modulate remedies and access prices as a function of competitive conditions in certain geographic areas, depending on the intensity of competition.
- 3.2 In our Consultation, we outlined our approach for NGA, which focused on stimulating investment in NGA through a flexible pricing approach, yet protecting competition by mandating a higher standard of equivalence across markets. Since the Consultation the Commission's policy on regulating NGA has evolved and although not mandatory, it is broadly consistent with the approach outlined in ComReg Document 12/27.
- 3.3 On 12th July 2012 Commissioner Kroes outlined the European Commission's intentions by providing further guidance on the NGA Recommendation. The Commissioner now believes that where there is a safeguard to competition, such as retail constraints and effective equivalence of inputs, adopting a flexible pricing regime can be accommodated and may stimulate investment.
- 3.4 The European Commission is at the point of giving clarity on a regulatory tool kit to balance the objectives of facilitating investment and competition and a recommendation on costing methodologies and non-discrimination will be adopted in early 2013. This aims to promote consistency across Member States. The Commissioner's statement focused on the following points:

³⁵ Commission Staff Working Document (accompanying document to the Recommendation on regulated access to Next Generation Access Networks (NGA) – SEC (2010) 1037 page 37.

1. A level playing field for competition;
 2. Too much intervention constrains flexibility;
 3. Consideration of direct and indirect effects of regulation;
 4. Technology neutrality;
 5. Wholesale access prices to create the right "buy or build" signals;
 6. Regulatory stability and consistency over time;
 7. Relationship between the rise or fall of copper prices on NGA investment.
- 3.5 This approach focuses on two main regulatory levers: the pricing of access regulation and ensuring a level playing field through effective non-discrimination. It envisages a departure from imposing strict cost orientation for access to a more flexible pricing approach but only in the presence of strong retail pricing constraints and equivalence, guaranteed through EoL. The Commission sees that EoL is the best way of guaranteeing non-discrimination and considers that NGA offers a unique opportunity to level the playing field.
- 3.6 Following the European Commission Consultation on Non-discrimination and Costing Methodologies in October 2011³⁶ (see [IP/11/1147](#)), the Commission states the need to ensure a consistent approach to the regulation of NGA throughout Europe. The Commission recently sent the draft "Recommendation on non-discrimination and costing methodologies" to BEREC for opinion³⁷. The Commission plans to adopt the draft recommendation in the first half of 2013. In the interim, the Commission has given specific guidance through Article 7 comment letters to national regulators, in the absence of the up-coming recommendation and a consistent message has emerged. Though not yet mandatory, ComReg has taken this guidance into consideration, particularly in terms of striking the correct balance between competition and investment and creating a level playing field. Of particular relevance is the guidance contained in the Recommendation to the Finnish NRA, FICORA³⁸, which states:

³⁶ European Commission: Questionnaire for the public consultation on the application of a non-discrimination obligation under article 10 of the Access Directive (including functional separation under article 13a), 3 October 2011.

³⁷ <http://ec.europa.eu/digital-agenda/en/news/commission-seeks-berec-opinion-draft-recommendation-consistent-non-discrimination-obligations>.

³⁸ [Cases FI/2012/1328-1329: Markets for wholesale physical network infrastructure access at a fixed location and wholesale broadband access – 18.10.2012.](#)

“certain remedies, which ensure equivalence of access to alternative operators, are imposed by NRAs (such as an equivalence of input obligation combined with a replicability test), and where there is a significant competitive constraint (from operators with cost-oriented access to the copper network or from other infrastructure-based competitors such as cable or LTE by virtue of their demand side substitutability at retail and/or wholesale), there should be no need to apply cost orientation to NGA products.”

3.7 The Commission recommended that FICORA should mandate cost orientation for wholesale broadband access (fibre networks) unless sufficient competition safeguards are imposed which render this unnecessary. In the latter case, FICORA should at least implement the following:

(a) Equivalence of input, which generally requires SMP operators' own downstream operations to use the same products, processes, and prices as those used by their retail rivals. As equivalence of input can only be fully implemented over a longer time period, this requirement could consist, in immediate terms, of a firm obligation on and commitment by the SMP operators to undertake certain key initiatives over a set time period.

(b) A transparency obligation regarding fibre, comprising a number of clearly specified KPIs³⁹ and an effective enforcement and monitoring mechanism (such as internal or external regular audits) and publication of the KPIs;

(c) A replicability requirement also for fibre based retail products;

(d) An accounting separation obligation covering also fibre products.

3.8 The European Commission's message is clearly that a level playing field should be created in the migration to NGA by implementing the standard of Eol and ensuring replicability of retail broadband products. More recently, the Commission confirmed its approach in comments to the MCA of Malta, stating that *“in the forthcoming guidance on non-discrimination and costing methodologies... allowing pricing flexibility where there are certain conditions or competition safeguards in place”*⁴⁰. These conditions confirm the importance of ensuring equivalence and reflect the guidance given to FICORA in terms of providing for Eol; transparent KPIs, replicability of fibre-base retail products; and accounting separation.

³⁹ Key Performance Indicator.

⁴⁰ Case MT/2012/1375 and Case MT/2012/1374.

3.2 Relevance and application in the Irish market

- 3.9 In ComReg Document No. 12/27, we outlined the challenges faced in the context of the Irish market and the principles that guide our decision making:
- Balancing investment incentives and competition;
 - Sustainable Competition and technology neutrality;
 - Modulating remedies on a geographic dimension;
 - Consistency of regulation between wholesale markets and on a pan-European basis; and
 - Managing the transition to NGA.
- 3.10 ComReg's approach is focused on stimulating investment and innovation while ensuring a level playing field. We believe that this can be achieved by pursuing a technology neutral approach, even in an NGA environment. Therefore, in line with the guidance set out in Commissioner Kroes' statement and expressed in commentary to NRAs, ComReg believes that a flexible approach to the pricing of access, where market conditions offer assurance of constraints in the retail market, and where a higher standard of equivalence can be facilitated. The flexibility afforded to Eircom through the margin squeeze obligation, should be conducive to driving investment and innovation since it allows prices to respond to market demand and avoids the potential rigidity of a cost-orientated price control. That said, the incentive to discriminate prevails in the wholesale market giving rise to the potential foreclosure of an innovative competitor which could compete with the incumbent at the retail level. Regulation needs to target where competition is fragile or growing; the control needs to address competition for the market. Therefore, we expect that, in addition to competition from cable, competition will also arise from alternative (copper-based) infrastructure players deeply interconnected to the network which play an important role of constraining retail prices, and ComReg is committed to facilitating this competition.
- 3.11 Economic theory would suggest that a more flexible approach to pricing could help mitigate incentives to discriminate. This has yet to be proven, however, and sufficient controls for non-discrimination are, therefore, needed to counteract a flexible price control.
- 3.12 Sustainable competition and technology neutrality is achieved by the support of the ladder of investment and is fundamental in the transition to NGA.

- 3.13 The current European Commission draft “Recommendation on non-discrimination and pricing methodologies”, sets out the foundations for flexible price controls, where competition can be safeguarded. ComReg endeavours to achieve this by applying a price control, margin squeeze obligation, which ensures economic replicability at each layer of the value chain; with adequate economic space between each layer. Therefore, deeply interconnected operators can reap the benefits of network investment, providing an important constraint along the value chain, in both the wholesale and retail markets. In essence, this approach recognises developments in the retail market and adjusts remedies to reflect differing levels of competitive intensity on a geographic basis. The price control offers Eircom the pricing flexibility to set retail prices in response to observed levels of market demand. This methodology has been supported by the European Commission and is in line with the 12th of July Statement.
- 3.14 ComReg is applying an approach which is consistent with pan-European regulatory policy. In relation to our notification of the draft final measures the Commission responded to ComReg on 17th December 2012 with the “Commission Decision concerning Case IE/2012/1404, Wholesale physical network infrastructure access and Wholesale Broadband Access – Remedies in Ireland”. The Commission endorsed ComReg’s approach to the regulation of NGA and commented that ComReg should further consider:
- Applying a standard of Eol to FTTH, should FTTH be deployed, even on a small scale;
 - Clear communication of the final measure for which non-SLU obligations might be reviewed, for the instances where FTTC and vectoring do not materialise as foreseen;
 - Review of price flexibility for fibre and application of the Margin Squeeze Tests once the forthcoming Recommendation on non-discrimination and costing methodologies has been adopted.
- 3.15 ComReg has considered these comments and sets out our strategy for the regulation of NGA, taking on board the emerging guidance from the Commission in the context of our statutory obligations. Therefore, we believe that in conjunction with a higher standard of the non-discrimination remedy, ComReg provides for a price control which allows a degree of pricing flexibility. In other words, ComReg aims to re-balance the incentives of the incumbent to foreclose competition, by taking a more flexible approach to upstream regulation. This can only be possible when the following conditions are met, namely strong retail pricing constraints and provision of access and price control, which ensures technical and economic replicability of retail products. ComReg believes that the measures set out in these Decision

documents provide the mechanisms which should ensure technical and economical replicability of the incumbents retail offerings, including adequate economic space along the layers of the margin squeeze test, and that this approach is reasonable given that there are sufficient retail constraints to guard against excessive pricing at the retail level by the incumbent SMP operator.

3.3 Competition problems

3.16 In the Consultation, ComReg identified that competition problems have the potential to emerge in an NGA environment. It was explained that the SMP operator has incentives to foreclose strategic, innovative competitors and this may emerge through either price or non-price discrimination. In fact, through the consultation process, respondents have submitted evidence and experiences of how competition issues have manifested in the current generation environment, with the assumption that these issues may continue in the context of NGA. These are noted, in particular by Vodafone's response to consultation⁴¹. ComReg has evaluated the potential competition problems in the context of NGA and taken on board respondents' views. It is our view that persistent competition problems remain in the WPNIA and WBA markets, regardless of the underlying network architecture. Experience has shown that discriminatory behaviour has hampered the proper functioning of the wholesale access markets (See Chapter 3, ComReg Document 12/27). This would suggest that the incentives of the SMP operator to foreclose will continue to exist with the introduction of NGA and non-pricing discrimination can be particularly difficult to identify and mitigate. This was substantiated by an analysis carried out by Oxera, entitled "Eircom's Next Generation Access Products: Pricing principles and methodologies" (the "Oxera Report"), Annex 8 of ComReg Document No. 12/27 and of this Decision document. A number of operators have raised specific concerns relating to historic competition problems in these markets in particular Vodafone, BT and Magnet have given a detailed history of issues and cases. Details on specific competition problems are already set out in Chapter 3 of ComReg Document 12/27.

⁴¹ See Vodafone's response to Consultation 12/27 in ComReg Document No. 12/97.

3.17 Our analysis points to the potential for both pricing and non-pricing discrimination and the set of obligations outlined in this Response to Consultation and Decisions are targeted at evaluating and addressing any potential problems⁴². In particular, we have considered competition issues in an NGA context, in light of Eircom's past behaviour towards its wholesale customers, which has been a cause for concern⁴³ (as noted in a number of compliance cases and in an investigation which culminated in ComReg Decision D07/11 on White label – PSTN Product)⁴⁴. Based on this experience, it suggests that Eircom has the incentive and the ability to foreclose competition in an NGA environment. Given that a competitive constraint from alternative operators will emerge in the market for WBA, it is more likely that discriminatory behaviour by the SMP operator will emerge at this level of the market. This confirms the findings of the WPNIA and WBA Market Reviews that the potential for Eircom to foreclose OAOs exists and should be addressed with obligations that provide access and prevent any discriminatory behaviour. Access remedies will in fact be necessary as it could be argued that the use of vectoring by Eircom, as part of its NGA roll out, will extend Eircom's control of the network and dominance over the copper sub-loop.

3.18 Based on our understanding of past and potential competition problems⁴⁵, there is a need to address the potential for discrimination and foreclosure and to alter incentives to discrimination. In theory, a degree of pricing flexibility (under certain conditions) may alleviate the pre-disposition to discriminate, though this has yet to be proven. We consider that the obligations outlined are proportionate and justified in light of ComReg's objectives as set out in Section 12 of the Communications Regulation Act and Regulation 16 of the Framework Regulations. There is a justified need to ensure that wholesale access is provided, so that foreclosure does not arise and that a suite of remedies will be required to ensure that discrimination, whether pricing or non-pricing, does not occur.

⁴² http://www.comreg.ie/_fileupload/publications/ComReg0627.pdf
http://www.comreg.ie/_fileupload/publications/ComReg0744.pdf
http://www.comreg.ie/_fileupload/publications/ComReg0895.pdf
http://www.comreg.ie/_fileupload/publications/Comreg0750.pdf
http://www.comreg.ie/_fileupload/publications/ComReg1093.pdf

⁴³ In BT's Non-confidential response to Consultation Document No 12/27 BT states: "*Separately we have found the Eircom reform program to be aimed at its sale of end-to-end packages rather than regulated components and recent poor experiences with Eircom leaves us with the perception the Eircom reform program does not apply to operators trying to compete at the wholesale level such as BT.*"

⁴⁴ This followed an investigation on a case of non-compliance on wholesale inputs over the Eircom "White label – PSTN product".

⁴⁵ As outlined in Chapter 3 of ComReg Document 12/27.

- 3.19 Policy choices to address the competition problems continue to focus on supporting deep infrastructure competition and addressing embedded discrimination. We propose to enhance Eircom's non-discrimination obligation by, inter alia, imposing an obligation of equivalence of input for systems and certain processes for NGA services and with the enforcement of governance and compliance obligations. We consider this combination of measures to be consistent with the available guidance from the European Commission.
- 3.20 Although there are a complex set of regulatory challenges to balance, the measures outlined in these Decisions will provide clarity, consistency and flexibility to the market, during a period of intense change and development. We have undertaken a detailed review of Commission policy, market circumstances and respondent concerns and are confident that these Decisions provide the appropriate regulatory mechanism to ensure investment in NGA and sustainable competition.

3.4 Transitional period

- 3.21 In the consultation we asked respondents to consider what period was appropriate for the transitional period for migration from a copper based network to one with a significant fibre component and whether or not the migration from copper to fibre should be managed through regulatory tools.
- 3.22 The European Commission, in particular in the 12th of July Statement, stated that "the question whether a rise or fall of copper prices would spur NGA investment is complex".
- 3.23 It highlighted that: "...over time consumers will come to place greater value on what they can get from NGA networks: then copper prices should adapt: on the basis that "you pay for what you get".
- 3.24 The statement further points out that "after examining all the evidence, and given the significant competitive relationship between copper and NGA networks, we are not convinced that a phased decrease in copper prices would spur NGA investment..... "Indeed, we now see fibre investment progressing relatively well in some Member States where copper prices are around or above the EU average"....."Where NGA networks are price regulated, regulation should address investment risks by aiming at full cost recovery in such infrastructure even if future costs decline".
- 3.25 Through the Consultation, ComReg sought the views of industry on the management of the relationship between copper and fibre over a transitional period.

- Q. 1 What period is appropriate for the transitional period and why? What issues do you think will occur over this period? Do you think that it will be important to maintain copper services in NGA footprint areas during this time? Please provide reasons for your response.
- Q. 2 Do you believe that it is appropriate for ComReg to manage or incentivise a migration from copper to fibre over the transitional period? If so on what basis should ComReg assess the appropriate timing or benchmark for retirement of the copper network? What criteria or trigger should be used? Please provide reasons for your response.

3.4.1 Views of Respondents:

- 3.26 There was little agreement amongst the nine respondents in relation to the length of an appropriate transition period. While some felt that a transition period of up to five years would be reasonable, three felt it was too early to say and that a cautious approach should be adopted by ComReg. A fair assessment could not be made, they suggested, until after a period of two years. One respondent offered no view.
- 3.27 Eircom believed that a five year transition period struck an appropriate balance between minimizing disruption to market players while ensuring the cost to Eircom of operating parallel NGA and current generation access solutions was not unreasonably prolonged. A number of operators were concerned that too short a transition time would affect the potential returns on investments made by LLU operators. Vodafone questioned whether Eircom's planned deployment could be truly characterised as NGA suggesting that only FTTH truly satisfied that term. On the question of incentivizing migration to NGA, many respondents felt it was not appropriate for ComReg to incentivize this. Eircom was in favour of such incentives stating: "a transition period should be primarily directed at facilitating practical implementation of new technologies rather than artificially sustaining the old." Vodafone, consistent with its argument that Eircom was not implementing real NGA, said that "we do not believe the long terms needs of consumers can be met with VDSL technology nor will it meet the Digital Agenda targets." For this reason, it did not believe that incentives were warranted.

3.4.2 ComReg's Assessment of Responses and Final Position:

- 3.28 ComReg agrees with many respondents that the length of any transitional period is not certain at this point. Eircom has recently re-iterated a "commitment to deliver fibre based broadband to one million premises over the next four years." Minister Rabbitte recently announced the National Broadband Plan, as noted in Chapter 2 and which states that "the State would provide funding of €200 million along with matching investment from private companies" to support high speed broadband targets to be met "within the lifetime of the Government." These targets envisage that "70-100Mbps should be available to at least 50 per cent of the population", and at least "40Mbps should be available to at least a further 20 per cent of the population and a minimum of 30Mbps available to all." Finally UPC recently announced that it was "doubling its standard entry level broadband speeds for new customers from 25Mb to 50Mb" and announced "new mid-tier service of 100Mb (formerly 50Mb) and a highest speed of 150Mb (formerly 100 Mb) download speeds."
- 3.29 Clearly, Eircom's plans, the possibility of State intervention, and increasing competitive pressures from UPC mean that the length of the transitional period is difficult to estimate and the likely end-state hard to predict.
- 3.30 Other important factors to consider include the success of rollout (actual vs planned); the cost of deployment; the costs of managing dual networks; the ability to migrate retail customers to the highest speed services possible, as a result of NGA investment; the emerging demand for services on the new fibre network and Ireland's targets under the Digital Agenda. ComReg is also mindful that LLU will remain the cornerstone for wholesale access in areas inside and outside the NGA footprint areas. Any "retirement" of legacy access modes would be dependent on takeup of NGA services and, possibly, on the deployment of VOB solutions at scale, that would allow the retirement of the copper network.
- 3.31 In relation to questions 1 and 2, as to how long the transition from copper to fibre should last and whether regulation should encourage a migration to fibre, ComReg believes that it is no longer necessary to define a specific length of a transitional period nor identify particular methodologies to incentivise migration to NGA.

- 3.32 Through analysis of the potential demand and market structure, ComReg has come to the view that it is not necessary to artificially incentivise migration to NGA. Instead, market conditions will dictate a demand for fibre based products; in fact it is likely that the retail market will be characterised by a range of broadband products and bundled services, with differing levels of broadband speed and delivery of content, offered at different price points. The importance of LLU prospectively means that relativity between copper and fibre pricing will need to be maintained to support competition and to allow customers to choose between a range of products, thus supporting the principle of technology neutrality. Given that WPNIA inputs will be priced in accordance with the copper access model the cost of maintaining a legacy network will incentivise a natural migration to a more efficient network, over time. Copper-based competition and indeed, a properly functioning upstream market, is paramount during the transition to a fibre network.
- 3.33 Adopting the European Commission's approach, as appropriate, to the costing of wholesale access networks should facilitate customer and operators to pay for an efficient level of access. Thus, for the period of this review, any transition to fibre will be on the basis of demand observed in the market. While regulatory intervention to manage a migration to fibre does not need to be adopted, ComReg sets out a range of access and pricing measures which should reward investment in an efficient network and hence enable a smooth, regular and equivalent transition of customers to NGA.

3.4.3 ComReg's conclusion:

The transition to NGA will be led by natural market forces and no specific regulatory intervention needs to be taken to incentivise this migration.

Chapter 4

4 Access Obligations

Overview

- 4.1 In this section we consider respondents' views on the access provisions for the WPNIA market. As noted in the Regulatory Impact Assessment (RIA) in Chapter 11 and set out in ComReg Document No. 12/27, ComReg has taken appropriate account of the risks incurred while balancing the need to promote competition⁴⁶. This is also explained in ComReg's evaluation of the regulatory challenges in Chapter 3. Assessment of these factors is also applied to access in the WBA market.
- 4.2 Therefore, pursuant to ComReg's objectives under section 12 of the Act, Regulation 16 of the Framework Regulations and pursuant to Regulation 12 of the Access Regulations, we consider that the proposed access obligation for the WPNIA market takes "appropriate account of the risk incurred by the investing undertakings and by permitting various cooperative arrangements between investors and parties seeking access to diversify the risk of investment, while ensuring that competition in the market and the principle of non-discrimination are preserved⁴⁷."
- 4.3 In our consideration of the factors (further discussed in Chapter 11 of the Regulatory Impact Assessment), as set out in Regulations 12(4) of the Access Regulations we took into account:
- the technical and economic viability of using or installing competing facilities;
 - the feasibility of providing access in relation to capacity available;
 - the initial investment of the provider;
 - the need to safeguard competition;
 - any intellectual property rights;
 - the impact in relation to pan European services.
- 4.4 Following the Consultation, measures of particular concern include access to civil engineering infrastructure, specifically duct and pole access and sub-loop unbundling.

⁴⁶ Pursuant to Regulation 12 (4) of the Access Regulation.

⁴⁷ Regulation 16 2(d) of the Framework Regulations.

4.1 Civil engineering infrastructure and dark fibre where reasonable

4.1.1 ComReg's Preliminary View from Consultation Document:

- 4.5 In line with the NGA Recommendation, ComReg stated that access to civil engineering infrastructure facilitates investment at the deepest level of the network. While recognising that demand has been historically low we also noted that industry believes that there is likely to be a demand for access to civil engineering infrastructure to provide next generation products and services.
- 4.6 Access to Eircom's civil engineering infrastructure may give Access Seekers the opportunity to extend their network towards the end-users. However we recognised that in certain circumstances it may not be possible to provide access to civil engineering infrastructure, on foot of a request by an OAO, for technical or capacity reasons for example, though this should arise only in exceptional circumstances.
- 4.7 In the WPNIA Decision ComReg imposed an obligation on Eircom to provide access to ducts⁴⁸. In the consultation, ComReg proposed that Eircom should have an obligation to provide access to civil engineering infrastructure⁴⁹ ("CEI"), in particular duct and poles, where it is technically feasible and economically viable. In certain circumstances there may be a finite portion of space available in a duct or a duct may have collapsed, and it would not be possible to grant access or the costs associated would be prohibitive. Where this is the case, access to dark fibre should be offered where possible, subject to certain conditions. The NGA Recommendation specified that access to CEI should be provided on a strictly equivalent basis; ComReg proposed that access should be provided for on an Eol basis for all WPNIA products.

Q. 3 Do you agree with ComReg's preliminary conclusions on mandating access to civil engineering infrastructure and where reasonable to dark fibre? Do you believe that this approach is necessary, justified and proportionate? Please provide reasons and evidence for your answer.

⁴⁸ Pursuant to Regulation 12 of the Access Regulations

⁴⁹ Civil Engineering Infrastructure (also known as passive infrastructure) means physical local loop facilities deployed by Eircom to host local loops consisting of various media such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean or above-ground assets such as sub-ducts, ducts, manholes and poles.

4.1.2 Views of Respondents:

- **Civil engineering infrastructure:**

- 4.8 The majority of respondents supported the approach to civil engineering infrastructure and stressed the importance of duct access in an NGA environment. Magnet is supportive of the proposed obligation adding “It is important to allow alternative suppliers, fibre to a cabinet or premises and dark fibre if space in a duct is not available”. A number of respondents called for a duct access reference offer.
- 4.9 BT highlights that “there is an opportunity for others to deploy NGA solutions in the market and the availability of Market 4 facilities such as Sub-Loop Unbundling and duct access etc. are essential for competitors in Ireland”. Eircom recognises its obligations to provide access through the WPNIA market but does not believe that it is necessary or appropriate to impose any additional or specific obligations. Eircom states that demand for duct access is very low and therefore “does not believe that there is any need for eircom's obligation to meet reasonable requests for access to ducts/civil engineering to be specified in the manner proposed by ComReg. In particular, eircom does not agree that access to ducts should be subject to a Reference Offer”.
- 4.10 Eircom proposes that the obligation to provide CEI continues as set out in Decision D05/10 and that the requirement to publish a reference offer should not be established. Eircom believes that it would be disproportionate to require publication of a reference offer, which would entail significant development costs. BT is of the view that “Eircom should make a duct offer and it should be published.”
- 4.11 Eircom considers that duct access should be commercially negotiated to facilitate a practical approach. It is of the view that the pricing of duct can vary on a case by case basis and has concerns about the visibility of the price of duct by competitors. It also believes that the current practice of commercial negotiations on duct access is satisfactory and this should continue within the controls of access to CEI in an NGA context.

- **Dark Fibre:**

4.12 Eircom believes that demand for dark fibre could only manifest itself in the case of a request for sub-loop unbundling and where duct is not available. On that basis Eircom envisages that this situation will rarely occur and hence imposing a dark fibre obligation is entirely disproportionate. Eircom believes that making that obligation subject to EoI obligations is even more unreasonable.

4.13 In general the majority of operators agree with ComReg's proposals regarding access to CEI. Vodafone states that where it is not possible to provide duct access it is proportionate that Eircom be obliged to provide access to dark fibre.

4.1.3 ComReg's Assessment of Responses and Final Position on Question 3

4.14 ComReg has decided that Eircom shall have an obligation to provide access to civil engineering infrastructure and this should be supplied on an EoO basis. After consultation with industry access to civil engineering infrastructure is considered necessary and proportionate where FTTH or FTTC is deployed by an alternative operator. While it is true that there has been limited demand for civil engineering access, we believe that this is not a legitimate reason to deny access in the future particularly where Eircom is entitled to recover the cost of provision. There is also some evidence that some operators may well avail of this facility.

4.15 The NGA Recommendation, Recommend 13, proposes that access to CEI "*should be provided in accordance with the principle of equivalence as set out in Annex II*". As required by virtue of Article 19(2) of the Framework Directive, as transposed by Regulation 30(1) of the Framework Regulations, ComReg has taken "utmost account" of the NGA Recommendation and, in so doing, has had regard to it in the context of its application to the particular circumstances of the Irish market.

4.16 In the Consultation it was proposed that access to CEI would be provided on an Equivalence of Inputs basis, in line with a proposed strengthening of the non-discrimination obligation. While acknowledging and taking utmost account of the European Commission's NGA Recommendation, however, as explained in Chapter 7 of this Response to Consultation, ComReg now envisages that access to Market 4 WPNIA, including civil engineering infrastructure should be offered on at least an Equivalence of Outputs basis.

- 4.17 In particular, it is considered that there are practical difficulties with providing CEI on an EoI basis as access to CEI will require access to information regarding CEI topology, capacity and geographical information much of which, ComReg understands, is not held centrally but is managed locally at an area or exchange level. Therefore access to CEI for Eircom's downstream arms is embedded in existing work-practices and workflows that are not easily disaggregated, in order to present a common interface or a standard ordering process to a third party. Therefore a more proportionate requirement is the development of a process for operators that yields the same outputs, i.e. timely access to CEI, but based on a discrete provisioning process. The low demand for duct access has also been taken into consideration in this regard.
- 4.18 ComReg notes that the requirement for a reference offer for duct access has already been established in D05/10 and ComReg is proposing to further specify the obligation to include all aspects of CEI through the current consultation. Furthermore, it is our understanding that Eircom is currently preparing to trial access to Eircom duct by other operators, to determine the operational issues involved, with a view to developing a product description. The reference offer should also include information on the process whereby requests will be fulfilled. Eircom should ensure that adequate information regarding the location of civil engineering infrastructure such as duct location, space and available dark fibre, is made available to operators, on request.
- 4.19 Where access to civil engineering is not available for economic, technical or capacity reasons, Eircom will be obliged to provide access to dark fibre, where it is available. Therefore, where access to civil engineering infrastructure via duct access cannot be met for economic or technical reasons, requests may be met by the provision of available dark fibre. ComReg believes that on the basis that dark fibre should be made available only where reasonable and where dark fibre is available, this approach is both practical and proportionate.
- 4.20 Pricing of access to civil engineering infrastructure and dark fibre should in principle be based on cost as discussed in the pricing section of this document. However, ComReg will allow an opportunity for the price to be agreed by way of negotiation between Eircom and the access seeker. An indicative offer should be presented within a one month period and terms agreed within a three month period from the initial request for access. Non price conditions should be published by way of a reference offer.

4.1.4 ComReg's Decision:

Eircom shall have an obligation to provide access to:

- **Civil Engineering Infrastructure including Duct Access where reasonable;**
- **Where Civil Engineering Infrastructure is not available, Dark Fibre where reasonably available.**
- **The standard of non-discrimination applicable to civil engineering infrastructure will be at least equivalence of outputs.**

4.2 Unbundled access to the fibre loop and access to the terminating segment for FTTH

Unbundled Access to the fibre loop:

4.2.1 ComReg's Preliminary Views from Consultation Document:

- 4.21 In ComReg Document No 12/27, it was proposed that Eircom would be obliged to offer unbundled access to the fibre loop, regardless of the network topology, infrastructure or architecture deployed.
- 4.22 As stated in the consultation document Eircom is mainly deploying FTTC technology and network rollout is currently underway. Eircom has trialled FTTH on a limited basis and intends to leave the FTTH equipment already deployed in place at those exchanges. However the vast majority of premises will be passed using FTTC technology.
- 4.23 However, ComReg was of the view that FTTH rollout may take place at some point in the future and that this may be a possibility during the lifetime of this review. ComReg also considered that in particular circumstances some customers may be directly connected, by fibre, to the exchange as part of NGA rollout. ComReg therefore considered that an FTTH obligation including backhaul and co-location was required.

Q. 4 Do you agree with ComReg's preliminary conclusions on network access in the context of FTTH? Please provide reasons for your answer.

4.2.2 Views of Respondents:

- 4.24 Of the respondents, all except two felt that Eircom should be obliged to provide access to unbundled fibre or the terminating segment. Eircom did not argue this proposal and UPC opined that ComReg should ensure that FTTH obligations did not involve the imposition of any additional fibre deployment costs on Eircom.

In its response to the consultation Eircom states that there is no market demand for FTTH, citing its experience on the Eircom Fibre Pilot in 2011, and therefore FTTH will not form part of the NGA roll out other than a very limited number of fibre loops which have already been installed as part of Eircom's Fibre Pilot. Eircom believes that there is a strong preference from operators for virtual unbundled access ("VUA") coupled with co-location and backhaul facilities. Therefore, Eircom believes that it would be disproportionate to require Eircom to prepare a reference offer for unbundled fibre. Other respondents submitted that unbundled fibre should be available, particularly where there is a wider roll out of FTTH.

4.2.3 ComReg's Assessment of Responses and Final Position:

4.25 ComReg notes that there will be minimal deployment of fibre to the home, other than what has been deployed as part of the Fibre Pilot. That said, we are of the view that in order to ensure consistent regulation, it would be necessary to ensure that unbundled access should be made available were FTTH to be deployed more widely in the future (regardless of the network topology, infrastructure or architecture deployed). However, we are also conscious that there is little or no current demand evident for fibre loops. Accordingly, we are mandating access to unbundled fibre, in principle but will forbear from insisting on detailed product development at this time and from developing a detailed price control. In the event that market conditions change and demand for access emerges, a product specification and price control will need to be developed and this would be priced in a way which is consistent with the pricing of the access network or a similar valuation.

4.26 To conclude, although Eircom shall have an obligation to provide unbundled access, upon a wider roll out, Eircom will not be obliged to ensure that a reference offer is in place immediately after the date of the Decision. However, although FTTH rollout is limited at present, where there is a request for FTTH access, the request should be acceded to in the absence of a formal reference offer and a FTTH reference offer shall subsequently be made available within six months from the request.

4.27 Furthermore, the European Commission notes notes to ComReg⁵⁰:

⁵⁰ Case IE/2012/1404.

“ComReg concludes on proportionality grounds to mandate only Equivalence of Outputs for FTTH unbundling given the limited rollout of FTTH lines so far planned by the SMP operator. Against this background, the Commission reminds ComReg that effective non discrimination is best achieved by the application of Equivalence of Inputs. In this respect the Commission further points out to ComReg that providing wholesale inputs consisting wholly or partly of optical elements on an Equivalence of Input basis is likely to be proportionate given the low incremental costs of designing new systems, a consideration also acknowledged by ComReg. As a result, the Commission asks ComReg to reconsider (within an industry forum if suitable) the feasibility and proportionality of mandating Equivalence of Inputs for unbundled FTTH products should FTTH roll-out occur, even on a small scale.”

Should such a wider roll out of FTTH emerge, a further review of such a measure will be carried out by ComReg and a consultation may be required.

4.28 Furthermore, where access to the fibre loop is required, co-location and backhaul facilities should be provided.

Access to the terminating segment for FTTH:

4.2.4 ComReg’s Preliminary Views from Consultation Document:

4.29 Access to the terminating segment⁵¹ for FTTH was not proposed and ComReg notes that fibre unbundling delivers the required access to the full fibre loop, from the exchange, which includes the terminating segment.

4.30 ComReg Document No 12/27 explains that consideration of access to the terminating segment in the case of FTTH has specific relevance in more densely populated Member States where multi-dwelling premises are common and access at many points along the network could be considered. Fibre unbundling delivers the required access to the full fibre loop, from the exchange, which includes the terminating segment. Eircom envisages only extremely limited deployment of FTTH at this time and in light of the limited extent of FTTH rollout planned, we continue to consider that it would not be proportionate to mandate access to the terminating segment in addition to unbundled access to the fibre loop at this time.

⁵¹ Paragraph 2 of the NGA Recommendation. The ‘terminating segment’ means the segment of an NGA access network which connects an end-user’s premises to the first distribution point. The terminating segment thus includes vertical in-building wiring and possibly horizontal wiring up to an optical splitter located in a building’s basement or a nearby manhole.

4.31 ComReg considered that access to the terminating segment was not required and may be a remedy more suitable to other Member States, particularly since ComReg considers that as regards fibre access, an FTTH obligation alone, was considered appropriate. However, should a wider rollout of FTTH be delivered then ComReg would revisit the issue.

4.2.5 Views of Respondents to Question 4:

4.32 There had been a certain amount of confusion amongst operators regarding distinctions between FTTH and access to the terminating segment particularly since the terminating segment is a component of the fibre access path associated with FTTH. Therefore there was some misunderstanding of ComReg's approach to access to the terminating segment. Clarification of this matter has been provided through engagement with industry on NGA product development issues.

4.2.6 ComReg's Assessment of Responses and Final Position:

4.33 ComReg considers that unbundled access to the fibre loop in the case of FTTH provides sufficient access and thus it is not yet necessary to mandate access to the terminating segment to provide an effective form of competitive access. However we may review whether it is required in the event of a wider roll out of FTTH.

4.2.7 ComReg's Decision:

- **Eircom shall have an obligation to provide:**
 - **Unbundled access to the fibre loop;**
 - **Unbundled access to the fibre loop combined with GNP where required.**
- **Where access to the fibre loop is required, co-location and backhaul facilities should be provided.**
- **Access should be provided consistent with the provisions of the non-discrimination obligation, set out in Section 8 of the WPNIA and WBA Decisions.**
- **Access to the terminating segment for FTTH is not mandated; however this may be reviewed in the event of a wider roll out of FTTH.**

4.3 Next generation access in the context of FTTC deployment

Overview

- 4.34 Fibre to the Node (“FTTN”), in general, refers to a situation where fibre is deployed to, but not beyond, a network node on the access path between the exchange and the end-user premises. Eircom is currently deploying fibre to a particular node, in this case the street cabinet, as part of its NGA rollout plan, namely fibre to the cabinet.
- 4.35 Eircom has stated its intention to deploy next generation access through a FTTC network architecture on a phased basis. It has also stated that it will deploy VDSL2 on a 17Mhz band plan. It intends to use the bandwidth enhancing technology called “Vectoring” to achieve greater speeds, with a cumulative benefit of up to 100 Mbs and resulting in a greater number of customers achieving 30 Mbs. The use of the current generation⁵² VDSL2 vectoring technology by one operator precludes access to the copper sub-loop by another operator through the same cabinet. Eircom argues that the use of vectoring in an FTTC context is central to its competitive strategy and is of benefit to consumers, by virtue of higher speeds.
- 4.36 Eircom has argued there has been little demand for SLU in recent years. Given that the current (first) generation of vectoring is incompatible with access by more than one operator to the copper sub-loop. Eircom has expressed concerns that selective access to Eircom’s cabinets, where another operator would deploy vectoring technology and therefore gain exclusive access, would undermine Eircom’s business case for NGA and could be detrimental to its ability to compete and to the recovery of its investment. SLU is mandated as part of the WPNIA Market Decision, in ComReg Decision D05/10. In the past number of years, there has been no demand for SLU although an OAO has recently requested access to a small number of cabinets. Eircom has not yet given access to the OAO and this matter is currently under investigation.

⁵² ITU Standard G.993.5

4.3.1 ComReg's Preliminary Views from Consultation Document

- 4.37 Eircom plans to deploy vectoring technology and in the Consultation we stated that a deployment of vectoring technology has implications for the currently mandated sub-loop unbundling remedy. However in the consultation ComReg considered options on the obligation to provide SLU in NGA footprint areas, given the end-user benefits that may be gained from vectoring.
- 4.38 ComReg considered that a practical approach is required in order to facilitate operators willing to take investment risks. The regulatory approach consulted on suggested a number of options aimed at creating favourable conditions for the deployment of technology that enhances end user welfare.
- 4.39 The options considered were developed by considering the implications of potential restrictions on unbundling the copper sub-loop at cabinet, where VDSL2 services in conjunction with current generation vectoring technologies are planned or deployed. ComReg has considered its approach to SLU in the context of attaining the targets of the EDA and ensuring that investment in NGA by all market players can be accommodated.
- 4.40 Mindful of the strategic importance of SLU, ComReg proposed three options for the future of SLU in the ComReg Document No 12/27.

Options for SLU proposed in Consultation 12/27

Option A

Conditional access in NGA footprint areas. The reasonableness of a request would be subject to ComReg approval which would depend on OAOs :

- Providing Wholesale NGA services to other operators.
- A commitment on the deployment of bandwidth enhancement technology.

Option B

Remove SLU in the NGA footprint area to facilitate investment by the incumbent.

Option C

Unconditional access to the sub-loop in NGA footprint areas, with the possible future withdrawal of SLU if bandwidth enhancing technology is not deployed, by an OAO. In such scenarios the operator is required to provide wholesale NGA services to other operators.

Q. 5 Do you agree with ComReg's preliminary conclusions, the Options outlined and related processes with regard to the access obligation for FTTN/C through access to the sub-loop? Please provide reasons for your response.

Q. 6 Do you agree with the general conditions which would apply to all options? Please provide reasons for your response.

Q. 7 Do you intend to make a request for access to the sub-loop and on what scale? Please provide reasons for your response.

Q. 8 Do you intend to deploy a bandwidth enhancing technology for NGA; if so which options are likely and are there any competitive implications? Please provide reasons, practical justification for your response or any alternative suggestion.

4.3.2 Views of Respondents:

4.41 The majority of respondents warned of the competitive impact of premature withdrawal of the SLU obligation.

4.42 In its response to the consultation, BT comments on the issue of sub-loop unbundling as follows: *".....in the absence of vectoring or any other exclusivity, the first to deploy a cabinet significantly reduces the economic case for a second operator establishing a presence at the same cabinet location. Hence in reality we consider the economics of the market will determine exclusivity rather than technology or regulation"*. That said, BT submits: that *"should Eircom struggle to roll out NGA in a reasonable time frame its unreasonable they should prevent others deploying NGA solutions requiring Sub-Loop Unbundling"*.

4.43 Vodafone highlighted that exclusive access to the cabinet by an OAO would improve the business case for SLU and cites the renewed interest in SLU in the NGA context as supporting this view.

4.44 Vodafone offers suggestions on conditions which should be present to merit exclusive self supply of SLU. These include a *"use it or lose it"* approach; the deployment of vectoring; and the provision of downstream access in Market 5 on non-discriminatory terms.

- 4.45 ALTO states that the economics of multiple operators deploying SLU are difficult and hence commercial decisions may naturally lead to exclusivity at locations irrespective of the presence or absence of vectoring.
- 4.46 ComReg is mindful that SLU and vectoring are key issues for the industry; and indeed ECTA has made a specific response to the consultation in relation to the importance of SLU and vectoring for the industry. ECTA warns ComReg against withdrawing the SLU obligation; given that “second generation” vectoring is likely to facilitate cohabitation in the cabinet for NGA services.
- 4.47 Eircom sets out its concerns regarding the uncertainty that would be created for its investment in FTTC and vectoring, where SLU continues to be mandated, even outside of any defined NGA footprint areas. It has stated it believes that SLU would undermine Eircom’s ability to compete with competing high speed offerings, which would significantly undermine its competitive strategy and hence investment plans. Where a cabinet has been unbundled, Eircom stressed that it considered its rights to its network should preclude the takeover of any Eircom cabinet by any operator in the market. Eircom also questioned the regulatory powers which could ensure third party access to wholesale services provided by a non-SMP operator from an unbundled cabinet. Eircom’s position is that the continuation of the SLU obligation creates legal uncertainty and significantly undermines the investment case for NGA. It believes that an ongoing SLU obligation would hamper its use of vectoring technology and is fearful of selective cabinet unbundling by OAOs designed to exacerbate this.

4.3.3 ComReg’s Assessment of Responses and Final Position:

- 4.48 The investment in infrastructure is at a crucial stage of development. ComReg has taken the above views into account and aims to progress the EDA targets.
- 4.49 In addition, it is noted that Regulation 8(6) of the Access Regulations provides that any of the above obligations imposed must:
- (a) be based on the nature of the problem identified;
 - (a) be proportionate and justified in the light of the objectives laid down in section 12 of the Communications Regulation Acts 2002 to 2011 and Regulation 16 of the Framework Regulations⁵³;

⁵³ Pursuant to section 12 of the Communications Regulation Acts 2002 to 2011, ComReg’s relevant objectives in relation to the provision of electronic communications networks and services 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.

- (b) only be imposed following public consultation and notification of the draft measures to the European Commission, BEREC and other NRAs in accordance with Regulation 12 of the Framework Regulations.
- 4.50 It is also noted that Regulations 12(1) and 12(4) of the Access Regulations also provide statutory criteria that ComReg must take into account before imposing access obligations on an SMP undertaking. These criteria include, *inter alia*, examining the technical and economic viability of using or installing competing facilities; the feasibility of providing access; the initial outlay of investment by the undertaking; and the need to safeguard competition in the long term.
- 4.51 We understand from respondent submissions that demand for SLU is more likely to emerge outside the main urban areas where NGA is unlikely to be deployed by Eircom. It appears unlikely that there is a strong business case for multiple FTTC operators at the same cabinet. Demand for SLU is more likely to emerge in adjacent areas or additionally, in non-commercial areas which might be the target of future government subsidised schemes.
- 4.52 In our approach to SLU ComReg has taken into consideration the investment risk by the incumbent and the need for the platform as a whole to be competitive, along with the likely consumer requirements. On the other hand we are of the view that the SLU product may prove necessary, especially in those areas where Eircom does not roll out FTTC, given the importance of competition at a deeper level.
- 4.53 ComReg therefore provides that SLU shall be available nationally on a reasonable request basis, except where a government tender has identified non-commercial areas and development of a subsidy scheme, in compliance with EU State Aid rules. In this latter case the availability of SLU would be mandatory.
- 4.54 Our preferred approach is a hybrid of Options A, B and C whereby SLU is available on a reasonable request basis across the national market. Although this approach is similar to Option A, ComReg considers that a pre-defined NGA area would be difficult to identify and would not provide the clarity required to underpin investment in NGA. It would also require micro-management of the market, which is unlikely to yield the required level of certainty over market conditions conducive to investment.
- 4.55 Regulation 8(6) of the Access Regulations provides that ComReg must ensure that remedies are based on the nature of the problem identified and are proportionate and justified. Although Eircom will be granted exclusive control of the underlying physical infrastructure, once NGA and vectoring is deployed or is imminent, our choice of regulation has been influenced by the

fact that virtual unbundling offers operators an alternative means of delivering broadband access in the downstream markets.

- 4.56 In the Commission Decision to ComReg on 17th December 2012⁵⁴, the Commission stated the importance of ensuring full transparency and competitive access and states:

“the Commission welcomes ComReg's commitment to monitor Eircom's FTTC rollout plans. The Commission further asks ComReg to reconsider the imposition of the SLU obligation in those instances where FTTC and vectoring deployment plans do not materialise as announced, and where there is a serious risk that alternative investments are unduly hindered due to the lack of a SLU obligation. The Commission, in particular, invites ComReg to indicate in a clear and precise way in their final measure the circumstances under which non-SLU obligations might be reviewed.”

- 4.57 ComReg has taken utmost account of the European Commission's comments.

- 4.58 ComReg is taking the decision to make SLU available on a reasonable request basis. The terms and conditions of potential availability of cabinets are set out in this document. Also clarified is the level of transparency required for and the performance monitoring of Eircom's NGA rollout. This provides the mechanisms for industry to make a request for access to Eircom where required. It should facilitate commercial agreement under strict regulatory rules of access. Only where operators fail to agree under this process should the request be referred to ComReg. That said, transparency, performance and compliance on the SLU obligation will be closely monitored and assessed by ComReg.

- 4.59 As regards availability on a reasonable request basis, a request (made to Eircom in the first instance) ought to be considered *prima facie* **reasonable** if:

1. The Request for SLU is at a cabinet where vectoring enablement has NOT already taken place and is NOT imminent or credibly scheduled and;
2. There is a commitment to open access by the SLU operator by way of the wholesale provision of virtual unbundled access and next generation bitstream services and;
3. There is a commitment by the Access Seeker to bandwidth enhancing technology.

- 4.60 These criteria are considered to be cumulative.

⁵⁴ Case IE/2012/1404.

- 4.61 In the absence of these conditions, and in the interest of providing certainty for all operators, ComReg will expect to find a request not reasonable, if a request is referred to it.
- 4.62 As regards what might signify “imminent” or “credibly scheduled”, ComReg notes the obligation for Eircom to publically inform OAOs and ComReg of its FTTC cabinet roll out plans in advance, as required under its proposed transparency obligations (see 8.1.4). Such plans would by default be considered imminent.
- 4.63 In meeting its obligations under criterion 1, there is an obligation on Eircom to make publicly available, up to date information on scheduled NGA roll out plans. If asked to assess the reasonableness of a request within a planned area (i.e. after a request has already been made to Eircom), ComReg will evaluate compliance with Eircom’s transparency obligations by reference to the credibility of the scheduled roll out by reference to, *inter alia*, previous roll out performance against previous announcements; the delivery of vectoring on a timely basis; how far in the future the roll out is planned; the degree of transparency provided by Eircom to ComReg and industry; and the degree Eircom cooperates in facilitating trials for a potential Government tender for SLU in non-NGA areas. For instance, ComReg would expect to treat requests for limited trials with no material impact on Eircom’s plans (whether because of limited duration or small number of cabinets) as *prima facie* reasonable.
- 4.64 Where Eircom does not meet its planned roll out commitments ComReg would, where necessary and using its dispute resolution powers⁵⁵, most likely reconsider its assessment of the availability of SLU, as invited to do so by the European Commission. That is to say, it would consider, in this circumstance, that it would likely find a request for SLU in such an area, subject to 4.57 (b) and (c) above, to be now *prima facie* reasonable.

⁵⁵ Response to Consultation and Decision Notice, ComReg Decision No. D03/10, entitled “Dispute Resolution Procedures - Framework Regulations”.

- 4.65 Thus, ComReg substantially agrees with Vodafone's suggestion of a "use it or lose it" approach. Where it has formed the opinion that a particular roll out plan is "imminent" or "credibly scheduled", in addition to requiring Eircom to submit updates six months in advance and to publish minor amendments one month in advance, ComReg will monitor progress and will receive updates from Eircom on a quarterly basis (these Chapter 8, Transparency). No later than annually from the date of this decision, part of a review ComReg may decide that some, or all, of the roll out plan is no longer likely in a reasonable time frame. In this case requests for SLU in these areas would once again be considered *prima facie* reasonable subject to the conditions detailed in 4.57. Where Eircom has been unable to deliver some of the planned deployment in line with expected performance for operational reasons beyond the control of Eircom, ComReg will take the feasibility of implementation into account when assessing performance.
- 4.66 To take a further scenario: where an OAO(s) having been granted access to cabinets in a particular area, and failing to rollout NGA to these cabinets within a reasonable period, and where Eircom plans to roll out FTTC /vectoring to this area; in this case ComReg may decide that a request for SLU access is now unreasonable.
- 4.67 SLU might be an important access product in non-commercial areas which might be the target of future government subsidy schemes. In the event of such a scheme, SLU will continue to be mandatory in the area associated with the scheme, until an operator successfully competes for the State Aid contract. At this point the SLU obligation would revert to being on a reasonable request basis.
- 4.68 As regards ECTA's views in respect of the emergence of SLU-friendly vectoring, we are of the view that this technology is nascent and our information is that a process for standardisation of such technology is not well advanced and therefore the opportunity for commercial deployment seems to be a number of years away. It would not be reasonable, therefore, to insist that this type of vectoring be deployed by Eircom. However, we propose to monitor and may potentially revisit the obligation if SLU second generation vectoring emerges as a commercially viable option.

4.3.4 ComReg's Decision:

Eircom shall have an obligation to grant access, based on a reasonable request for:

- Sub-loop unbundling in areas which have not been identified as susceptible to benefit from a state subsidy scheme, and which meet with the following criteria (which consist of likely indicators regarding whether a request is *prima facie* reasonable):
 1. The request for sub-loop unbundling is at a cabinet or in an exchange area where Next Generation Access roll out and vectoring enablement has not already taken place and is not imminent or credibly scheduled; and
 2. There is a commitment to open access by the SLU operator for the provision of next generation wholesale broadband access services and;
 3. There is a commitment by the Access Seeker to bandwidth enhancing technology, where it is possible.

4.4 Backhaul and co-location

4.4.1 ComReg's Preliminary View from Consultation Document:

Backhaul

- 4.69 ComReg considered that backhaul is required in order to ensure interoperability between networks and to enable connectivity from a co-located operator's equipment in an Eircom exchange or node to the point of handover for WPNIA services. Access seekers are dependent on Eircom for interoperability and connectivity to the Eircom network.
- 4.70 Backhaul for WPNIA services is provided through the markets for terminating segments for leased lines. This was mandated through the Decision in the market for wholesale terminating segments of leased lines, in ComReg Decision D06/08⁵⁶. The same requirement exists for a backhaul product for NGA WPNIA services.

⁵⁶ Decision Notice and Decision Instrument: Market Analysis – Leased Line Market Review, ComReg Document No 08/103 (ComReg Decision D06/08); dated 22 December 2008.

- 4.71 Specifically, in the context of next generation access, an access seeker intending to unbundle a sub-loop will require backhaul from the cabinet or node to a point of handover in the exchange or higher in the network as without backhaul these products would be rendered ineffective. The NGA Recommendation states that:

“A copper sub-loop unbundling remedy should be supplemented by backhaul measures including fibre and Ethernet backhaul where appropriate....”⁵⁷.

- 4.72 Furthermore, access to backhaul facilities at the exchange should be made available for NGA products and services in conjunction with the provisions of ComReg Decision No D05/10 and ComReg Decision No D06/08.

Cabinet and exchange co-location

- 4.73 Eircom has chosen to deploy a FTTC/VDSL solution for the vast majority of its NGA rollout. FTTC/VDSL solutions require active equipment to be placed in a street cabinet. The current street cabinets house a termination frame for the sub-loops, which enables a cross-connect to a main cable which is then routed to the exchange to complete the path from the customer premises to the core network. The street cabinets currently deployed do not have the physical space to accommodate the active equipment required for VDSL. To solve this problem more space is required. The two most feasible solutions in the Irish context are the replacement of the existing street cabinet with a larger street cabinet, or have a second street cabinet to house the active VDSL equipment, and then link the new and existing cabinets with a tie cable.
- 4.74 Due to space constraints in a single street cabinet this solution would require Eircom to replace existing street cabinets in the areas where it is deploying NGA. If opting for the one cabinet solution, there is an argument that it should engineer the new cabinet so that an OAO(s) who intends unbundling the sub-loop could deploy their active equipment inside the Eircom cabinet in a similar manner to the existing exchange co-location. However, a single cabinet solution requires greater civil engineering work and more network intervention during cabinet deployment. During the NGA Pilot Eircom evaluated a single cabinet solution for NGA, however it has selected a two cabinet solution for the first phase of the NGA rollout. The two cabinet solution was chosen in other jurisdictions, for example in Northern Ireland, where NGA has been deployed, BT chose a two cabinet solution.

⁵⁷ The NGA Recommendation; Article (29).

- 4.75 If Eircom deploys the single cabinet solution, there is no guarantee that OAOs would request co-location in the new street cabinet, and demand for SLU, to date, has been low. Therefore, unnecessary costs might be incurred by Eircom. A national rollout of NGA would require a significant upgrade in cabinet real estate.
- 4.76 While co-location in the Eircom street cabinet may be needed, however, Cabinet Co-Location, i.e. the ability to link existing Eircom cabinets to a co-located OAO cabinet using a tie cable, is more likely to be required. The current SLU product provides the OAO with the capability to deploy a street cabinet in close proximity to an existing Eircom street cabinet, i.e. a co-located cabinet, and then link both cabinets with a tie cable which allows access to the sub-loops.
- 4.77 Traditional exchange co-location is required for next generation WPNIA. Without exchange co-location for next generation WPNIA access products, VUA and FTTH, for example, would be rendered useless for access seekers. Exchange co-location is required in order to provide effective access.

Q. 9 Do you agree with the ComReg's analysis for the requirement of Backhaul and exchange and cabinet co-location? Please provide reasons for your response.

4.4.2 Views of Respondents to Question 9:

Backhaul and Co-Location

- 4.78 The Five respondents (Eircom, Vodafone, Magnet, E-net, BT, ALTO and Digiweb) broadly agree.
- 4.79 One operators states that there are “clear requirements for backhaul, exchange and cabinet co-location” and support this point.
- 4.80 However, Eircom states that there should be no obligation to provide SLU in the NGA footprint and therefore issues of co-location from the cabinet and of backhaul from the cabinet do not arise. However, Eircom proposes that these products continue to be made available in the context of NGA in the context of the proposed VUA product.

4.4.3 ComReg's Assessment of Responses and Final Position:

Backhaul and Co-Location

- 4.81 It is clear from responses that all operators agree on the importance of exchange co-location and backhaul to the provision of Next Generation WPNIA products and services, regardless of Eircom's objections in relation to SLU in the NGA footprint area. Eircom will therefore have an obligation to provide exchange co-location and backhaul to enable the provision of next generation WPNIA products and services.
- 4.82 Moreover, access to the cabinet via a tie cable and backhaul between the cabinet and the exchange is essential to the provision of SLU, which is mandated on a reasonable request basis as outlined in sub-section 4.3.4. Access to cabinet co-location is required in so far as it facilitates access to Eircom's cabinet via a tie cable or other connection for the purposes of making use of the Sub Loop from an adjacent cabinet. Therefore, cabinet co-location is mandated.
- 4.83 ComReg's conclusion is that exchange co-location is required for FTTC. Access to the Eircom cabinet in order to allow for an OAO tie cable is also necessary, where access to SLU is considered to be reasonable or is mandatory.

4.4.4 ComReg's Decision:

Eircom shall have an obligation to provide backhaul.

Eircom shall have an obligation to provide co-location.

Eircom shall have an obligation to provide cabinet co-location.

4.4.5 ComReg's Decisions for Access to the WPNIA market:

Eircom shall have an obligation to provide access to the following services and facilities:

- **Civil Engineering Infrastructure including Duct Access where reasonable;**
- **Where Civil Engineering Infrastructure is not available, Dark Fibre where reasonably available;**
 - **Unbundled access to the fibre loop;**

- **Unbundled access to the fibre loop combined with GNP where required;**
- **Migrations;**
- **Co-Location;**
- **Cabinet Co-location;**
- **Backhaul;**
- **Interconnection.**

Additionally, ComReg concludes that Eircom shall provide access to the following particular services and facilities on a reasonable request basis:

- **Sub-loop unbundling in areas which have not been identified as susceptible to benefit from a State subsidy scheme according to the criteria discussed in subsection 4.59.**

Chapter 5

5 Access obligations in the WBA market

Overview

- 5.1 In this section we consider the application of the NGA Recommendation to wholesale broadband access products in Market 5 and the views of respondents to ComReg's proposed measures for access to wholesale broadband access.
- 5.2 Pursuant to ComReg's objectives under section 12 of the Act, Regulation 16 of the Framework Regulations and pursuant to Regulation 12 of the Access Regulations, we consider that the proposed access obligation for the WBA market takes "appropriate account of the risk incurred by the investing undertakings and by permitting various cooperative arrangements between investors and parties seeking access to diversify the risk of investment, while ensuring that competition in the market and the principle of non-discrimination are preserved⁵⁸."
- 5.3 This is further discussed in the Regulatory Impact Assessment (RIA) in Chapter 11 and set out in ComReg Document No. 12/27. Therefore ComReg has taken appropriate account of the risks incurred while balancing the need to promote competition⁵⁹. This is also explained in ComReg's evaluation of the regulatory challenge in Chapter 2.

5.1.1 ComReg's Preliminary Views from Consultation Document:

- 5.4 In ComReg Document No 12/27 ComReg proposed that Eircom would be mandated to offer access to "NGA Bitstream", which is considered a product under Market 5. NGA Bitstream allows high speed bitstream connectivity via the FTTH and FTTC access technologies.
- 5.5 Similar to the NGA Bitstream, it was also proposed that Eircom would be mandated to offer access to Virtual Unbundled Access ("VUA"), which is also considered a product under Market 5.

⁵⁸ Regulation 16 2(d) of the Framework Regulations

⁵⁹ Pursuant to Regulation 12 (4) of the Access Regulation.

- 5.6 It was proposed that Eircom's VUA product would be mandated as part of Market 5 and consideration was given to whether or not the technical characteristics reflected functionality associated with either WPNIA or WBA inputs. It should be noted that ComReg's assessment was that VUA is similar to an enhanced bitstream product, albeit with local handoff.
- 5.7 It was proposed that the enhanced bitstream product should possess the following characteristics:
- Ethernet Interface; ubiquitous and allows Layer 2 delivery of data-streams;
 - Flexible CPE; allows OAO to deploy its own CPE though this is still in development in the GPON environment;
 - QoS enabled; allows OAO to deploy its own QoS scheme;
 - Bandwidth control possible; allows OAO to design its own upstream and downstream speeds;
 - Flexible Interconnection; allow OAO to interconnect at various points in the network;
 - Multicast enabled; to facilitate the efficient distribution of IPTV.
- 5.8 It was also proposed that Eircom would have an obligation to provide exchange co-location and backhaul to enable access to VUA.

Q. 10 Do you agree with ComReg's preliminary conclusions in relation to its understanding and assessment of Market 5 obligations? Do you consider that we have considered the necessary access products for Market 5 for NGA. Please provide reasons for your response and approach.

5.1.2 Views of Respondents to Question 10:

- 5.9 Respondents were in agreement that the Market 5 access products were appropriate in an NGA context with Vodafone making the point that the "high level of functionality appears to be broadly acceptable."
- 5.10 In its response to consultation, Eircom agreed that NGA Bitstream and NGA VUA services (including exchange co-location) are the appropriate mandated products.

- 5.11 Eircom accepts the characteristics which a VUA product must include, however it points to the importance of CPE being vectoring compliant and that the Optical Network Termination unit (ONT) standard is set by Eircom. Other respondents did not have any particular issue with the products developed.
- 5.12 Eircom stated that it does not intend to offer standalone multicast and furthermore, in a recent development, Eircom submitted additional information to suggest that it does not consider multicast to be part of the market for WBA and hence should not be mandated.

5.1.3 ComReg's Assessment of Responses and Final Position:

- 5.13 ComReg notes that operators were in agreement that there was a requirement for both VUA and NGA Bitstream products and that it is appropriate and justified that these products should be mandated. Furthermore, having consulted with industry, ComReg continues to consider that the VUA product has technical functionality which reflects an active access product.
- 5.14 ComReg also notes that these products have been developed by Eircom while the NGA consultation was underway and that this development included input from industry. This product development process also informed ComReg's view of the required characteristics of a Market 5 product set.
- 5.15 The increasing proliferation of bundled services and in particular the evolution of triple play services clearly signals the important role that such offerings are likely to play in the competitive market, therefore ComReg shares industry's view that a multicast service is an essential component of a mandated NG Bitstream service.
- 5.16 For operators whose core networks already support multicast functionality, support for multicast traffic is an important technical characteristic of the VUA service, such that these operators can provide services which depend on multicast functionality to their end-users.

5.1.4 ComReg's Decision:

Eircom shall have an obligation to provide access to:

- **Next Generation Bitstream combined with Multicast where required;**
- **VUA combined with support for Multicast where required.**

5.2 Backhaul and co-location provision for WBA

5.2.1 ComReg's Preliminary Views from Consultation Document:

- 5.17 ComReg considered that backhaul is integral to providing a Bitstream service and is an important facility to enable the provision of next generation WBA products and services, and therefore should be mandated.
- 5.18 The VUA product should allow for Local handover (i.e. at the local exchange) in addition to including a backhaul component which allows traffic to be delivered over the VUA service to a nominated point of handover.
- 5.19 For both VUA and Next Generation Bitstream services, Eircom should provide a backhaul facility with Customer Sited Handover, In-span and In-building variants.
- 5.20 In the Consultation, we asked whether the characteristics and provisions for all next generation products and services in the WBA market were sufficient and appropriate. Included in the provisions was the proposal that Eircom would be obliged to provide exchange co-location to enable access to VUA.

Q. 11 Do you agree with ComReg's conclusion on the provision of backhaul services and facilities for WBA? Please provide reasons for your response.

5.2.2 Views of Respondents to Question 11:

- 5.21 All respondents agree that a backhaul service is required for Next Generation WBA services and facilities. Magnet considers that "...mandating a backhaul product in the WBA market is removing a barrier to entry and inviting more competition in the market place."
- 5.22 Vodafone consider that it is necessary to mandate two forms of backhaul for the WBA market a service based on "defined increments of bandwidth" and "a variable bandwidth backhaul component" as proposed in Eircom's Bitstream Plus product.
- 5.23 While Eircom agrees that backhaul is an associated facility for VUA, Eircom is of the view that it is not appropriate to include WEIL in the definition of backhaul as proposed.

5.2.3 ComReg's Assessment of Responses and Final Position:

- 5.24 ComReg notes that all respondents agreed that a backhaul service with flexible handover was required for the provision of WBA services and that handover at the local exchange is an essential component of the VUA service.
- 5.25 ComReg notes that Eircom's WEIL product is cited in the Backhaul definition as Ethernet reflects the appropriate technology choice for both the Backhaul and interconnect for the delivery and handover of NGA services.
- 5.26 Eircom will have an obligation to provide backhaul to enable the provision of next generation WBA products and services. The obligation will also require Eircom to provide a backhaul facility with Customer Sited Handover, In-span and In-building variants.
- 5.27 ComReg considers that it is necessary to emphasise the importance of Ethernet technology for backhaul and handover services in the context of NGA. ComReg considers that for the avoidance of doubt Ethernet should be mandated as a constituent of backhaul and interconnection.
- 5.28 ComReg notes that Backhaul is offered by Eircom as a component of their NGA Bitstream plus product as notified to ComReg and subsequently published on the Wholesale website on 20th November 2012.
- 5.29 ComReg considers that it is necessary to ensure that Eircom provides exchange co-location to enable VUA.

5.2.4 ComReg's Decision:

Eircom shall have an obligation to provide:

- **Backhaul for Next Generation Bitstream and VUA, including backhaul based on Ethernet technology;**
- **Co-location;**
- **Interconnection, including interconnection based on Ethernet technology, to include the following:**
 - **In-building handover;**
 - **In-span handover;**
 - **Customer-sited handover.**
- **Eircom shall have an obligation to provide cabinet co-location to enable access to VUA and Next Generation Bitstream.**

Chapter 6

6 Conditions of access common to the WPNIA and WBA markets

6.1.1 ComReg's Preliminary Views from Consultation Document:

6.1 In the Consultation ComReg proposed that it is appropriate that the conditions attached to the access obligations should ensure that Eircom provides access in a manner that allows the following requirements to be met:

- Obligation to negotiate in good faith;
- Obligation not to withdraw access to services and facilities already granted;
- Access to technical interfaces and protocols and to Eircom's OSS;
- Conditions attached to the access obligation;
- Obligation to grant access in a fair, reasonable and timely manner; and
- Migrations

Q. 12 Do you agree with ComReg's preliminary conclusions, as set out above, on the terms and conditions of the access obligation which are common to WPNIA and WBA? Please provide reasons for your response.

6.1.2 Views of Respondents to Question 12:

6.2 One respondent did not express a view. Other respondents agreed with the proposals in general but made a number of suggestions and comments. These requirements did not give rise to a cause for concern from respondents, except for the following issues which are now discussed.

- 6.3 In the consultation ComReg was of the view that the obligation to negotiate in good faith applies to current and next generation WPNIA and WBA, equally. No respondent disagreed with this proposal. However Vodafone suggested that it should be further specified to require Eircom to provide written reasons for refusal where access is not acceded to; and for a maximum delivery timeline to be specified for requests that are acceded to.
- 6.4 In relation to the obligation not to withdraw access to services and facilities already granted, most respondents to Question 12 addressed the issue of MDF closures with most respondents supportive, albeit with some reservations, of the position put forward by ComReg.
- 6.5 Eircom argued that a period of less than five years for the closure of an MDF might be appropriate if a commercial agreement has been reached for the alternative supply of relevant services.
- 6.6 BT was of the view that MDF closures should be the subject of public consultation; that there should be demonstrable evidence of a market shift sufficient to justify a closure; that there should be compensation for operators whose business suffered as a result; and that co-location required for other services, such as terminating segments of leased lines, should be maintained.
- 6.7 Respondents addressing the obligation to grant access to technical interfaces, protocols and access to Eircom's Operational Support Systems (OSS), focused on the Equivalence of Inputs standard and this is addressed fully in the section on Non-Discrimination.
- 6.8 Most respondents did not comment on the issue of granting access in a fair, reasonable and timely manner. However Vodafone discussed it in the context of SLAs. It was of the view that SLAs should be used to define an objective standard of a "fit for purpose" product and that this should be done independently of any consideration of financial compensation to be paid out. The required standard of access would be based on operator requirements.

6.1.3 ComReg's Assessment of Responses and Final Position:

6.2 Obligation to negotiate in good faith

- 6.9 A requirement to provide the "objective criteria" where access is refused, as per Vodafone's suggestion, was already included in the draft Decisions for both NG WPNIA and NG WBA. While ComReg understands the motivation for Vodafone's requirement for a stipulated maximum time for a response to an access request, it is of the view that the variation in the size and scope of access requests would make such an approach too inflexible.
- 6.10 ComReg is of the view that the obligation to negotiate in good faith applies to current and next generation WPNIA and WBA, equally.

6.3 Obligation not to withdraw access to services and facilities already granted

- 6.11 In the case of this obligation, ComReg appreciates the opposing interests that would be taken by an SMP Operator and OAOs availing of WPNIA-based services. ComReg has endeavoured to provide sufficient certainty to both interests while at the same time allowing for the possibility of flexibility if certain criteria are met.
- 6.12 In line with Regulation 12 (2) of the Access Regulations and mandated in the ComReg Decision D05/10⁶⁰ on WPNIA and ComReg Decision D06/11 on the WBA⁶¹, Eircom has an obligation not to withdraw access to services and facilities already granted without prior approval of ComReg.
- 6.13 In line with the NGA Recommendation, ComReg has taken the view that a period of five years prior notification for the closure of an exchange or removal of related services or facilities such as co-location or an MDF should be considered as appropriate and proportionate.

⁶⁰ ComReg Document 10/39, Market Review: Wholesale (Physical) Network Infrastructure Access, Response to Consultation and Decision, Decision No. D05/10, 20 May 2010.

⁶¹ ComReg Document 11/49, Market Review: Wholesale Broadband Access, Response to Consultation and Decision, Decision No. D06/11, 8 July 2011.

- 6.14 In the case of withdrawal of facilities, equivalent access would be required and ComReg will consider the merits and provision of equivalent access, when considering the withdrawal of MDF facilities and services. Equivalent access would be based on at least a “virtual” product, and new or innovative products developed and offered as a result of a “reasonable request”. ComReg believes that such an approach is in line with the NGA Recommendation, as discussed in paragraph (40) of that Recommendation. Eircom maintains that ComReg should use its discretion to reduce the notice period of five years prior notification, taking into account the cost of maintaining dual networks for an unreasonable period of time and the potential availability of equivalent services.
- 6.15 More generally, withdrawal by Eircom of access to facilities already granted in the WBA and WPNIA markets remains subject to the prior approval of ComReg. ComReg will assess this obligation and use its discretion to waive the obligation on a case by case basis, taking into account whether there is a fibre product - either an unbundled offer or a virtual product - in place.

6.4 Access to technical interfaces, protocols and access to Eircom’s Operational Support Systems (OSS)

- 6.16 Access to technical interfaces, protocols and access to Eircom’s Operational Support Systems (OSS) is discussed further in Section 8 of this paper which deals with Eircom’s non-discrimination obligation.
- 6.17 Given ComReg’s approach to ensuring that Eircom fulfils its non-discrimination obligation, we are proposing that Eircom must ensure that any future OSS IT developments evolve such that both Eircom's down-stream arms and Access Seekers gain access to OSS in exactly the same manner, as far as possible. This should be provided in accordance with the principle of Eol.
- 6.18 This matter is discussed at greater length in the section on Non-Discrimination.

6.5 Conditions attached to the access obligation

- 6.19 Pursuant to Regulation 12 (3) of the Access Regulation, there are certain standards in the provision of access which facilitate and support the provision of access on a fair, reasonable and timely basis. These standards provide clarity to industry and ComReg and ensure that Eircom is meeting its obligations for non-discrimination and transparency.

Obligation to grant access in a fair, reasonable and timely manner:

- 6.20 Vodafone's discussion of "fit for purpose" products is reminiscent of the discussion of KPI "targets" contained in the KPI Decision and the associated consultation documentation. ComReg concluded that it would not impose targets at that time but did not rule out revisiting the topic.
- 6.21 Regulation 12 (3) of the Access Regulations empowers ComReg to attach to relevant access obligations conditions covering fairness, reasonableness and timeliness. In the case of WPNIA and WBA services and facilities ComReg requires Eircom to ensure that the terms and conditions for access are governed by a Service Level Agreement ("SLA").
- 6.22 Eircom has an obligation to conclude, maintain or update, as appropriate, Service Level Agreements for the supply of WBA and WPNIA services. In terms of delivering NGA services ComReg's position remains the same and Eircom should have the same obligations in terms of SLAs for the delivery of next generation WPNIA and WBA to OAOs. Such SLAs should include an obligation to pay service credits where agreed targets are missed. Performance Metrics should be published to demonstrate aggregate performance by Eircom against the SLA targets.
- 6.23 ComReg, noting the existing SMP access obligations (as now further specified) and, having regard to its statutory obligations and functions, proposes and justifies a range of conditions to apply to Eircom access obligations in order to address competition problems identified. These conditions are further summarized below:

6.5.1 ComReg's Decision:

The following conditions will apply to Eircom's provision of access for both WPNIA and WBA:

- **Obligation to negotiate in good faith;**
- **Obligation not to withdraw access to services and facilities already granted;**
- **Access to technical interfaces and protocols and to Eircom's OSS;**
- **Conditions attached to the access obligation;**

- **Obligation to grant access in a fair, reasonable and timely manner.**

6.6 Migrations

6.6.1 ComReg's Preliminary Views from Consultation Document:

6.24 The importance of a fully functioning migrations process cannot be overstated as it is a critical process, key to an operator successfully gaining a new customer and therefore paramount to the commercial performance of an access seeker. The migrations processes associated with current generation LLU have been characterised by particular difficulties.

6.25 Article 40 of the NGA Recommendation provides that appropriate migration paths are put in place to ensure smooth switching between current generation and next generation service providers and expressly states that:

"NRAs should put in place a transparent framework for the migration from copper to fibre-based networks. NRAs should ensure that the systems and procedures put in place by the SMP operator, including operating support systems, are designed so as to facilitate the switching of alternative providers to NGA-based access products".

Q. 13 Do you agree with ComReg's preliminary conclusions, as set out above, in relation to the terms and conditions of the access obligation including a fully functioning **migrations process**, in the WBA market (Market 5) and WPNI market (Market 4)? Please provide reasons for your response.

6.6.2 Views of Respondents to Question 13:

6.26 Of the respondents to this question, all agreed, in principle, with ComReg's position, save for one, who expressed no view. However, a number of related issues were raised in more detailed discussion of migrations.

6.27 BT does not agree with what it sees as a proposal by Eircom to recover migration through Wholesale rental pricing; nor with what it characterises as ComReg's proposal of a universal migration charge. This position is supported by ALTO.

6.28 BT is also of the view that migrations will not be one-way, and that migrations from NGA services to services supplied over legacy networks must be fully supported.

6.6.3 ComReg's Assessment of Responses and Final Position:

- 6.29 The point raised by BT and ALTO regarding migrations has been dealt with in Chapter 10 in subsection 10.13.
- 6.30 Eircom will have an obligation to provide migration facilities across and between regulated current generation and next generation products and services in the WPNIA and WBA markets.
- 6.31 This obligation will also include migrations between alternate infrastructures and will provide a corresponding "bulk migration" facility. Eircom has stated their intention to provide a full suite of migration capabilities although it believes that migration from NGA to legacy should not be encouraged.
- 6.32 We take the view on the other hand that migrations should be facilitated on a non discriminatory basis.

6.6.4 ComReg's Decision:

Eircom shall provide migration facilities, including bulk migrations, across and between regulated current generation and next generation products and services in the WPNIA and WBA markets.

Chapter 7

7 Obligation of non-discrimination in the WPNIA and WBA markets

Overview:

- 7.1 The consistent and appropriate application of an ex-ante non-discrimination obligation has been the focus of European and national regulatory policy over the past year. The debate centres on what constitutes an effective non-discrimination obligation that can prevent a vertically-integrated dominant operator from discriminating to the detriment of competitors. The European Commission is soon to issue a Recommendation on the consistent application of non-discrimination in wholesale communication markets. It is widely accepted that the non-discrimination obligation has not been well applied in Member States and yet the use of functional separation, as provided in Article 13 of the Access Directive, is considered by most regulatory authorities to be a measure of last resort. That said, efforts are being made to find some middle ground, whereby a more stringent and consistent application, with active monitoring and compliance measures, could deliver a safeguard to competition. Since the Consultation ComReg has taken into account the emerging guidance from the European Commission and operator views and thus notes the final measure below.
- 7.2 In ComReg Document No. 12/27, we specified the regulatory objective of raising the standards applied to non-discrimination based on the historic and potential competition problems. The European Commission's consultation and questionnaire on non-discrimination (the "Non-Discrimination Consultation")⁶² points to the fact that non-price discrimination is difficult to detect and is as harmful as price discrimination. This is also suggested in the publication: "Regulating for Non-Price Discrimination: The case of UK Fixed Telecoms"⁶³, where the authors point to extensive academic literature evidencing the incentives of a vertically integrated dominant operator to discrimination and foreclose a strategic opponent.

⁶² Questionnaire for the public consultation on the consultation on the application of a non-discrimination obligation under Article 10 of the Access Directive (including Functional Separation under 13A).

⁶³ "Regulating for Non-Price Discrimination: The case of UK Fixed Telecoms": Cave, Correa & Crocioni (2006).

- 7.3 Non-price means is an effective strategy of exclusion and where downstream rivals are disadvantaged, a vertically integrated operator can capture a higher share of the downstream profits. Tight upstream regulation can in fact strengthen the incentives to discriminate, as firms compete more intensively in the downstream market, particularly where there are large economies of scale at stake. Therefore, the regulation of non-price discrimination should be treated differently from price discrimination, in order to tackle foreclosure.
- 7.4 An alternative approach to tackling non-price discrimination is now understood to be more appropriate, whereby the incentives of the vertically integrated operator must be realigned and the behaviour made observable and verifiable. This regulatory strategy set out in ComReg Document 12/27, is similar to the policy options set out in the European Commission draft “Recommendation on non-discrimination and costing methodologies” and this standard is explored below.

7.1 Policy developments

- 7.5 In order to specify the obligation of non-discrimination since the Consultation, ComReg has take account of:-
- the competition problems as identified in Chapter 3 of the consultation paper;
 - submissions received from industry in respect of previous consultations (i.e. the First NGA Consultation⁶⁴ and earlier consultations relating to the WPNIA Decision, the WBA Decision as well as ComReg’s consultation on key performance indicators (the “KPI Decision”⁶⁵); and ComReg Consultation document No. 12/27.
 - the Commission Recommendation on regulated access to Next Generation Access Networks (the “NGA Recommendation”⁶⁶);
 - the Commission’s consultation on the application of a non discrimination obligation under Article 10 of the Access Directive (the Non-Discrimination Consultation) and associated responses;

⁶⁴ Document 11/40 Next Generation Access (NGA) Remedies in Wholesale Regulated Markets, 26th May 2011.

⁶⁵ ComReg Document No. 11/46 entitled “Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets”. Decision 05/11. (the “KPI Decision”).

⁶⁶ European Commission, “Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA)”, Brussels, C(2010) 6223.

- the BEREC consultation on the high level principles on non-discrimination (the “BEREC Non Discrimination Consultation⁶⁷”) and
- the comments letters issued by the European Commission in its review of regulatory measures notified by Member States under the Community consultation mechanism for electronic communications services (the “Comments Letters”). In particular:
 - FICORA⁶⁸
 - MCA⁶⁹
 - ComReg⁷⁰
- Draft “Recommendation on non-discrimination and costing methodologies”.

7.6 ComReg has taken this guidance into consideration in its application of these measures, particularly in terms of striking the correct balance and for creating a level playing field. Of particular importance is the guidance contained in the Recommendation to the Finnish Regulator, FICORA, which states: “ certain remedies, which ensure equivalence of access to alternative operators, are imposed by NRAs (such as an equivalence of input obligation combined with a replicability test), and where there is a significant competitive constraint from operators with cost-oriented access to the copper network or from other infrastructure-based competitors such as cable or LTE by virtue of their demand side substitutability at retail and/or wholesale, there should be no need to apply cost orientation to NGA products.”

7.7 The Commission stresses the importance of a monitoring mechanism for non-discrimination, including transparent KPIs which provide an effective monitoring mechanism and support enforcement.

7.8 The Commission recommends: FICORA should impose:

“With regards to fibre infrastructures FICORA should mandate cost orientation for wholesale broadband access unless sufficient competition safeguards are imposed which render this unnecessary. In the latter case, FICORA should at least implement the following:

⁶⁷ BEREC’s Review of the Common Positions on wholesale unbundled access, wholesale broadband access and wholesale leased lines. Stage 1 High Level Principles on issues of non-discrimination dated 1 March 2012.

⁶⁸ [Cases FI/2012/1328-1329: Markets for wholesale physical network infrastructure access at a fixed location and wholesale broadband access – 18.10.2012.](#)

⁶⁹ Case MT/2012/1375 and Case MT/2012/1374.

⁷⁰ Case IE/2012/1404

(a) Equivalence of input, which generally requires SMP operators' own downstream operations to use the same products, processes, and prices as those used by their retail rivals. As equivalence of input can only be fully implemented over a longer time period, this requirement could consist in immediate terms in a firm obligation on and commitment by the SMP operators to undertake certain key initiatives over a set time period;

(b) A transparency obligation regarding fibre, comprising a number of clearly specified KPIs and an effective enforcement and monitoring mechanism (such as internal or external regular audits) and publication of the KPIs;

(c) A replicability requirement also for fibre based retail products;

(d) An accounting separation obligation covering also fibre products”.

7.9 More recently, the Commission confirmed its approach in the forthcoming guidance on non-discrimination and costing methodologies, allowing pricing flexibility where there are certain conditions or competition safeguards in place, to MCA⁷¹. These conditions confirm the importance of ensuring equivalence and reflect the guidance given to FICORA in terms of providing for EoI; transparent KPIs, replicability of fibre-base retail products; and accounting separation.

7.1.1 ComReg’s Preliminary Views from the Consultation Document:

7.10 In ComReg’s Document No 12/27 ComReg proposed, as part of the non-discrimination obligation, that Eircom would be obliged to meet the standard of non-discrimination, on the basis of persistent competition problems and evidence of discrimination.

Standard of Equivalence

- To require the standard of EoI for next generation WPNIA and WBA services and facilities.
- To demonstrate that reasonable steps were taken to comply with the requirement to provide next generation WPNIA and WBA on an EoI basis or, where not possible (for technical or other reasons), to comply with the standard of EoO.

⁷¹ Case MT/2012/1375 and Case MT/2012/1374.

- To demonstrate where there are any differences between the inputs provided by Eircom to Access Seekers and those provided internally and why these have occurred.

Monitoring compliance of non-discrimination

7.11 The European Commission's Non-discrimination Consultation points out that the potential for non-price discrimination is present where a dominant operator is vertically-integrated⁷². Detecting non-price discrimination is challenging and NRAs and competing operators need to be confident that any non-discrimination obligation which has been imposed is working effectively. Therefore, in order to enable transparent and verifiable monitoring of performance for the non-discrimination obligations, it was proposed that Eircom notify ComReg in advance of:-

- (i) Offering a new Next Generation WPNIA and WBA service or facility; and
- (ii) Amending an existing Next Generation WPNIA and WBA service or facility.

7.12 At the point of notification, it was envisaged that Eircom would be required to provide to ComReg sufficient information to demonstrate that the product or service is being provided on an EoI basis or where appropriate on an EoO basis.

Other non-discrimination obligations:

7.13 ComReg also proposed to impose on Eircom a requirement to notify ComReg, at the date of an agreement, of any potential co-investment arrangements that may take place between Eircom and another party. This provision is to ensure that Eircom does not attempt to leverage its market power from the WPNIA or WBA market so as to treat any contractual party in a more favourable way to how it treats other undertakings or itself.

Q. 14 Do you agree with ComReg's analysis and application of the non-discrimination obligation? In what circumstances should the standard of Equivalence of Inputs or another standard apply? Please give reasoning and evidence to support your position.

⁷² Page 2 of the Non Discrimination Consultation.

7.1.2 Views of Respondents to Question 14:

- 7.14 Of the nine respondents to this question, one disagreed with ComReg's position, seven endorsed it, and one did not express a view.
- 7.15 Eircom disagreed with the proposals in the consultation stating that the measure of Eol for NG WPNIA and WBA is intrusive and represents a new form of access regulation, which, it believed, is beyond the scope of Article 10 of the Access Regulations. Eircom stated that its principal concern was with the apparently open-ended nature of the obligation of Eol for NG WPNIA and WBA. Moreover, Eircom suggested that the burden of proof for compliance would be excessive and costly.
- 7.16 Eircom was of the view that the scope of this measure was undefined and unlimited and, based on this characterisation that it is effectively a requirement for functional separation; which, Eircom said, should apply only in exceptional circumstances. Eircom argued that an Eol requirement would need to be based on rigorous cost-benefit analysis and opined that ComReg had not considered the scale of potential costs. It stated that ComReg had not inquired of Eircom as to the feasibility and practicality of implementing Eol. Eircom believed that the obligation would place fundamental restrictions on Eircom's business and business processes; with the effect of potentially diverting technical resources from the rollout of NGA services.
- 7.17 Despite its opposition to the consultation proposal, Eircom stated an intention to be constructive and offered alternative solutions to meeting their non-discrimination obligations.
- 7.18 Eircom is offering voluntary commitments of reform with, in its view, an appropriate level of non-discrimination safeguards relating to quality of service and transparency. Eircom believes that a regime which requires it to justify any departure from Eol would entail a huge administrative burden. Eircom has offered to deliver:
- Commitment to develop wholesale capabilities and services;
 - Commitment to fit for purpose NGA wholesale services;
 - Migration of Eircom's retail arm through the Unified Gateway for provision, repair and maintenance of NGA bitstream;
 - Non-discrimination to the same standards as for all other wholesale services;
 - Publication of KPIs;
 - A corporate Code of Practice on compliance and governance.

- 7.19 Other respondents were of the view that the historic behaviour of the SMP operator merits an improved standard of non-discrimination and gave evidence to support these views. In particular, Vodafone stated that “Given the evidence that Eircom has breached existing transparency and non-discrimination obligations in a number of markets it is proportionate reasonable and justified that a more robust approach be taken by ComReg in designing the specific remedies which will apply to NGA based services.”
- 7.20 Vodafone pointed to a series of compliance cases and disputes that have occurred over the past number of years, which, it said, would indicate that discrimination has occurred. Specifically, Vodafone noted that the “purpose of *ex ante* regulation is to prospectively prevent negative market impacts arising for the exercise of SMP”, whereas the “current regulatory regime is based on Equivalence of Outputs (EoO) and subsequent detection and remediation to ensure equivalence”.
- 7.21 Furthermore, Vodafone believed that this regime “seems to have fostered an environment where it is viable for eircom to design EoO solutions and processes which are not overtly discriminatory” while “confirmation of lack of discrimination is at best difficult and subsequent enforcement is also challenging”.
- 7.22 BT was supportive of the proposal to strengthen the obligation of non-discrimination and agreed that there were examples where corrective action had been required by ComReg. BT pointed out that “for the new NGA environment and new deployments the preference should always be EoI as such should be designed in from the start without the need for costly retrofitting.”
- 7.23 BT considered that the obligation of functional separation is an appropriate remedy for NGA services and “In the interim strict equivalence should be mandated given that NGA is new and Eircom were aware of the Equivalence rules from the outset and such will facilitate competition”. BT stated that a similar structure to Openreach would foster greater confidence in using Market 5 solutions. BT stated that it has had a poor experience of Eircom’s reform programme.

7.1.3 ComReg’s Assessment of Responses and Final Position:

- 7.24 ComReg’s consideration in terms of developing a non-discrimination obligation is to ensure a remedy which addresses persistent and potential competition problems. In ComReg Document No 12/27 Chapter 3, issues of both pricing and non-pricing discrimination were identified. As previously highlighted in the European Commission public consultation on non-discrimination:

“However, cases of non-price discriminatory behaviour (e.g. quality discrimination, access to information, delaying tactics, undue requirements, strategic design of product characteristics etc.) are often more numerous and can be equally, if not even more severe.”⁷³

- 7.25 Respondents to the consultation pointed to specific examples where discriminatory behaviour has occurred. For example, in the WPNIA market, difficulties in the equivalent and timely supply of LLU were highlighted.
- 7.26 The proposals set out in ComReg Document No 12/27 were based on the application of Article 10 (2) of the Access Regulation in the context of the NGA Recommendation⁷⁴ and on emerging European policy.
- 7.27 Since the consultation, ComReg has noted further development to European Commission policy; in particular, the statement by Commissioner Kroes on 12 July 2012, which stressed the need for a level playing field for alternative operators. This has been highlighted to NRAs in the Recommendation to FICORA and commentary to MCA and in the draft “Recommendation on non-discrimination and costing methodologies”. This requires the provision of equal terms and quality for all, such that margins are not artificially squeezed. The statement, which applies to the future regulation of NGA, identifies an opportunity for SMP operators to remediate non-price discrimination affecting alternative operators which could, in turn, facilitate greater pricing flexibility by NRAs. Considering this policy guidance ComReg examines the particular national circumstance.
- 7.28 Through this consultation, Eircom has submitted evidence to suggest that the cable operator exerts retail pricing constraints in certain areas and proposes that a flexible pricing regime is appropriate in this market environment. The applicable regulatory approach from the NGA Recommendation stipulates that cost orientation should be applied to NGA pricing in Market 5, except in exceptional circumstances. ComReg’s proposal to shift to a more flexible pricing mechanism is intended to assist responsiveness to market demand and to incentivise demand-led investment.

⁷³ European Commission: Questionnaire for the public consultation on the application of a non-discrimination obligation under article 10 of the Access Directive (including functional separation under article 13a), 3 October 2011.

⁷⁴ European Commission, “Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA)”, Brussels, C(2010) 6223.

- 7.29 Such an approach can only be considered appropriate where there are conditions conducive to a more level playing field for alternative operators; in particular through an effective non-discrimination obligation⁷⁵. Past behaviour of Eircom towards its wholesale customers has been a cause for concern, as noted in a number of compliance cases and in the investigation which culminated in ComReg Decision D07/11⁷⁶. Given that a lighter form of price regulation can only be contemplated where there is a safeguard to competition, ComReg has decided not to impose strict cost-orientation for Eircom's NGA products in Market 5. This is on the basis that non-discriminatory wholesale performance and pro-active compliance is implemented for NGA. This is in line with European Commission policy guidance that any relaxation of price control must only be facilitated where equivalence of access for alternative operators for NGA services can be guaranteed.
- 7.30 ComReg maintains that there have been significant costs to alternative operators due to the fact that Eircom has not always fully met their non-discrimination obligations in the current generation environment. Development of new systems for NGA presents a unique opportunity to eliminate certain modes of discrimination at no incremental cost, as noted to ComReg on 17th December 2012. It should be noted that the basis of the non-discrimination outlined in ComReg Document No 12/27 Section 8, was based on Article 10 of the Access Directive and not on Article 13a as suggested by Eircom.
- 7.31 ComReg has taken on board some of Eircom's specific concerns in terms of the practical implications associated with meeting the obligations originally proposed. Moreover, Eircom has made a substantial, albeit voluntary and unproven, commitment to raising standards of non-discriminatory practice in the areas addressed by the proposals.
- 7.32 In light of these considerations, ComReg obliges Eircom to meet the following standard of non-discrimination:

Standard of Equivalence

- Eircom shall provide on an EoI basis end-user related pre-ordering, ordering, provisioning, fault reporting and repair for Next Generation Bitstream and VUA, including multicast.
- All other Market 5 services and associated facilities will be provided on, at least, an Equivalence of Output (EoO) basis.

⁷⁵ In line with the policy objectives set out and noted to FICORA in the Commission Recommendation of 18.10.2012. C(2012) 7189 final.

⁷⁶ This following an investigation on a case of non-compliance on wholesale inputs over the Eircom "White label – PSTN product".

- Access and voice provided over legacy technology and sold in conjunction with NG services at the wholesale level must be provided, at a minimum, to an EoO standard. The Market 5 element should be provided on an Eol basis, for pre-ordering, ordering, provisioning, fault reporting and repair and the services provided over legacy technology must be provided at a minimum of EoO. This requires the imposition of sufficient governance measures to ensure ongoing and auditable compliance with the non-discrimination obligation, to the standard of at least EoO.
- All WPNIA services should be delivered to at least an EoO standard.

7.33 ComReg's proposal, with regard to the non-discrimination obligation, is to require a standard of Eol for Next Generation WBA services and facilities. Following consultation with industry, ComReg has taken the view that Eol for commonly-consumed systems and processes is necessary and justified. ComReg believes that the scope of Eol for Next Generation Bitstream and VUA is proportionate and justified and does not create a disproportionate burden to implement, particularly given that this approach leverages new system developments, already implemented or planned by Eircom for NGA. ComReg is also of the view that this standard is essential to enable the pricing flexibility outlined later in this notification, in line with European Commission policy.

7.34 A standard of at least EoO will be accepted and considered proportionate for all other products and services within the WPNIA and WBA markets. This will be supported by appropriate measures to ensure compliance and transparency. Eircom intends to bundle next generation broadband services with voice services provided over the legacy network. The WBA (Market 5) element should be provided on an Eol basis, for pre-ordering, ordering, provisioning, fault reporting and repair; and the services provided over legacy technology must be provided at a minimum of EoO. ComReg requires the imposition of sufficient governance measures by Eircom to ensure ongoing and auditable compliance with the non-discrimination obligation, whether to the standard of EoO or Eol.

7.35 ComReg believes that the scope of Eol as proposed can co-exist with an EoO requirement for other aspects of the product life-cycle as long as sufficient monitoring, controls and governance have been put in place to ensure that the outputs are indeed equivalent. For EoO, it will be important that the service levels offered to Access Seekers and internally, are monitored to ensure compliance with the obligation. Some of this will be made transparent through KPIs while other aspects will be underwritten by compliance processes. These compliance processes should be supported by the implementation of a control environment and governance structure.

- 7.36 ComReg has considered Eircom's concerns about the potential cost of developing EoI, particularly where the scope of the obligations is not clearly delineated. The scope of EoI will be limited, for now, to Market 5 NGA Bitstream and VUA. ComReg understands that this approach reflects Eircom's voluntary commitment on non-discrimination while underpinning it with a formal obligation and notes that this can be provided at little incremental cost, other than the costs associated with the planned systems development. ComReg highlights that performance on non-discrimination will be closely monitored through KPIs and further supported by SLAs and associated performance metrics. Should it become evident that a level playing field for competitors does not develop, as has been evidenced in the past⁷⁷, ComReg will consider the associated cost to industry of not implementing a wider scope of equivalence, and may revisit the level of equivalence required of Eircom.
- 7.37 While ComReg recognises that there are persistent competition problems in the provision of access through legacy systems, we have concerns around the proportionality of imposing EoI for the wholesale physical access infrastructure, including civil engineering infrastructure. Eircom has argued that there will be a disproportionate cost associated with delivering this standard to systems and processes over legacy network elements. However, in view of ComReg's decision to scale back the extent of the standard of equivalence in the WPNIA market, ComReg is mandating observable and verifiable compliance and monitoring processes, with mechanisms in place to prevent a degradation of service levels.

⁷⁷ http://www.comreg.ie/_fileupload/publications/ComReg0627.pdf
http://www.comreg.ie/_fileupload/publications/ComReg0744.pdf

http://www.comreg.ie/_fileupload/publications/ComReg0895.pdf

http://www.comreg.ie/_fileupload/publications/Comreg0750.pdf

http://www.comreg.ie/_fileupload/publications/ComReg1093.pdf

Application and Monitoring

7.38 Eircom will be obliged to demonstrate prior to launch that it can certify delivery of a minimum standard of EoO delivered to all products and services within the markets and that EoI can be delivered for NG Bitstream and VUA services. The European Commission recently recommended to FICORA that an “...effective enforcement and monitoring mechanism...” is required regarding fibre⁷⁸ and also guided to ComReg⁷⁹. The governance and controls around EoI and EoO will also be required to ensure that compliance is ongoing and where material differences exist that they are identified and adequate countervailing internal controls implemented by Eircom. Specifically, for future products launched, this obligation would require Eircom to demonstrate to ComReg in advance of launching new services or changes to existing services, that it can meet its obligations of both EoI and EoO, where appropriate, by submitting a Compliance Statement in this regard. The extent and burden of proof will require:

1. Demonstration of adherence with the obligation of both EoI and EoO as mandated (and with a minimum standard of compliance for EoO).
2. Demonstration of how EoI and EoO have been achieved and a description of all material elements or differences, if they occur.
3. In the case of EoI differences should be very minor and these should be documented and justified.
4. Where EoO applies, Eircom should provide documentation which describes any material system or process differences (with particular attention to illustrating the governance and the control environment in the context of EoO given the particular opportunity for non-discrimination (as against EoI for example)).
5. Description of the governance structure and control environment used to ensure EoI where appropriate and in the case of EoO, to ensure that outcomes are equivalent.

7.39 Formal compliance statements supporting EoI and EoO, in particular detailing the compliance processes, monitoring regimes and the supporting governance structure, will be required at the point of notification, which will be in line with transparency requirements or as ComReg requires. In the case of the launch of NGA services, Eircom will be required to submit a statement of compliance four months after the launch of wholesale services, or as ComReg requires. This is considered appropriate, given the potential market impact of any non-compliance. Appropriate governance should ensure that documentation is kept up to date.

⁷⁸ Case FI/2012/1328-1329.

⁷⁹ Case IE/2012/1404.

- 7.40 Traditionally, the burden of monitoring compliance with a non-discrimination obligation has focused on detection rather than prevention. ComReg recognises that detection of some forms of non-pricing discrimination may be particularly difficult. Over the lifespan of regulation in the relevant markets, there have been a number of difficulties with Eircom's compliance with its non-discrimination obligations in supplying regulated wholesale offerings. Some of these issues have resulted in notifications to Eircom of non-compliance with its non-discrimination obligation.⁸⁰
- 7.41 Consequently, the SMP operator has had an unfair advantage in the presence of barriers to effective and timely competition. Progressive steps have been taken to address imbalances in the markets through mandating agreement of SLAs, requiring the publication of SLA-based performance metrics and, most recently, by requiring the publication of KPIs which directly compare the equivalent wholesale and self-supplied inputs. However, given the persistent potential for non-price discrimination, the new systems developments implementation of NGA and the EU legislative developments, ComReg believes that it is proportionate to require a higher standard of non-discrimination from Eircom; and to ensure that the burden of compliance and monitoring of these obligations is ascribed to the SMP operator. Given that Eircom has offered voluntarily to reform its wholesale performance and that ComReg has underpinned these reforms through its definition of the scope of application of Eol, we believe that this approach is both proportionate and justified. The proposed approach should reduce the scope for some of the embedded discrimination and may defer the possibility of a more interventionist approach.

Other non-discrimination obligations

⁸⁰ See the following documents which are on the ComReg website – “Notification to eircom of non-compliance by eircom with its non-discrimination obligation”, ComReg Document No. 06/27 dated 23rd June 2006, “Notification to eircom of non-compliance by, eircom with its non-discrimination obligation”, ComReg Document No. 07/44 dated 20 July 2007, “Decision to find that Eircom is not in compliance with the non-discrimination obligation in its use of “Sync Checker”, ComReg Document No. 08/95 dated 4 December 2008, “Notification to Eircom of non-compliance by Eircom with its non-discrimination obligation in relation to service repair” ComReg Document No. 07/50, dated 30th July 2007, “ComReg notifies Eircom Limited of a finding of non-compliance”, ComReg Document No. 10/93 dated 30 November 2010.

- 7.42 Eircom will have an obligation to publish KPIs on its website in accordance with the KPI Decision. More generally Eircom's obligations apply irrespective of whether or not a specific request for services or information has been made.

Other

- 7.43 At present ComReg is not aware of any market demand for a co-investment arrangement with Eircom. In the event that Eircom forms a co-investment arrangement, Eircom will be required to ensure that it is adhering to its non-discrimination obligation. To that end, Eircom will be obliged to notify ComReg, in advance of any potential co-investment arrangement that may take place between Eircom and another party, being finalised. Specifically, this obligation would materialise where there is a potential co-investment agreement; the agreement is of a sizable or substantial scale; and it is within the scope of NGA. In these circumstances, Eircom would be required to notify ComReg of its compliance with its non-discrimination obligations.
- 7.44 In the Consultation, ComReg noted that Regulation 10 of the Access Regulations provides that ComReg can impose non-discrimination obligations on an SMP undertaking in relation to access or interconnection. It was also noted that the Access Directive⁸¹ provided that the principle of non-discrimination is designed to ensure that undertakings with market power do not distort competition, in particular, where they are vertically integrated undertakings that supply services to undertakings with whom they compete on downstream markets. It was noted that non-discrimination obligations can be standalone, but can also support other obligations such those relating to access, transparency and price control.
- 7.45 ComReg having regard to its statutory obligations and functions, and having carefully considered operator submissions, proposes and justifies a range of non-discrimination obligations it considers should be imposed in order to address, in particular, competition problems already discussed. ComReg proposes to require, the following obligations at this point:

⁸¹ Recital 17 of the Access Directive.

7.1.4 ComReg's Decision:

Eircom shall have an obligation of non-discrimination, in particular:

Standard of Equivalence

- In respect of Next Generation WBA products, services and facilities, Eircom shall provide pre-ordering, ordering, provisioning, fault reporting and repair on an Equivalence of Inputs basis;
- All other forms of Access, including Associated Facilities, to Next Generation WBA services and facilities other than those provided in respect of VUA and NGB, shall be provided on at least an Equivalence of Outputs basis;
- EoO for Next Generation WPNIA services and facilities;
- Consequently, Next Generation products, services and facilities, sold with access and voice, provided over legacy technology, must be provided to at least the standard of EoO.

Application and Monitoring: Statement of Compliance:

- Eircom shall submit to ComReg a written Statement of Compliance demonstrating its compliance with its non-discrimination obligations:
 - No later than 30 September 2013 or;
 - For any offer of a new Next Generation WBA or WPNIA product, service or facility, seven (7) months in advance of launch;
 - For any change to an existing Next Generation WBA or WPNIA product, service or facility, three (3) months in advance of changes being made available.
- The Statement of Compliance shall include a written statement confirming compliance;
- The Statement of Compliance shall include documentation disclosing material facts regarding compliance and how it has been achieved in particular by reference to:
 - (a) systems and processes;
 - (b) the governance and control environment policies and procedures in place for both Eircom's downstream operations and OAOs; and
 - (c) an explanation as to how appropriate controls and governance are maintained over time.
- The Statement of Compliance shall include an explanation and justification of minor differences as between systems and processes in the case of EoI and in the case of EoO the explanation shall include a description as to how and what controls are in place to ensure an EoO

standard, notwithstanding the differences in systems and processes used.

Other non-discrimination obligations

- **Publication of KPIs;**
- **Confirmation of compliance for co-investment arrangements.**

Chapter 8

8 Transparency

Overview

- 8.1 ComReg is of the view that two complementary forms of information are essential for operators seeking to use NGA wholesale products in the construction and sale of retail services. These are (i) timely and sufficient information on the general availability of wholesale services and amendments to those services and (ii) timely and sufficient information on the geographic availability of those services as a result of the ongoing rollout of Eircom's FTTC network.
- 8.2 Information on the general availability of wholesale products is required in all wholesale markets as part of Eircom's transparency obligations in those markets. ComReg's proposals in this area represent a further enhancement of historical approaches it has taken in regulated markets which was informed by stakeholder inputs, European best practices and the EC's recent NGA recommendation.
- 8.3 While information on geographic availability has been a feature of other products, e.g. broadband or leased lines, there are particular complexities associated with the rollout of NGA services in an FTTC implementation. These significantly increase the level of detail required to keep potential wholesale customers updated on the progress of the geographical rollout and the associated timing of NGA service availability.
- 8.4 FTTC implementations require a considerable degree of advanced project planning and generally have both civil and telecommunications engineering aspects. Dependencies on civil authorities regarding planning permissions as well as instituting the supply of electrical power to hitherto passive cabinets may lead to unexpected delays. Furthermore, the co-ordinated implementation of the various FTTC service constituents at the cabinet represents a significant project management challenge.
- 8.5 ComReg is aware that Eircom has embarked on an ambitious NGA rollout programme and is cognisant of the potential for delays at various points in the process which may result from time to time in deviations and amendments to Eircom's NGA rollout plan.

- 8.6 Changes to the project plan would ultimately impact on the geographic availability of NGA services to Eircom's wholesale customers and on OAOs' business planning and network/engineering requirements. Therefore it is clear to ComReg that an essential component of Eircom's NGA rollout program should be the availability of detailed and clear information regarding rollout progress and service enablement at the appropriate level of granularity. This level of granularity will reflect the status of a geographical location within the rollout plan and will move from exchange level information (e.g. at the point where an exchange area is announced as in scope) to end-user specific information (e.g. homes passed and line pre-qualification data). These considerations have informed ComReg's approach to Eircom's transparency obligations.
- 8.7 To ensure that the access and interconnection obligations are effective, the SMP operator is required to make publicly available any technical and/or financial information relating to the access and interconnection. Regulation 9 (1) of the Access Regulations states that the Regulator may impose on an SMP operator, obligations to ensure transparency in relation to access or interconnection requiring such an operator to make public specified information, such as accounting information, technical specifications, network characteristics, prices and terms and conditions for supply and use.
- 8.8 ComReg believes that a transparency obligation is justified, necessary and proportionate to ensure that no operator is disadvantaged in its downstream operations and that any potential discrimination is observable and verifiable. The European Commission, in its Consultation on Non-Discrimination in October 2011, points out that non-price discrimination is particularly difficult to detect and:

*“Therefore, in order to ensure the effectiveness of a non-discrimination obligation, it is equally important to ensure that both the national regulator and access seekers can monitor the SMP operator's performance when supplying wholesale inputs in order to see whether it supplies any such wholesale services to its competitors with the same quality as it provides to itself. Otherwise the desired results in the downstream markets are unlikely to be achieved.”*⁸²

⁸² Page 7 of the Non-Discrimination Consultation.

8.1.1 ComReg's Preliminary Views from Consultation Document:

- 8.9 In the Consultation ComReg stated the necessity of timely availability of information regarding network development and rollout, new products and product upgrades, associated service level agreements and performance metrics are essential in order for operators to compete in the market with Eircom's downstream divisions.
- 8.10 The transparency obligation supports Eircom's other obligations such as its non-discrimination obligation, as Eircom must provide the necessary information to operators regarding how products and services are offered to them. Operators would also have visibility of the comparative performance of the wholesale inputs consumed by them and by Eircom's retail arm.
- 8.11 ComReg proposed that a transparency obligation is justified, necessary and proportionate to ensure that no operator is disadvantaged in its downstream operations. In the consultation ComReg Document No 12/27 Section 9, it was proposed that:
- a) Eircom to publish on its website and keep updated the Access Reference Offer (the "ARO") and the Wholesale Broadband Access Reference Offer (the "WBARO") which will contain information relating to Next Generation WPNIA and WBA services and facilities. The ARO and WBARO will be sufficiently unbundled.
 - b) Eircom to make publicly available and publish on its website **non-pricing information** in sufficient time i.e. six months prior to *new* Next Generation WPNIA and WBA services and facilities coming into effect, and two months prior to changes to *existing* Next Generation WPNIA and WBA services and facilities coming into effect.
 - c) Eircom to make publicly available and publish on its website **pricing information** two months prior to coming into effect for both new Next Generation WPNIA and WBA services and for changes to prices for existing services.
 - d) Eircom to notify ComReg of price and non price information one month in advance of its publication on its website.
 - e) Changes to the relevant ARO and WBARO to be provided to ComReg as part of the notification process.

- f) Eircom to provide information to Access Seekers in sufficient time regarding changes to the Eircom network or introduction and rollout of new technologies.
- g) Eircom to publish on its website sufficient information to identify and justify any differences between the Next Generation WPNIA and WBA services and facilities contained in the ARO and the WBARO and the comparable services and facilities which Eircom provides to itself.
- h) Eircom to publish Key Performance Indicators (KPIs) and information on Performance Metrics on its publicly available website, according to ComReg specification⁸³.
- i) Eircom to publish all SLAs (and any updates) on its website.

Q. 15 Do you agree with ComReg's preliminary conclusions, set out above, regarding the proposed transparency obligation in the context of NGA? Please provide reasons for your response.

8.1.2 Views of Respondents to Question 15:

8.12 The response from operators showed opposing positions with alternative operators stating that longer timeframes for notification and full visibility are required. Eircom on the other hand, is concerned that the long time-scales proposed by ComReg for notification of new services could constrain and inhibit responsiveness to the market and the development and introduction of new services better aligned to emerging customer needs. Vodafone believes that a notification period of at least six months is required, particularly for the initial launch period, where a launch by Eircom ahead of OAOs could confer a 'first-mover' advantage that OAOs would struggle to overcome. Vodafone believes that two months for notification of pricing for new wholesale services or for amendments to the price of existing wholesale services is inadequate and discriminatory. Vodafone point to the fact that retail IT development costs for operators will be a very significant part of investment cost and therefore of the approval process.

⁸³ "ComReg Decision No. D05/11" means ComReg Document No. 11/45 entitled "Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets" dated 29 June 2011 (the "KPI Decision").

- 8.13 BT supports the proposed transparency obligation but considers that a two month notification for changes to existing services is insufficient and as much as six months may be required in certain cases. In relation to network development and rollout, BT put forward that cabinet information should also be made available under the same conditions to potential Sub-Loop unbundlers, as is available to Eircom's downstream arm.
- 8.14 Eircom is of the view that a greater degree of flexibility is required to respond swiftly to market changes, particularly with increasing platform competition; and the timelines have the potential to delay the introduction of retail services. Eircom appeals to ComReg to adopt a more flexible approach. Eircom believes that there seems no merit and considerable disadvantage to both operators and end-customers, in an inflexible regulatory control. Eircom further state that a default minimum notice period of two months could act as a safeguard, and would be consistent with the price notification requirements.
- 8.15 Eircom has stated that high levels of transparency from Eircom alone can distort retail markets and lead to network and service information intended to support wholesale customers being available for use by Eircom's platform competitor(s) to gain an unfair retail advantage.
- 8.16 Eircom has stated that it agrees that its transparency publication should include the two forms of proposed reference offer (ARO/WBARO) but suggests that these should be produced within the notification period and as a condition of launch, rather than forming the starting point for notice.

8.1.3 ComReg's Assessment of Responses and Final Position:

- 8.17 In the Consultation ComReg noted that Regulation 9 of the Access Regulations provide that ComReg may, inter alia, specify obligations to ensure transparency in relation to access or interconnection requiring an SMP undertaking to make public specified information such as accounting information, technical specifications, network characteristics, prices, and terms and conditions for supply and use, including any conditions limiting access to or use of services and applications where such conditions are permitted by law. It was also noted that transparency obligations can be standalone but can also support other obligations being imposed and, as evidenced from the above, usually relate to requirements to make specified information publicly available. ComReg having regard to its statutory obligations and functions, proposes and justifies a range of proportionate transparency obligations (including as regards pricing and non-pricing information) that it considered should be in order to address competition problems identified.
- 8.18 ComReg continues to be of the view that timely availability of information regarding network development and rollout, new products and prices, product upgrades, associated service level agreements and performance metrics are essential in order for operators to compete in the market with Eircom's downstream divisions. This is particularly important in the context of a multiyear rollout of a complex NGA project based on an FTTC implementation. Transparency measures aim to mitigate some of the inherent first mover advantage afforded to the SMP operator.
- 8.19 This is particularly relevant given the conditionality of the SLU obligation, whereby potential rollout and performance against targets should be transparent and credible. The notification periods for ComReg and industry are essential to the proper functioning of the wholesale market and are necessary in order to protect competition. ComReg disagrees with Eircom's point that the proposed transparency obligation is not flexible enough to allow agility and responsiveness to changing market conditions. The obligation caters for such situations by allowing for agreement to be reached with ComReg on a suitable notification period where objectively justified by circumstances.

Price and Non-Pricing information

- 8.20 In relation to Wholesale NGA services, the initial Wholesale NGA product launch will require sufficient time for OAOs to prepare business cases. ComReg believes that at least six months notice in advance of a launch of wholesale services will be required for initial pricing and non-pricing information. That said, where sufficient data is made available prior to notification, during the product development process, for example and where there is evidence that Eircom is fulfilling its non-discrimination obligations, ComReg may consider a partial derogation from the prior notification timelines to ComReg and industry.
- 8.21 On the 20th November 2012, Eircom published on its wholesale website, pricing and non-pricing information for NGA services. Therefore, in accordance with the provisions of these Decision Documents and as consulted on in ComReg Consultation 12/27, wholesale service may be launched no sooner than 20 May 2013, except by derogation. Should significant problems emerge during the planned trial of NGA this date may need to be postponed. Furthermore, Eircom Retail may launch services any time after wholesale services are launched.
- 8.22 Prior notification of non-pricing data for existing services will be made two months in advance of a change to a product or service.
- 8.23 ComReg considers that the difference between the introduction of a new NGA product, service or facility and a change to an existing NGA product, service or facility principally depends on the amount of effort required by an OAO to exploit the wholesale input or inputs which are being introduced. One purpose of the notification requirements associated with Eircom's Transparency obligation is to ensure that there is no unfair first mover advantage, by notifying wholesale inputs according to an overly short timeline within which OAOs cannot develop the systems, processes or other enablers which would be required to develop and/or launch that wholesale input or inputs at a retail level.

- 8.24 In general, a new product, service or wholesale facility is one which requires significant process or system development, or requires significant changes to retail contracts, marketing or other relevant supporting activities to be carried out by an OAO. A change to an existing product, service or facility is one which requires no changes or minimal changes to systems or processes, and requires no changes or minimal changes to retail contracts, marketing or other relevant supporting activities to be carried out by an OAO. ComReg is of the view that this distinction is intuitively clear. Accordingly, as per the Decision Instrument, material amendments cannot be notified under the shorter period. ComReg may decide on the notification requirements on a case by case basis and use its discretion as set out in Sections 9.3 of the WPNIA Decision Instrument and 9.4 of the WBA Decision Instrument.
- 8.25 As regards pricing information ComReg concludes that it is appropriate that at initial launch, pricing information should be provided six months in advance of the launch of new services. However, for changes in the pricing information for existing services, ComReg maintains the two months notification as a minimum period. Eircom is also obliged to ensure that its retail arm is aware of proposed wholesale price changes no sooner than OAOs are made aware, in line with its non discrimination obligation.
- 8.26 Pricing and non-pricing information should be provided to ComReg one month in advance of the periods outlined.
- 8.27 Furthermore, Eircom should also ensure that any wholesale bills sent to operators are sufficiently detailed to allow operators to fully reconcile amounts payable to the relevant underlying regulated wholesale price lists. ComReg understands that issues have arisen over the years in relation to wholesale bills as invoices/credit notes may not have been sufficiently granular to allow operators fully reconcile prices and volumes consumed for regulated products purchased to the Eircom wholesale price lists and back to their own systems end to end. While this has improved, it is important that Eircom wholesale engages with the operators to ensure wholesale bills are transparent, granular, meet best practice standards. These must be sufficiently clear such that operators can efficiently use the wholesale invoice as an input to the preparation of end user invoices. Where additional amounts are invoiced in any given month or credits offset, these should be fully explained to operators.

Network Rollout and the availability of wholesale services

- 8.28 ComReg also considers that it is paramount that Eircom, as the SMP operator, should provide information regarding technical developments, network rollout and wholesale services, with sufficient visibility to ensure that operators are in a position to prepare business or operational plans. In the context of Eircom's NGA rollout plans details on the phasing of network roll out and the availability of services is particularly important for operator planning, particularly in light of the complexities associated with an FTTC implementation. Detailed information on project execution and service availability needs to be made available to operators in a timely, efficient, transparent and non-discriminatory manner.
- 8.29 Eircom's maintains that there is a risk that information intended to support wholesale customers, may be available for use by Eircom's platform competitor(s) to gain an unfair advantage in the retail broadband market. Considering this concern, ComReg reiterates that as the SMP operator, Eircom should provide information regarding technical developments, network rollout and wholesale services and notes that all OAOs potentially are access seekers or provide wholesale inputs to other access seekers which compete with Eircom at the retail or wholesale level.
- 8.30 However, where Eircom considers that certain aspects of information are confidential and/or commercially sensitive, Eircom can provide ComReg with details of the information, with reasons justifying why it considers it is confidential and/or commercially sensitive. ComReg will consider the confidentiality of the information⁸⁴. If ComReg concludes that the information is confidential and/or commercially sensitive, then that information only can be made available on Eircom's wholesale website, to that the specific category of OAOs which have signed a Non-Disclosure Agreement ("NDA").
- 8.31 Furthermore, the obligation to provide transparency on network roll out and development will be central to the assessment of the SLU obligation. ComReg and potential access seekers will require full visibility of the NGA rollout plan, in advance, in particular the exchanges in scope, their associated cabinets and the addressable market.

⁸⁴ In accordance with ComReg Document No. 05/24.

- 8.32 Operators should have prior visibility of the exchange areas and associated cabinets which are in scope for NGA rollout and those which are not. This is important from a number of perspectives including managing customer expectations. Therefore Eircom should be obliged to structure and make available on its wholesale website information regarding exchange areas under consideration and the total number of cabinets available in those exchange areas. Information regarding the cabinets in each exchange area which will be NGA enabled and those which will not be enabled should also be available. This information should relate to both Exchanges and Remote Subscriber Units particularly when the RSU cabinets are not considered part of an exchange area.
- 8.33 As rollout progresses information should be made available by Eircom on a phased basis clearly detailing which cabinets have been enabled and which ones are delayed or which were on the plan but will not now be enabled. ComReg considers that monthly updates on Eircom's wholesale website would be appropriate.
- 8.34 ComReg also considers that operators should have advance notice of when vectored NGA services will become available at cabinets on a regular basis as the rollout progresses. In particular ComReg obliges Eircom to publish information on its website regarding the predicted availability of vectored NGA services at a particular cabinet(s) six months in advance of those services becoming available. On a monthly basis thereafter, as the rollout progresses, this information should be amended to reflect progress including any deviations from the rollout program.
- 8.35 Specific information regarding the addressable market and the nature of the services which can be launched from a cabinet will also be required in a timely manner before launch, ComReg understands that during the product development phase industry and Eircom agreed, through the forum process, that this information should be made available one month prior to launch. This level of detail is essential on one-hand to facilitate transparency for alternative access seekers allowing them time to consider the extent of the addressable market and to plan to offer NGA services.
- 8.36 Evaluation of the performance of NGA network roll out will therefore require transparency on the performance against targeted deployment. This will also be addressed through a quarterly update to ComReg on network rollout and development; specifically cabinet enablement of FTTC and vectoring. This should include supporting information regarding delays to cabinet enablement or why a decision has been made not to progress in an exchange area as originally planned.

- 8.37 ComReg also concludes that a number of transparency measures are necessary to support its proposals in respect of non discrimination which are detailed below.

8.1.4 ComReg's Decision:

Eircom shall have an obligation of transparency, in particular in relation to pricing and non-pricing information, which is summarised below:

- **Eircom will publish on its website and keep updated the ARO and the WBARO containing information relating to Next Generation WPNIA and WBA products, services and facilities.**
- **The ARO and WBARO (and associated invoices) will be sufficiently unbundled to ensure that OAOs availing of such products, services and facilities are not required to pay for products, services or facilities which are not necessary.**
- **The ARO should include:**
 - **Description of products, services and facilities;**
 - **Prices, terms and conditions (except, in the case of WPNIA, prices for access to CEI and dark fibre);**
 - **Technical specification and network characteristics;**
 - **At least the Schedule of services in Access Regulations (WPNIA only).**

Pricing and non-pricing information

Eircom shall notify ComReg of price and non price information at least one month in advance of publication of amendments; notification shall contain adequate detail. ComReg may use its discretion to reduce the notification and publication periods, where appropriate.

- **Eircom shall make publicly available, on its publicly available wholesale website, in adequate detail, non-pricing information at least six months prior to an offer of new Next Generation WPNIA and WBA services, products and facilities coming into effect and two months prior to changes to existing Next Generation WPNIA and WBA products, services and facilities, coming into effect.**
- **All price changes (except price increases), including price introductions for new products, services and facilities, shall be made publicly available by Eircom, on its publicly available wholesale website, at least two months before coming into effect.**
- **Price increases shall be made publicly available by Eircom, on its publicly available wholesale website, at least three months before coming into effect.**

- Eircom shall publish (and keep updated) information on its publicly available wholesale website, for Next Generation WPNIA and WBA products, services, facilities and processes, identifying and justifying any permissible differences between the products, services, facilities and processes as set out in the ARO and WBARO and the comparable products, services, facilities and processes which Eircom provides to itself (this should be in accordance with Section 8.6 of WPNIA Decision and 8.7 of WBA Decision). The appropriate timelines are noted in Section 8.4 of the WPNIA Decision and Section 8.5 of the WBA Decision.
- Eircom has an obligation to publish, on its publicly available wholesale website, KPIs in respect of Next Generation WPNIA and WBA services and facilities as per ComReg Decision No. D05/11.
- Non-discrimination must be supported by transparency measures, including publication of SLAs and performance metrics on Eircom's publicly available wholesale website.
- Eircom must make available on its publicly available wholesale website, at least six months in advance of implementation, information on the introduction of, changes to, or technical developments relating to Eircom's network, infrastructures or new technologies, as well as information on supporting products, services or facilities. Where information is accepted by ComReg commercially sensitive, it can be made available subject to an NDA.

Transparency for SLU

Eircom shall make available, on its publicly available wholesale website, in advance of implementation, information regarding its NGA roll out plans, in particular:

(i) For each Exchange area in Eircom's NGA rollout plan, at least six (6) months in advance of vectored NGA services becoming available, the following details:

- a. the total number, and location, using geographic coordinates of cabinets in each Exchange area; and
- b. details of which cabinets will and will not be NGA enabled, as part of Eircom's NGA rollout plan; and
- c. the date for the provision of Next Generation WPNIA and WBA products, services and facilities from any cabinet(s) (including a Node other than a cabinet from which Eircom may offer NGA

products, services and facilities).

(ii) For the Exchange areas included in Eircom's NGA rollout plan Eircom, shall on a monthly basis, in advance of particular cabinets becoming enabled, update, reconcile or revise any previous announcements or notifications, projections or plans in respect of cabinets; and

(iii) In respect to Next Generation WBA products, services and facilities, 28 days prior to becoming available from a cabinet, Eircom shall provide to Access Seekers, end-user information including information in relation to the number of homes passed and line pre-qualification data.

On a quarterly basis Eircom will provide ComReg with details on progress of network roll out in the previous quarter including a comparison of performance against planned roll out and reasons for differences between planned and actual roll out.

8.2 Summary Transparency and non-discrimination notification timelines for NGA wholesale products.

8.38 The table on the following page summarises the notifications to ComReg and industry relating to Wholesale NGA Product development arising from Eircom's proposed non-discrimination and transparency obligations. Note that for products launched soon after publication of any decision by ComReg, it may be necessary for us to exercise discretion as to notification timelines in order to prevent undue delay.

Summary Transparency and non-discrimination notification timelines for NGA wholesale products. (Guidance only)								
		Offer of new wholesale products	Amendments to wholesale products	Retail prices (see Chapter 10)	Commentary / other	Wholesale products published before the effective date of the Decisions		
(Note all time periods relate to time prior to product launch unless otherwise stated)								
Non-price information	Notification to ComReg	7 months	3 months	N/A	Statement of compliance in accordance with non-discrimination obligations (Ref Chapter 7).	Statement of compliance for non-discrimination provided by 30 th September 2013. Thereafter in accordance with notification timelines.		
	Publication on Eircom Wholesale Website	6 months	2 months	N/A	Publication of information relating to any differences between products provided to Eircom internally and OAOs. This shall be kept updated.	Publication on website of statement containing information on differences between products provided to Eircom internally and OAOs by 30 th September and thereafter in line with Publication timelines.		
		<u>NGA Rollout</u>			6 months		<u>NGA Rollout</u>	Publication, per Exchange area of each cabinet location, and whether it will be upgraded for NGA or not 6 months in advance
		Monthly			Monthly publication of reconciliation of performance against plan on cabinet rollout and enablement.			
1 month	Publication 1 month in advance of service becoming available, of end-user information.							
	Quarterly				Quarterly update and justification to ComReg re rollout performance against rollout plan.			

Summary Transparency and non-discrimination notification timelines for NGA wholesale products. (Guidance only)						
		<u>Network updates</u>			Update to industry 6 months in advance on general network developments, infrastructures or new technology.	
		KPIs			KPIs/SLA/Performance Metrics to be published as per D05/11	
Pricing information	ComReg	3 months	3 months <u>or</u> 4 months for price increases	5 working days before the retail prices are expected to come into effect	Provision of ongoing statements of compliance and a statement of compliance one year from launch (and thereafter where requested by ComReg) with respect to the NGA margin squeeze tests.	
	Industry	2 months	2 months <u>or</u> 3 months for price increases	N/A		

- 8.39 Eircom will have an obligation of transparency which will apply to the pricing and non-pricing terms and conditions for next generation WPNIA and WBA, in the level of detail set out above.

Chapter 9

9 Provisioning of NGA services; In-Home activity; CPE and Voice services

9.1.1 ComReg's Preliminary Views from Consultation Document:

- 9.1 It was noted in the Consultation that the provision of NGA services to the retail customer could generate significant issues arising from complexities associated with the coordination of service provision and with provisioning related in-home activity. This could create the opportunity for any vertically integrated dominant operator to either discriminate or leverage market power.

9.2 Provisioning of NGA services and In-Home activity Customer Premises Equipment:

- 9.2 In the Consultation ComReg stated that the principles that should be maintained or adopted by industry are:
- All Customer Premises Equipment (CPE) should adhere to the chosen international standards
 - CPE standards should be decided upon and agreed in as far as advance as possible before deployment
 - All CPE deployed should adhere to the Copper Loop Frequency Management Plan (CLFMP) and not cause any undue effect on the performance of other users connected to the Eircom copper plant
 - An operator should be afforded a reasonable opportunity to test its CPE in a test environment with any other operator deploying VDSL cabinet equipment.

Q. 16 ComReg is interested in operator views on provisioning co-ordination, home-wiring and related matters and in workable methods to support the management of CPE in the NGA context. Please provide your views supported by outline scenarios and proposed solutions where possible.

9.2.1 Views of Respondents to Question 16:

9.3 Most respondents agreed with ComReg's analysis of the potential competition problems in these areas with two expressing no view. In relation to in-home wiring and related issues there was some variation in views on the extent to which Eircom's responsibilities should extend, although most concurred that Eircom should not gain an advantage through its ability as a vertically integrated entity to co-ordinate field and in-premises activities. Respondents were also concerned that any regime Eircom puts in place to exclude inappropriate CPE from its network is not excessively rigid and does not hamper ingenuity or foreclose future enhancements.

9.2.2 ComReg's Assessment of Responses and Final Position:

9.4 Through engagement with industry and responses to ComReg Document No. 12/27, it is clear that for in-premises wiring, the management and coordination of the hand over from Eircom to another operator, creates an opportunity for inefficiencies, as well as the possible leveraging of market power. Vodafone in particular has raised this as a concern. Eircom has been working with operators through the industry forum, to ensure that activities at the end user premises are co-ordinated. In support of these developments, ComReg is imposing obligations relating to the management of the in-premises wiring. These are intended to address the risk of leverage of market power, as raised by operators, in a reasonable and proportionate manner. Eircom will have the following obligation:

- A requirement to extend the reach of the NTU data port within the premises at install time.

9.5 Note that this instance of in-premises activity, extension of the data port, will be deemed to be an associated service for NGA. Therefore all other requests for in-premises activity would be available on a reasonable request basis.

9.6 Given Eircom's investment in vectoring which requires operators to use VDSL2 equipment that is vectoring compliant, Eircom should be transparent as to the standards necessary for the use of vectoring. Therefore Eircom will be required to publish the required standard in a timely and non-discriminatory manner.

9.7 ComReg remains of the view that the CLFMP is a key element in ensuring that any CPE deployed does not unduly affect the performance of other users connected to the Eircom copper plant.

9.2.3 ComReg' Decision:

Eircom will be obliged to:

Provide in-premises wiring limited to extending the reach of the NTU data port. This should occur at the time of installation.

9.3 Voice in the NGA context

9.3.1 ComReg's Preliminary Views from Consultation Document:

- 9.8 In the consultation, ComReg briefly discussed voice services in the context of NGA. The position of Eircom on this issue was explained and respondents were asked for their views on that position.

Q. 17 Do you accept the Eircom position that the barriers to entry to the retail VoIP market are low based on Eircom's proposed NGA wholesale product set? In particular, are barriers to entry low for those operators currently operating in the WLR or WBA markets? Please provide specific supporting evidence for your answer in terms of entry requirements and likely associated costs.

9.3.2 Views of Respondents:

- 9.9 Of the nine respondents to the consultation, two supported the view, arguing that barriers to entry are low, six disagreed with it, and one expressed no view. Operators arguing that barriers to entry were high focused on the difficulties and costs of initiating "carrier class" VOIP services. Vodafone asked why, if barriers are so low, Eircom had not itself announced a VOIP service thus far. Eircom wished to clarify that while it believed that an obligation to provide a wholesale VOIP input was unwarranted it fully intended to make a wholesale VOIP product available on a commercial basis.

9.3.3 ComReg's Assessment of Responses and Final Position:

- 9.10 Eircom retail and wholesale voice offerings are provided via its Public Switched Telephone Network (PSTN) platform and delivered over its copper access network. Voice sold with NGA will be provided in the traditional way, using PSTN over copper to the cabinet, as a "parallel service" with the FTTC products.

- 9.11 ComReg understands that there are various forms of VoIP offers available ranging from over the top (OTT) to fully end-to-end managed services. Some of these services do not offer any form of quality guarantee, yet are acceptable to many subscribers, being used, for example, for very cheap international calls. Other users, such as business users, could require a higher quality specification. It may be that differentiated remedies are required for different types of consumers based on the class of service required.
- 9.12 Barriers to market entry are also reflective of the nature of the VOIP service envisaged. For example, an OTT VOIP service is far less complex, and therefore less costly to implement than a voice service that fully replicates PSTN services and envisages a planned migration of a significant proportion of the PSTN customer base to the new VoIP platform.
- 9.13 In NGA, voice could be managed over the broadband service and treated as another application being delivered using internet protocol ("IP"). As part of the consultation, ComReg invited views on whether there are barriers to entry in the provision of retail voice over IP ("VoIP") on the basis of the NGA wholesale product set. The evidence presented to ComReg reflects the diversity of VOIP strategies available to operators. Therefore there is no common view, discernible in the responses, regarding the magnitude of the barriers to entry. It may be that views expressed reflect issues associated with the solution being considered by the respondent. However, given that voice services will continue to be provided over the PSTN, this is not considered to be an issue for the short to medium term. ComReg considers that these issues can be effectively addressed as part of the normal cycle of market analyses in the relevant markets. In particular, the forthcoming consultation and Market Review on wholesale call origination and transit.

Chapter 10

10 Obligation of price control in the WPNIA and WBA Markets

10.1 Overview

- 10.1 In ComReg Document No 12/27, ComReg set out in detail its preliminary views in relation to the price control for NGA products and services in the WPNIA and the WBA markets.
- 10.2 Following consideration of the responses to the consultation, ComReg has now set out below its Decisions which further specify the price control obligation for NGA services in the WBA Market and WPNIA Market. A summary of the main conclusions on pricing for each market is set out directly below with a more detailed analysis in the subsections thereafter.
- 10.3 In line with ComReg's statutory objectives under Section 12 of the Communications Regulation Act, ComReg recognises that the main objectives of determining the appropriate pricing mechanism for NGA is to send the appropriate signals to the market so as to encourage efficient investment in infrastructure and also to promote competition to the benefit of end-users. ComReg as an NRA has the responsibility to promote and further intensify competition in the electronic communications markets. Competition clearly remains essential for safeguarding choices and prices for consumers, in particular in relation to technological change and transition to fibre.

WBA Market:

- 10.4 The main wholesale NGA services are VUA and NGA Bitstream and these are contained in Market 5 (WBA Market). Therefore, the main NGA pricing Decisions relate to the WBA Market.
- 10.5 To date, the current generation services (legacy Bitstream) in the WBA Market have been subject to a 'retail minus' price control based on ComReg Decision D01/06⁸⁵. This Decision imposes a 'retail margin squeeze' approach ('**Retail Margin Squeeze test**') for NGA services in the WBA Market given that it is not possible to establish a one to one relationship between retail and wholesale services in an NGN environment.

⁸⁵ ComReg Document No 06/01, ComReg Decision D01/06 – Decision Notice: Retail minus wholesale price control for the WBA market; 13 January 2006.

- 10.6 While the European Commission's NGA Recommendation stipulated a cost orientation obligation for NGA services, there has been a recent shift in the European Commission's thinking towards a more flexible pricing approach where certain conditions are met. On 16 November ComReg notified the European Commission of its draft measures for NGA, including our price control remedy. On 17 December ComReg received a response from the European Commission stating that it agreed with ComReg's approach on the price control and inviting ComReg to revisit the margin squeeze tests along the lines of the forthcoming Recommendation once adopted. This has been discussed in Chapter 3 of this Decision and also in subsection 10.4.3 below.
- 10.7 In terms of the details of the Retail Margin Squeeze test in this Decision, Eircom will be obliged not to cause a retail margin squeeze between the retail price of the NGA retail product (s) and the price for NGA Bitstream. ComReg has decided that a portfolio approach should be applied by comparing the weighted average revenues of NGA retail broadband offers against the weighted average retail and wholesale costs.
- 10.8 It is important to note that this Decision only relates to standalone NGA retail broadband offers. There is only one VUA product which is configurable by OAOs to provide a multiplicity of retail offers. Where an NGA retail broadband product is sold in a bundle with narrowband / PSTN voice, this is subject to a separate regime on bundles, which is discussed below and also later in this chapter of the document.
- 10.9 In addition to the Retail Margin Squeeze test a number of wholesale margin squeeze tests will also apply to Eircom as follows:
- (1) Wholesale Margin Squeeze test between End-to-End NG Bitstream and NGA Bitstream
 - (2) Wholesale Margin Squeeze test between NGA Bitstream and VUA
 - (3) Wholesale Margin Squeeze test between VUA and SLU.
- 10.10 Given that Eircom is subject to a price control obligation as result of the market reviews in the WPNIA and WBA Markets, the margin squeeze tests between the various products along the value chain should ensure that operators are not squeezed out of the market during the transition to NGA. The margin squeeze tests are contained in a model called the '**NGA Margin Squeeze Model**'.

- 10.11 The importance of LLU prospectively means that relativity between copper and fibre pricing needs to be maintained for now. For this reason we need to maintain the link between copper and fibre prices. The link between copper and fibre is established where the SLU cost oriented price (Market 4 product) is the key cost input to the cost stack for VUA (Market 5 product) in the margin squeeze model, given that it reflects the cost from the home to the cabinet. This approach ensures that copper and fibre based services are priced consistently relative to their cost of provision. This means that NGA prices in Market 5 cannot fall below a certain level without a reduction to the SLU and LLU prices (in Market 4).
- 10.12 All ancillary services / associated facilities in the WBA Market are subject to a cost orientation obligation. This includes backhaul, co-location, interconnection, migrations, connections, fault repairs. ComReg considers that this approach ensures that these essential services are not priced in a discriminatory manner and that there is a level playing field for all operators to compete.
- 10.13 On 20 November 2012, Eircom published its proposed NGA prices on its Eircom wholesale website⁸⁶. The published Eircom NGA prices are lower than the numbers that were published in ComReg Document No 12/27 due to changes to the underlying wholesale cost inputs based on responses to the consultation as well as Eircom's recently announced reduction to the price of SLU from €10.53 to €9.03. This is discussed in more detail later in this chapter of the document.

Bundles:

- 10.14 As already stated above, this Decision relates to standalone NGA retail broadband offers only. However, given that the more likely scenario is that NGA retail broadband will be sold in a bundle with narrowband / PSTN voice it is important to highlight the main principles that apply in that context.

⁸⁶ <http://www.eircomwholesale.ie/Reference-Offers/Proposals/>, please refer to document "Proposed_Bitstream Price List v7.17".

10.15 Traditional PSTN voice services (or retail line rental) are currently regulated as part of Market 1 (also known as Retail Fixed Narrowband Access ('**RFNA**')) and are subject to ComReg Decision D07/61⁸⁷. ComReg Decision D07/61 imposed an obligation on Eircom not to unreasonably bundle services and so Eircom must ensure that any bundle avoids a margin squeeze and passes a net revenue test. Where NGA is sold in a bundle with retail line rental it is subject to the net revenue test. Please refer to subsection 10.12.3 below for a summary of the principles that will apply for bundles that will include retail line rental and NGA retail broadband, based on the draft measures notified to the European Commission in Case IE/2012/1381 and Case IE/2012/1382. A decision on bundles will be published shortly.

WPNIA Market:

10.16 The WPNIA products and services in the context of NGA are subject to a cost orientation obligation based on maximum prices.

10.17 The charges for civil engineering access and dark fibre should be priced at no more than the bottom-up long run average incremental costs⁸⁸ ('**BU-LRAIC plus**') in the Copper Access Model⁸⁹ ('**CAM**') but adjusted where appropriate for fibre costs. This should ensure consistency with the costing approach for current generation services (LLU and SLU) and avoid market distortions. The impact of any revision of the BU-LRAIC plus approach will need to be examined on a consistent basis across the value chain. Backhaul should be based on a manner consistent with the methodology in the CAM but adjusted where appropriate for fibre costs.

10.18 As set out in Chapter 3, the European Commission have recently published a draft Recommendation on access pricing. It is expected that a final Recommendation will be published in the first half of 2013. ComReg as well as other NRAs will have to take utmost account of it. Any changes on foot of that Recommendation will be subject to a further consultation with the industry.

10.19 For now, ComReg will not insist on the publication of reference prices for civil engineering access. This is due to the likelihood of a significant proportion of bespoke cost depending on local circumstances. For duct access and dark fibre, ComReg will allow Eircom three months to agree a price with an access

⁸⁷ Market Review: Retail Fixed Narrowband Access dated 24 August 2007

⁸⁸ "Bottom Up Long Run Average Incremental Costs plus or BU-LRAIC plus" means the methodology used to estimate the "LRAIC plus" of an efficient operator which is derived from an economic and / or engineering model of an efficient network. The LRAIC plus costs are the average efficiently incurred directly attributable variable and fixed costs, plus an appropriate apportionment of joint and common costs.

⁸⁹ Copper Access Model in this decision means the modelling tool which is applied to determine the cost of provision of local loop unbundling in Ireland based on efficient BU-LRAIC plus costs of Eircom's network to derive the maximum allowable Local Loop Unbundling and Sub Loop Unbundling monthly rental charges as is more particularly described in this decision.

seeker which may reflect local costs. Eircom will be obliged to provide the access seeker with an offer price within one month of an access seeker's application (i.e. two months before agreement should be reached). This arrangement will be kept under review.

- 10.20 Given that Eircom has no plans at this time to rollout out any significant level of FTTH, for fibre unbundling, the cost orientation obligation will apply and ComReg will further specify this at a later stage. For co-location, interconnection and shared sub loop unbundling access, Eircom are obliged to ensure that the charges are cost oriented. The SLU charge is subject to ComReg Decision D01/10, as amended by this Decision.
- 10.21 All charges for ancillary services, including connections and fault repairs will also be based on cost orientation.
- 10.22 As set out in ComReg Document No 12/27, Oxera, was hired to assist us on the economic aspects of price regulation and the relevant principles to apply where a price control obligation is considered necessary. Oxera's report was published in ComReg Document No 12/27a. Since the consultation and having considered the views of respondents, Oxera also carried out an analysis on the retail pricing constraint on Eircom, in the context of the retail market for broadband services. A non-confidential version of Oxera's report on the retail pricing constraint is published in ComReg Document No 13/11b. Oxera's final report⁹⁰ on the pricing principles and methodologies is also separately published in ComReg Document No 13/11a.
- 10.23 TERA consultants assisted us on the application of the pricing principles and methodologies in terms of the appropriate pricing structures for the NGA products and services relevant to the WPNIA and WBA markets.

⁹⁰ Oxera report entitled: "Eircom's next generation access products; Pricing principles and methodologies, Final report prepared for Commission for Communications Regulation" dated January 2013.

10.2 Structure of this chapter of the document

10.24 The rest of this chapter of the document is structured under the following headings:

1. Reasons why a price control is warranted
2. Price control obligations in the WPNIA and WBA markets
3. Choosing the appropriate form of price control in the context of NGA
 - Cost Orientation: WPNIA Market
 - Cost Orientation: WBA Market
 - Retail margin squeeze test
 - Wholesale margin squeeze tests
4. Specific margin squeeze tests
 - Principles to apply to the margin squeeze tests
 - WLR and relevance of Bundles Regime
5. Migrations – WPNIA and WBA Markets
6. NGA Margin Squeeze Model
 - Retail to NGA Bitstream margin squeeze test
 - Retail costs
 - Wholesale Margin Squeeze test from End-to-end NGA Bitstream to NGA Bitstream
 - Wholesale Margin Squeeze test from NGA Bitstream to VUA
 - Wholesale Margin Squeeze test from VUA to SLU
 - Outputs of the NGA Margin Squeeze Model
7. Other Ancillary Charges – WBA Market
8. Price control period and future review
9. Co-investment/risk sharing options.

10.3 Reasons why a price control is warranted

10.3.1 ComReg's Preliminary Views from Consultation Document:

- 10.25 As set out in ComReg Document No 12/27, an important factor influencing the incumbent's incentives to foreclose competition, and consequently the rationale for price regulation, is the extent to which the incumbent's behaviour is constrained by alternative platforms, either in the retail market or as alternative suppliers of wholesale inputs. Even when there is no direct competition between different networks (cable versus Eircom's fixed line) at the wholesale level, competition in the retail market could constrain Eircom's wholesale pricing and incentives to offer wholesale services at all.
- 10.26 ComReg recognised in ComReg Document No 12/27 that the extent to which Eircom have incentives to offer access on non-discriminatory and reasonably priced terms depends on the distribution channels available to OAOs, and the additional services that the OAOs can offer. ComReg set out a number of factors for consideration in this regard, as detailed in ComReg Document No 12/27.
- 10.27 ComReg considered that Eircom's claim that it could have a strong incentive to offer access to wholesale products on non-discriminatory terms was not based on robust evidence that these market dynamics were actually present.
- 10.28 Given that a price control was deemed necessary by ComReg, we considered if there were any incentives for Eircom to foreclose downstream rivals. ComReg was of the preliminary view that while the ability of Eircom to overcharge its retail customers (in areas where there is some presence of cable competition — whose offering includes a high speed broadband service) may appear to be limited, the incentive to provide third party access seekers competitive wholesale services on commercial terms together with the incentive to sell wholesale services at preferential prices to those higher up the ladder of investment appeared to be weak.
- 10.29 To date, there has been no evidence to justify that Eircom has consistently negotiated reasonable terms and prices with an entrant, absent regulatory intervention.
- 10.30 Consequently, in ComReg Document No 12/27 ComReg set out its preliminary view that there was currently insufficient evidence to indicate that it is in Eircom's interest to provide access on reasonable terms without regulation.

- 10.31 We considered that the prospect for wide scale competitive access infrastructure was relatively low and the circumstances under which no price control would be necessary were not met therefore forbearance was not an appropriate policy in Ireland at this time.
- 10.32 Please also refer to the details set out in Section 10.3 of ComReg Document No 12/27 and also in Oxera's Report set out in ComReg Document No 12/27a.
- 10.33 While there was no specific question raised regarding the appropriateness of a price control in the context of NGA, set out below are the views raised by one of the respondents to the consultation.

10.3.2 Views of Respondents:

- 10.34 Eircom's advisors, Frontier Economics, questioned ComReg and Oxera's views on whether or not Eircom would, in the absence of price regulation, have incentives to provide access in a fair, reasonable and non-discriminatory manner. Frontier's view was summarised in its Executive summary as follows:

"Both Oxera and Comreg have indicated that there is significant competition from UPC in urban areas in Ireland, but do not appear to have factored this fully in to the analysis of the appropriate regulation to apply to eircom's proposed NGA network. Taking this platform-competition from UPC into account, raises a question about eircom's incentives to offer access terms that would foreclose efficient rivals. Our analysis suggests that there are several factors which would be consistent with Oxera over-estimating the risks of eircom having the incentive to foreclose."

10.3.3 ComReg's Assessment of Responses and Final Position:

- 10.35 As set out in the Consultation, Regulation 13 of the Access Regulations provides that ComReg may, inter alia, impose on an operator obligations relating to cost recovery and price controls. These include obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of access or interconnection in situations where a market analysis indicates that a lack of effective competition means that the operator concerned may sustain prices at an excessively high level or may apply a price squeeze to the detriment of end-users.

- 10.36 In imposing any such obligations, it was also noted in ComReg Document No. 12/27 and ComReg is aware that it is required to take into account a number of factors including the investment made by the SMP operator and the need to ensure that any cost recovery mechanism or pricing methodology that ComReg imposes serves to promote efficiency and sustainable competition and maximise consumer benefits (which ComReg discussed in the Consultation and which issues and considerations ComReg has reviewed again in this Final Decision).
- 10.37 Based on the above, it was noted that the purpose of price control and cost accounting obligations are to ensure that prices charged are not excessive (or cause a margin squeeze) and promote efficiency and sustainable retail competition while maximising consumer benefits.
- 10.38 ComReg described existing SMP price control and cost accounting obligations and, having regard to its statutory obligations and functions, then proposed and justified a price control obligation that it considered should be imposed in order to address price-related competition problems identified.
- 10.39 ComReg considered that the imposition of price control obligations, was justified and proportionate having identified in the Consultation that SMP operators' ability and incentive to set its prices associated with access and associated facilities at an excessive level thereby impacting upon downstream competition to the detriment of consumers.
- 10.40 Having considered the response of Frontier Economics and other respondents, ComReg remains of the view that a price control is warranted in the context of NGA services in the WBA and WPNIA markets. Regulation is still required and should be focused on ensuring that OAOs have access to Eircom's network at the wholesale level. Wholesale price controls, while necessary, should not inhibit retail pricing flexibility unduly. Also there is a case for treating NGA, which will be rolled out in densely populated areas only, with a little more flexibility than legacy services, particularly given the uncertainty around forecasting costs and demand.

- 10.41 In its response, Frontier Economics presents descriptive market data to highlight the strong growth of UPC. ComReg and Oxera agree that UPC has gained significant market shares, particularly in urban areas. These points are further substantiated in Frontier's (2011) report⁹¹, which has been published separately as part of the non-confidential responses in ComReg Document No 12/97. ComReg and Oxera also agree with Frontier that Eircom's NGA rollout is mainly a defensive move to match UPC's offers. These and other points made by Frontier are indicative of a retail pricing constraint. ComReg has discussed the retail pricing constraint in more detail below.
- 10.42 Frontier Economics also draws strongly on Dr Mike Walker's (Charles River Associates ('CRA')) report, on the basis of which Oxera analysed Eircom's incentives to foreclose. ComReg and Oxera's position, having carefully considered, in particular, Frontier Economics analysis, remains unchanged for the following reasons:
- 10.43 **Product differentiation:** ComReg and Oxera consider the possibilities for OAOs to differentiate their retail products to such an extent that Eircom would have incentives to provide wholesale access on fair terms, and concluded that no such evidence exists in the Irish market at the moment. The UK pay-TV example is of limited relevance in the Irish context, given that (a) Sky's offering—in particular, its holdings of UK Premier League rights—is unlikely to be of a similar value in Ireland as it is in the UK, and (b) there is simply no evidence of Sky capturing significant market shares in Ireland so far, in stark contrast to its success in the UK market. Further, while Sky does offer a differentiated retail product in the UK, it is not clear whether BT would actually have incentives to provide access on fair terms in the absence of price regulation, as manifested through several disputes over Openreach's wholesale access pricing in the UK.
- 10.44 **Lower downstream costs:** Frontier argues that 'eircom could be expected to have a greater incentive to provide access if its competitors have lower (variable) downstream costs' and goes on to suggest that international players like Vodafone and BT could benefit from economies of scale and scope at the retail level to a greater extent than Eircom. No significant evidence is provided to support this argument. Frontier claims that BT might benefit from its backhaul network. While we accept that BT does gain some economies of scale through its investments, BT is unlikely to benefit to a *greater* extent than Eircom.

⁹¹ Frontier Economics (2012), 'Competitive constraints on eircom from UPC – A report prepared for eircom', December 2011.

- 10.45 **Importance of FTTC:** FTTC architecture 'is likely to enhance, not erode, Eircom's market power relative to that of the OAOs, and its ability to tailor wholesale inputs to meet its own retail requirements'. This finding was based on the premise that entrants' ability to climb the ladder of investment is undermined by the virtue of uneconomic SLU. It is not clear why Eircom would have strong incentives to provide reasonably priced VUA if it has not done so with any of the legacy access products.
- 10.46 **Past behaviour.** Frontier downplays Oxera's reference to Eircom's earlier behaviour and OAOs' responses to Oxera's questionnaire, arguing that 'Eircom is starting from a different position in the case of NGA based services'. In the absence of incentives to provide access (which seems to be the case), there is a risk that Eircom continues to discriminate against OAOs. Put another way, for every potential OAO customer, Eircom could provide equal service—why would it not have incentives to serve these customers itself? Frontier has not provided new evidence in this respect.
- 10.47 Oxera's final report is set out separately in ComReg Document No 13/11a.

10.4 Price control obligations in the WPNIA and WBA Markets

10.4.1 ComReg's Preliminary Views from Consultation Document:

Price control for the WPNIA Market:

- 10.48 In ComReg Document No 12/27 ComReg proposed that the cost orientation obligation should apply for the access products and services mandated in the WPNIA Market in the context of NGA.
- 10.49 We highlighted the fact that the maximum rental charges for LLU and SLU, currently in the marketplace, are based on a cost orientation obligation (or often referred to as the cost plus approach) determined by a BU-LRAIC plus methodology (using the CAM) and are based on nationally averaged prices.
- 10.50 We considered that the price ceiling based on the BU-LRAIC plus methodology continues to be relevant to the copper based LLU (and SLU) products. However, this would depend on any changes required by Eircom at a retail level given the migration to NGA services, particularly where changes are as a result of constraints from competitors in the retail broadband market.
- 10.51 ComReg proposed that in the event that there were changes to the retail price(s) charged by Eircom as a result of these competitive retail constraints, that the prices for SLU and LLU products would need to be revised down further in those NGA Footprint Areas, to ensure that there would be sufficient economic space between the VUA product in the WBA market and the equivalent SLU access product in the WPNIA market.
- 10.52 Therefore, we proposed to introduce a further price ceiling for SLU (and LLU) in the NGA Footprint Areas which may be calculated by reference to the price of VUA adjusted for the costs that an entrant operator using SLU would incur to provide VUA based on the NGA Margin Squeeze Model.

Price control for the WBA Market:

- 10.53 As already set out in ComReg Document No 12/27, the current form of price control in the WBA market on the current generation copper based broadband is a retail-minus regime. In addition, there is also a retail margin squeeze test in existence since 2006, under ComReg Decision D01/06. The recent WBA Market Decision also imposed the obligation not to cause a margin squeeze.

10.54 Given the uncertainties in respect of consumer demand for NGA services and the potential choice available to consumers via the cable platform and LLU, ComReg was of the preliminary view that Eircom should be obliged to comply with ComReg Decision D01/06 in the context of NGA for the retail margin squeeze test - except for a number of proposed amendments to ComReg Decision D01/06 as set out in ComReg Document No 12/27.

10.55 In ComReg Document No 12/27 ComReg then asked the following question:

Q. 18 Do you agree with ComReg's preliminary views, as set out above, on the price control for products and services in the context of NGA in the WPNIA and WBA markets? Please provide reasons for your response.

10.4.2 Views of Respondents:

10.56 The following gives a high level overview of the responses in relation to the price control for products and services in the context of NGA in the WPNIA and WBA markets:

- Six respondents (Magnet, Imagine, Digiweb, ALTO, Telefonica, E-net) generally agree.
- Eircom welcomed ComReg's proposal to extend ComReg Decision D01/06 to NGA but it raised a number of issues, as detailed below.
- Vodafone disagreed on the basis that cost orientation should be imposed in relation to the VUA product. This is further discussed below.
- BT also favoured the cost orientation approach. It also stated that there is scope to reduce SLU but this must apply to all downstream services. This is further discussed below.
- Two respondents (UPC and ECTA) did not provide any specific views.

10.57 Among those that agree, **Imagine** stated that “...without regulatory certainty with regard to pricing in particular, Imagine will not be in a position to make informed business decisions in the short term or indeed in the medium to long term”. In addition, **UPC**, while having no specific views on the question, made some positive comments where it stated that:

“ComReg has taken considerable care in its regulated pricing of current generation services to ensure that access-based players are incentivised to consider market entry via more infrastructure-intensive means, i.e. by way of Wholesale Physical Network Infrastructure Access (‘WPNIA’) services, and in particular Local Loop Unbundling (‘LLU’), rather than by Wholesale Broadband Access (‘WBA’) services such as Bitstream. UPC notes that ComReg’s proposed approach to regulatory pricing for NGA-based services retains this same incentive, one that should provide access seekers with appropriate price signals to migrate to own infrastructure and WPNIA-based NGA access services. It is also an approach which demonstrates ComReg’s continued support for platform competition, which needs to continue to develop, given the important roles that alternative platforms such as cable, fixed wireless, LTE and 4G mobile are set to play in the provision of NGA services in Ireland”.

10.58 **E-net** agrees with ComReg but it states that:

“...it makes sense for ComReg to use its proposed margin squeeze tests as the basis for price control in relation to NGA WPNIA and WBA services and that while the existing retail-minus pricing constraint should be retained for current generation WBA, it should not be extended to its NGA equivalent.”

10.59 **Eircom** welcomes the proposal to extend the current retail-minus approach of D01/06 to NGA and it stated that:

“...rather than moving immediately to a strict cost oriented approach in light of the many uncertainties associated with the introduction of NGA services which makes it difficult to calculate costs with a reasonable degree of accuracy.”

10.60 Eircom has an issue however with the statement that UPC's broadband share is modest and did not reflect competition in the national market. Eircom claims that the market shares within the areas they operate show that in some markets UPC have over 50% broadband which under no circumstances can be considered ‘modest’. Eircom further stated that ComReg has materially underestimated the strength of UPC competition, and as a result, has not sufficiently considered the impact of its regulatory proposals on Eircom's ability to compete with its platform competitors.

10.61 Eircom also disagrees with the linkage between NGA and copper based services, since the effect of this will be to artificially sustain the economic appeal of wholesale copper services in NGA areas, to the detriment of NGA adoption.

10.62 Eircom states that it agrees that a retail margin squeeze could form a reasonable approach to WBA pricing however the form of the test will be of crucial importance to the success of NGA build. Eircom claims that a test which leads to excessively generous margins between wholesale and retail prices, which ComReg's present proposals do, will encourage inefficient market entry and unduly constrain Eircom in competing with UPC.

10.63 **Vodafone** stated that a cost orientation obligation should apply in the context of NGA services. Vodafone made a number of points as follows in this context:

- A cost oriented price for VUA would allow OAOs to obtain a key wholesale input at a price that allows them to compete with Eircom in the retail market.
- Retail competition from UPC and legacy will not provide an effective competitive constraint on Eircom. If UPC were a significant competitive constraint on Eircom's behaviour then at the very least Eircom should be reducing its wholesale products to their floor prices and Eircom should be reviewing its LLU prices to seek to identify efficient savings, so that it has scope to further lower its retail prices to meet UPC's offering. Vodafone does not believe that ComReg's assessment of the constraints on Eircom is supported by facts.
- Under the proposed approach, this flexibility will allow Eircom to effectively set the pricing differential between NGA and legacy broadband products.
- The margin squeeze approach is impractical in an NGA context, where bundling of a wide range of unregulated services makes it impossible for ComReg to determine if Eircom is in compliance with margin squeeze criteria.

10.64 **BT** generally preferred cost orientation and made a number of key points as follows:

(1) Clause 11.58 appears to imply the downstream retail price could impact the upstream WPNIA cost orientation price. Such an approach would undermine the principle of cost orientation and would not be appropriate or acceptable. **ALTO** also raised this point.

(2) Whilst maintaining its view that the Retail Price should not impact the upstream cost orientated price, LLU is overpriced and there should be scope to reduce its underlying cost both through redefining the exchange areas. BT is of the view that it should be possible to reduce the cost of the Sub-Loop component and that this reduction should pass to all the services that use this facility including, WLR, LLU and Standalone NGA. Line Share and Current Generation Bitstream would benefit through the WLR reduction. **ALTO** also raised this point.

(3) Separately a margin squeeze test should be applied to establish the price floor for the wholesale price to ensure there is an economic space between wholesale Bitstream plus price and the underlying services. **ALTO** also raised this point.

10.65 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.4.3 ComReg's Assessment of Responses and Final Position:

10.66 Having considered the views of respondents, ComReg has decided that the margin squeeze approach should apply for NGA services in the WBA Market and the cost orientation obligation should apply for NGA services in the WPNIA Market for the reasons already set out in ComReg Document No 12/27 and as set out below. The ancillary services in the context of NGA in the WBA market are subject to cost orientation and this is discussed separately in subsection 10.21 below.

10.67 While Vodafone believes that cost orientation should be applied for the main NGA services (i.e. VUA), ComReg considers that cost orientation for next generation WBA is not appropriate at this nascent stage of market development. While the European Commission in its 2010 NGA Recommendation considered that WBA services should be regulated by means of a cost orientation price control, in July 2012, Commissioner Neillie Kroes outlined that the key instruments for stimulating investment and innovation, while safeguarding competition, was by shifting to a more flexible pricing regime provided that there are market conditions and effective non-discrimination remedies to safeguard a level playing field. It is clear that the European Commission's thinking has evolved and the focus for NGA pricing has now shifted from imposing a strict cost orientation obligation to a more flexible pricing approach but only in the presence of strong retail pricing constraints and equivalence, guaranteed through EoI. In the European Commission's response to ComReg's proposed draft measures on NGA, the European Commission stated that it:

“...agrees with ComReg not to impose cost orientation in market 5 given in particular the strict non-discrimination obligations put in place (Equivalence of Inputs for key products and the application of margin squeeze tests). The Commission understands that the set of margin squeeze tests developed by ComReg takes into account the specific stage of development of NGA services in the Irish market and that it aims at fostering investments while making sure that market distortions are avoided.”

- 10.68 While the European Commission agreed with ComReg’s approach on the price control, it invited ComReg to revisit the margin squeeze tests along the lines of the forthcoming Recommendation once adopted. A draft of the European Commission Recommendation relating to non-discrimination and costing methodologies was recently published⁹² by the European Commission and the final Recommendation is expected during 2013. ComReg, as well as all NRAs, will be expected to take utmost account of it.
- 10.69 ComReg considers that it is the volatility and unpredictability of demand, at both the retail and wholesale level, which means that significant risks are associated with a cost based approach. Also of note is that the required rate of return for investors on assets which have not yet been constructed is also difficult to measure. In the case of NGA, a key risk is that the investment will not happen at all. Given the established position of alternative platform competition for fibre offerings and the need to ensure that investment in NGA is incentivised as extensively as possible, cost orientation risks creating disequilibrium between demand and supply for next generation services. Any imbalance would stymie the extent of the potential network roll out at a time when investment in NGA is assessed on a phased basis and is in response to strong retail competition.
- 10.70 If as part of a cost orientation obligation ComReg were to set the access price too low it could deter investment in NGA, which is yet to take place by not providing sufficient return on investment to warrant it. If ComReg were to set the price too high, there is a risk that the resulting modeled price could be too high which might not allow Eircom Retail or the OAOs to sell at an affordable or sufficiently attractive retail price. This in turn could be detrimental to the investment and take up of NGA services. Therefore, it is important that any regulatory decision that ComReg takes now does not create such possible market distortions or otherwise impede efficient investment and infrastructure.

⁹² <http://ec.europa.eu/digital-agenda/en/news/commission-seeks-berec-opinion-draft-recommendation-consistent-non-discrimination-obligations>

10.71 The most important factor affecting the choice between the option of cost orientation and a margin squeeze approach is the degree of competition in the retail market; this coupled with the objective of incentivising NGA investment, across all platforms and from all operators. ComReg recognises that a margin squeeze approach is only appropriate where there are limited concerns about the ability to sustain excessive pricing. In most of the areas where Eircom plans to roll out its NGA network, the cable operator, UPC has already rolled out its bidirectional cable network. Furthermore, BT Ireland has expanded its co-location footprint for LLU in many of the same areas. Also of note is the imminent entry of Sky into the market using BT's LLU (line share) based platform. Therefore, Eircom faces retail competition from UPC and prospectively, from line share or full LLU based OAOs in the prospective NGA footprint particularly in broadband markets. The retail constraint is discussed in more detail below.

10.72 When identifying the appropriate price control mechanism, ComReg considered the market dynamics observable in the retail broadband market. In urban areas, where the UPC cable broadband is present, there is evidence to suggest that UPC exerts retail pricing pressure on Eircom's retail broadband prices. At the retail level, Eircom's fixed line broadband market share has decreased from circa 45% in Q3 2011 to circa 42%⁹³ at Q3 2012 and UPC has increased its share from circa 23% in Q3 2011 to circa 27% in Q3 2012. UPC's gains signify a greater increase than all other retail providers combined, signifying that not only did UPC acquire customers switching from other retail broadband providers but also signed up customers that had not previously subscribed to a retail fixed broadband service. ComReg recognises that the decline in Eircom's market share is more dramatic in urban areas than the national figures suggest. The pattern suggests that UPC is able to attract churning subscribers from Eircom Retail (and wholesale) products as well as new broadband subscribers, while Eircom is losing subscribers in a growing market. It is apparent that consumers are responding to UPC's relatively attractive product offering (including voice and TV bundles), putting pressure on both Eircom, and Eircom's wholesale customers, to provide competitive offerings to those who have the ability to access the UPC cable network. The retail constraint from UPC is discussed further below.

⁹³ See ComReg Document No 12/134: 'Quarterly Key Data Report - Data as of Q3 2012', dated 12 December 2012.

- 10.73 While Eircom Retail has not reduced the headline prices for its bundles offers in response to losing customers to UPC, it has increased the perceived value of existing packages with a mixture of 'free' upgrades (E.g. increase in speeds), time limited promotions offering significant reductions for a limited period of time. These seem to be targeted mainly at those customers that are likely to switch to an alternative platform, mainly UPC. UPC retail prices trade at what is effectively a price/quality discount to Eircom's retail bundles. Eircom's current broadband packages have entry level speeds of 8 Mbps with no TV offering, while UPC broadband packages have an entry level of 50 Mbps and offer established TV content. This retail pricing pressure has been passed through to a limited extent to the wholesale level, given the recent price reductions. Though, some of the perceived price/quality differentials will be addressed through Eircom's upgrade to fibre, competitive broadband offers from other operators in the Irish market should ensure that Eircom is not in a position to price excessively for its retail broadband packages. From this point of view, ComReg is confident that given the retail constraints, the risk of excessive pricing at the retail level is low. Moreover, as demand for NGA manifests and market players react to the introduction of new products, a price control which facilitates flexibility at the retail level, would be more appropriate. Recently, Eircom has reduced prices for certain wholesale access products outside of the normal price control period review. For example, the usage component of the Bitstream (managed backhaul) 8Mb product was reduced from €50 to €30 in July 2012. Eircom wholesale have also recently announced a price reduction of €2.50 to the price of LLU, from €12.41 to €9.91 and a SLU reduction of €1.50 from €10.53 to €9.03. These price reductions bring wholesale access prices closer to European averages and should have a positive impact on competition at the wholesale level.
- 10.74 In addition, to the retail constraint from UPC, Eircom's NGA prices may be constrained by OAOs' retail offers also. Given that ComReg is maintaining the link between copper based services and fibre based services for now, legacy broadband offers and bundles are likely to constrain Eircom's NGA pricing to some extent as retail customers will have the ability to decide between offers at different speeds at different prices. If NGA based services are offered at too high a price relative to current generation services, the ability of customers to switch from NGA service to CGA services may be impacted, in response to the price differential. This is particularly the case where operators have their own active equipment and use LLU. This illustrates that prospectively there is likely to be further competition in the retail market through offers that are not reliant on Eircom's active access services in the WBA Market.

- 10.75 ComReg considers that the importance of LLU prospectively means that relativity between copper and fibre pricing will need to be maintained. VUA is a new product in Market 5 while LLU, despite being a legacy product, is a Market 4 product which gives OAOs more control over the local loop. The link between copper and fibre means that as well as imposing a ceiling on NGA prices by reference to retail prices, copper-based competition and indeed, a properly functioning upstream market is paramount during the transition to a fibre network. For this reason it is important to maintain the link between copper and fibre at least for the price control period. ComReg deduces from such market activity that a range of alternative investors could emerge and it is paramount to continue to foster investment by the incumbent or by alternative operators.
- 10.76 Unbundling in Ireland has not been extensive to date and competition in the WBA Market has not yet developed sufficiently to be deemed fully competitive; however it is at a pivotal point of development particularly given the planned unbundling by BT which merits support; particularly during the construction of NGA. Given prevailing competition concerns in both the WPNIA and WBA market, ComReg continues to maintain that wholesale prices must be closely monitored and that sufficient economic space is left between wholesale products, even when there is significant pricing pressure at the retail level. It is our view that competition at the wholesale level must be allowed to expand, even with the transition to NGA.
- 10.77 If LLU based competition is squeezed over the transition to NGA, for example by low priced Bitstream products, during a phase when OAOs are actively climbing the ladder of investment, choice and market conditions will be impacted, in the downstream retail market. ComReg has identified the incentive to foreclose other wholesale operators and sufficient controls must safeguard against a price squeeze. Investment in broadband is at a key stage of development with additional exchanges being unbundled and the current LLU Line Share footprint migrating to full unbundling. Any transition to fibre from LLU to VUA would evolve over the medium term and it is crucial to put in place a pricing mechanism which supports competition, in particular in the WBA market while concurrently incentivising next generation investment. Moreover, balancing incentives is made more complex given that there are likely to be a number of emerging fibre strategies.

10.78 In response to Eircom's point regarding the exceptionally generous margins between wholesale and retail prices as part of the margin squeeze tests, ComReg considers that in general the similarly efficient operator ('**SEO**') margin squeeze test allows for sufficient margin to ensure effective competition between operators not benefiting from the same economies of scale and scope and having different unit network costs. Given that neither LLU based retail competition nor the WBA market is fully developed i.e. Eircom's DSL broadband market share remains at circa 71%⁹⁴, the SEO test is considered to be an appropriate basis at this stage. Any remedy which sets out to ensure fair and effective competition has to allow for smaller scale and scope of other operators. However, ComReg has taken on board the fact that there are large operators in the Irish market with an international presence who are likely to have economies of scale/scope efficiencies in terms of its retail costs. As a result ComReg has amended the SEO test to reflect some EEO costs. This is discussed in detail later in this chapter of the document. It is worth noting that ComReg will keep this under review as competition evolves, in particular in the larger exchange areas ('**LEA**') which is relevant in the context of the regulation of bundles.

10.79 Vodafone's concerns that ComReg's approach will make it impossible to understand the cost of provision of unregulated products would exist even if a cost orientation approach was followed. The issue of cost of provision of unregulated products remains an issue whatever the pricing approach followed for VUA.

10.80 E-net seems to have misunderstood ComReg's proposed approach from the consultation, to clarify the margin squeeze approach applies to the NGA services in the WBA market and from the WBA market to the SLU product in the WPNIA market. However, the NGA access services mandated in the WPNIA market are subject to a cost orientation obligation by virtue of this Decision. It is also necessary to clarify that while a retail minus applies to the current generation WBA services, a retail margin squeeze approach (as well as a number of wholesale tests) will apply in relation to next generation WBA services.

10.81 BT raised three issues which ComReg considers below:

10.82 Regarding BT's point that a change to retail prices should not affect the upstream WPNIA prices, ComReg would like to clarify that competitive pressures may in fact drive down the price of wholesale services, where retail prices are constrained. In Oxera's report (contained in ComReg Document No 12/27a), it stated that:

⁹⁴ See ComReg Document No 12/134: 'Quarterly Key Data Report - Data as of Q3 2012', dated 12 December 2012, see Figure 3.3.1.

"An important message of this report is that conventional regulatory costing approaches (valuation of regulated assets at historical or replacement cost) are of limited relevance where retail prices are constrained by competition. To the extent that customers do indeed switch to UPC, the economic value of sunk copper assets in UPC areas is, conceptually, the residual of revenue (which is constrained by UPC) less operational costs and other non-sunk costs. Consequently, there seems to be limited economic rationale to consider that the current LLU and SLU (maximum) prices constitute cost-based price floors below which Eircom cannot reduce its other tariffs, taking into account other relevant costs."

10.83 In essence, retail competitive pressure may determine the appropriate level of wholesale prices.

10.84 BT also raised the point that notwithstanding its view that the retail price should not impact the upstream cost oriented prices, that LLU is overpriced and should be reduced. As already noted in response to Vodafone's point regarding reductions to wholesale prices, Eircom has recently announced reductions to the price of LLU / SLU. In addition, the European Commission is to issue a Recommendation to NRAs on costing methodologies in 2013 and ComReg will take utmost account of it.

10.85 Regarding BT's point that a separate margin squeeze test should be applied to establish the price floor for the wholesale price to ensure there is an economic space between wholesale Bitstream plus price and underlying services, ComReg considers that the underlying access network is subject to cost orientation and as VUA is linked to SLU / LLU pricing, there is a cost oriented floor. As set out in the LLU pricing Decision in 2010 (ComReg Decision D01/10), ComReg's objectives in terms of monitoring compliance with the cost orientation obligation is to ensure that competition is fostered, investment incentives are maintained and consumers benefit in the long run.

10.86 Finally, it should be noted that ComReg is mandating cost orientation for ancillary charges such as migrations and connection fees in this Decision (as described in subsection 10.21 below).

10.4.4 ComReg's Decision:

Eircom shall comply with the cost orientation obligation for the access products and services mandated in the WPNIA Market in the context of NGA.

Eircom shall have an obligation not to cause a margin / price squeeze with regard to Next Generation WBA products and Next Generation retail products. This has been further specified below.

10.4.5 Other Points Raised by Respondents:

10.87 **Digiweb** broadly agrees with ComReg but it made two comments as follows:

- One key factor used in the Margin Squeeze Test model is the Discount Rate which it understands to be the Eircom WACC. Digiweb does not believe that this value is a fair assumption of the average WACC supported by OAOs and that ComReg should explore other ways to determine a discount rate.
- Based on the LLU/SLU reduction in 2010 which was based on the number of lines per exchange/cabinet, Digiweb suggested that ComReg should use a similar approach to set-up a range of SLU/LLU line rental prices depending on the number of exchanges/cabinet rolled-out by the OAO.

10.88 We consider that the current WACC is a reasonable rate of return for an efficient operator.

10.89 Regarding the second point on LLU exchanges, reflecting the cost of exchanges unbundled by OAOs (rather than the LLU exchanges selected by ComReg) is indeed a possibility as long as a probability factor is still applied to account for the costs of other exchanges and therefore does not disincentivise OAOs to further unbundle exchanges.

10.5 Choosing the appropriate form of price control in the context of NGA

10.90 In ComReg Document No 12/27 ComReg set out its preliminary views regarding the appropriate form of price control in the context of Eircom's NGA deployment for the provision of standalone broadband from the WPNIA and WBA markets.

10.91 The various forms of price control considered in ComReg Document No 12/27 were discussed under the following headings:

- **Cost orientation:**

- WPNIA Market
- WBA Market.

- **Margin squeeze tests:**

- Retail to wholesale margin squeeze test
- Wholesale margin squeeze tests in WBA and from WBA to WPNIA.

10.6 Cost Orientation: WPNIA Market

10.6.1 ComReg's Preliminary Views from Consultation Document:

LLU and SLU:

10.92 In ComReg Document No 12/27 ComReg set out that the BU-LRAIC plus methodology using the CAM may continue to be relevant to the copper based LLU (and SLU) products for the time being but depending on any changes required by Eircom at a retail level given the migration to NGA services in the WBA market. Where a retail constraint could give rise to a margin squeeze along the value chain, then a price reduction may be reflected in the SLU price in the WPNIA market, in the NGA Footprint Areas.

10.93 Therefore, ComReg proposed to introduce a further price ceiling for SLU (and LLU) in the NGA Footprint areas which may be calculated by reference to the price of VUA adjusted for the costs that an entrant operator using SLU would incur to provide VUA based on the NGA Margin Squeeze Model. We considered that for the SLU monthly rental charges in the NGA Footprint Areas, Eircom may offer the lower of either:

- The maximum charge, as set out in ComReg Decision No D01/10 or as amended based on changes by Eircom to the underlying parameter(s) of the CAM as set out in ComReg Decision D01/10. This would require a review by ComReg

or

- The revised charge derived by the application of the margin squeeze test between the VUA monthly charge and the SLU monthly charge based on the NGA Margin Squeeze Model.

10.94 ComReg also proposed that where the SLU price is reduced in either of the two cases above, Eircom would be required to ensure price consistency and to amend the LLU price where appropriate, using the CAM, in the NGA Footprint Areas.

10.95 As discussed in subsection 11.5 of ComReg Document No 12/27, the price of SLU, and other relevant passive access inputs, set a benchmark for costs underlying any active access, be it a wholesale or retail product. However, this does not mean that the current BU-LRAIC plus based SLU price should be considered as a price floor. Rather, principles of asset valuation suggest that, in the presence of pricing constraints on the one hand, and where the assets are non-replicable on the other, prices below the BU-LRAIC plus (current-cost accounting) benchmark may be appropriate and consistent with 'cost orientation'.

- 10.96 The BU-LRAIC plus methodology in the CAM, which was set to incentivise infrastructure investment may be higher than the actual historical costs of the last mile over which NGA services are provided. At some point in the future, it may be necessary for Eircom to revise its wholesale Access prices to reflect this, in the relevant areas, where the assets are not intended to be replaced. Please refer to subsection 11.5 of ComReg Document No 12/27 for further discussion on the point on asset valuation. In any event, a change to the underlying asset valuation methodology for determining LLU and SLU prices would need to be considered in detail and may require a separate consultation.
- 10.97 ComReg also recognised in ComReg Document No 12/27 that the flexibility being afforded in respect of NGA pricing is made possible to some degree by pricing constraints arising from current generation products and it is important that this continues. In ComReg Document No 12/27 ComReg set out the importance of maintaining consistency, where appropriate, between copper and fibre based access prices for now. A failure to provide certainty about the future of copper based access services would be very likely to hamper investment by entrants. On the other hand, in the medium to long term it would be inefficient to maintain both copper and access networks in parallel in the NGA Footprint Areas.
- 10.98 In ComReg Document No 12/27, ComReg raised the point regarding the maximum loop length parameter in the context of NGA. The recent pilots/trials run by Eircom suggested that NGA services would only be available for loop lengths within a 1,500 metre radius of their respective cabinets which are upgraded for VDSL as opposed to ADSL services which would provide basic broadband for up to 5 kilometres. ComReg was of the preliminary view that the CAM may need to be updated to reflect these new developments to ensure the price of SLU remains appropriate and does not give rise to an excessive SLU price based on the underlying network costs of providing NGA services. Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.
- 10.99 Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.

Unbundled access to the fibre loop (or FTTH):

- 10.100 In ComReg Document No 12/27 ComReg considered that the cost orientation obligation should be applied in the context of unbundled access to the fibre loop. ComReg was of the preliminary view that the wholesale costs for fibre loop unbundling in the case of FTTH are similar to the costs already determined in the CAM for copper based LLU, as determined in ComReg Decision D01/10. One exception to this is where the cost of the copper lines in the current model should be replaced by the cost of the fibre lines.
- 10.101 We considered that the CAM for LLU is relevant for unbundled fibre loops given that the same trenches and ducts are used for both copper and fibre lines. In ComReg Document No 12/27 ComReg proposed that Eircom should charge no more than the maximum prices set for LLU in the context of FTTH while adjusting for the cost of fibre lines as opposed to copper lines. In addition, we considered that it is open to Eircom to offer different prices from different exchange areas if appropriate or if required by the margin squeeze tests.
- 10.102 With regard to a risk premium, we considered that for the moment given the likely insignificant coverage of FTTH that we would revisit whether a risk premium is warranted if demand materialises significantly over the price control period. We would also consider reasonable proposals from Eircom in that regard.
- 10.103 Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.

Civil engineering infrastructure (including duct and pole access):

- 10.104 In ComReg Document No 12/27, ComReg considered that the cost orientation obligation should apply in relation to the various components within civil engineering infrastructure.
- 10.105 ComReg considered that because the basic infrastructure of ducts, trenches and poles are non-replicable, Eircom should recover only the actual costs incurred. This implies the use of historical costs taking account of any actual incremental costs associated with remediation and on-going maintenance together with a rate of return. Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.

10.106 In ComReg Document No 12/27, we also considered that where a request for civil engineering access is made by an operator, that Eircom should negotiate a reasonable rate per metre (or similar mechanism agreeable to both parties) of access reflective of costs and subject to its obligations regarding price discrimination. Where the negotiation process is not concluded successfully, ComReg would intervene to set the relevant price of civil engineering access on a case by case basis, based on depreciated historic costs plus the cost of remediation together with a rate of return. We considered that a time period of no more than three months seemed reasonable for negotiation purposes.

10.107 In ComReg Document No 12/27, we acknowledged that the use of historic costs in this context was not consistent with the valuation methodology for LLU where BU-LRAIC plus is used. However, where no infrastructure would be built/replicated we explained that it may be difficult to justify continuation of the BU-LRAIC plus methodology, in the long term, which may in fact artificially increase prices. We sought the views of respondents on this point while acknowledging that at some point in the future we would revisit the underlying methodologies used for determining access prices.

10.108 Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.

Dark Fibre:

10.109 In ComReg Document No 12/27 we acknowledged that where civil engineering access could not be provided, or where such access is economic, dark fibre should be made available to operators where it is reasonably available.

10.110 We proposed that dark fibre should be priced at current cost for the fibre element plus depreciated historic costs for the applicable civil engineering access element. Since fibre is being installed in the access network at the moment, its historic cost is not relevant and current cost should apply in line with the principle of replicability.

10.111 Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.

Backhaul costs:

10.112 In ComReg Document No 12/27, we proposed that the costs for Backhaul should be priced on a basis consistent with the prevailing methodology for the CAM for LLU in ComReg Decision D01/10.

10.113 Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.

Fault repair:

10.114 We considered that all fault repair charges in the context of NGA should also be cost oriented and should not be unduly discriminatory.

10.115 Please refer to subsection 11.5.1 of ComReg Document No 12/27 for further details.

10.116 In ComReg Document No 12/27 ComReg then asked the following questions:

Q. 19 Do you agree with ComReg's preliminary views, as set out above, on the appropriate form of price regulation in the context of NGA in the WPNIA market? Please provide reasons for your response.

Q. 20 Do you agree whether the underlying network costs of providing NGA based services using SLU are likely to be much lower than the network costs of providing current generation services due to the likely geographic coverage of NGA based services? Please provide reasons for your response.

Q. 21 Do you believe that the cost base for ducts and trenches should be amended to a HCA basis in the context of mandated civil engineering infrastructure? Please provide reasons for your response.

Q. 22 Do you believe that the link between copper and fibre based services should be maintained during the transition? Or should migration to fibre be encouraged by way of differential pricing after a certain period of time. If the latter, how long should this period be and what triggers for a change should be considered? Please provide reasons for your response.

10.117 The views of respondents and ComReg's Assessment and Final Position have been discussed under the following relevant headings which relate to each of the four questions above:

- Form of price control for NGA in the WPNIA Market
- Cost differences between NGA and Current Generation
- Cost base for ducts and trenches
- Link between Copper and Fibre.

Form of price control for NGA in the WPNIA Market:

10.6.2 View of Respondents:

10.118 The following gives a high level overview of the responses in relation to the form of price control for NGA services in the WPNIA market:

- Six respondents (Magnet, Imagine, Digiweb, ALTO, Telefonica, E-net) generally agree with the form of price control for NGA services in the WPNIA market.
- Eircom disagree with a number of points which are further discussed below.
- Vodafone referred to its response to Question 18 above and these have been addressed by ComReg in subsection 10.4.3 above.
- BT stated that there needs to be consistency between the parameters used in the context of bundles in ComReg Document No 12/63 and those already used to determine the LLU price, and it specifically referred to the threshold of lines within larger exchanges.
- Two respondents (UPC and ECTA) had no specific views.

10.119 **Digiweb** agrees stating that “...*the VUA, LLU and SLU rental cost should be connected, in order to incentivize operators to move up the investment ladder.*” **Imagine** also agrees with cost orientation but it stated that pricing should not in any way be related to retail pricing but be on a cost plus model only.

10.120 **BT** and **ALTO** stated that ComReg should review the exchange line threshold of 2,500 which was used to determine the LLU price. BT stated that ComReg should consider a higher threshold of exchanges with lines in excess of 4,000 consistent with the LLU deployment numbers in the context of bundles.

10.121 **Magnet** and **ALTO** stated that it is glad that ComReg have identified that less costs are to be recovered in VUA as sub loops are a lot shorter and that this would have an impact on the price for LLU due to the inter-relationship proposed by ComReg for LLU and VUA pricing.

10.122 **Eircom** disagrees based on the following key points:

10.123 By establishing a direct link between NGA retail charges and copper based WPNIA charges, Eircom states that ComReg is proposing a regime which does not take adequate account of the different cost drivers of SLU and LLU, and which could easily lead to inappropriately low WPNIA prices.

10.124 Eircom welcomes the proposal that the price remedy would only apply in NGA areas but it sought clarity that the NGA Footprint Areas are those areas where Eircom NGA infrastructure is built and actually available for use.

10.125 Eircom also refers to the fact that ComReg proposed an additional maximum price for SLU and note the proposed linkage between SLU and LLU. Eircom raise concerns that incentives to migrate could be undermined. It further added that SLU prices could be reduced for many reasons, without impacting on the LLU price and vice versa. Eircom set out a number of differences between calculating the cost of LLU and SLU. Please refer to Eircom's non-confidential response to Question 19 which is separately published within ComReg Document No 12/97.

10.126 Eircom also raised a number of points on the methodology for setting the charges for NGA services in the WPNIA market. These points are as follows:

- For unbundled fibre, it would be inappropriate to use the CAM for costing fibre without adjusting volume forecasts, price trends for inputs and updating current costs. However, it welcomed the suggestion that it is open to Eircom to offer different prices for unbundled fibre from different exchanges areas, "if appropriate, or if required by the margin squeeze tests".
- For civil engineering infrastructure, Eircom did not agree with the proposed approach as it would not allow for the recovery of common costs or overheads which is inconsistent with pricing access for LLU.
- Dark fibre should at a minimum cover the costs of civil infrastructure used (including relevant common costs allocation) plus the current replacement cost of the fibre cables (including cable materials, installation labour, and relevant share of common costs).
- For SLU backhaul, Eircom would not support a change to the principles of using the CAM in anticipation of the outcome of consultations yet to be held.

10.127 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.6.3 ComReg's Assessment of Responses and Final Position:

- 10.128 Having considered the views of respondents, ComReg has made some amendments to the pricing methodology for civil engineering access, dark fibre and unbundled access to the fibre loop, while maintaining its view that cost orientation remains appropriate for NGA services in the WPNIA market. It is important to note that cost orientation applies to all connections, fault repairs and any other related charges in the context of NGA in the WPNIA market. Co-location, interconnection and shared sub loop unbundling access is also subject to the obligation of cost orientation. The SLU charge is subject to ComReg Decision D01/10 (LLU Pricing Decision) but as amended in this Decision.
- 10.129 Further to the issues raised by Eircom regarding the methodology for setting the NGA WPNIA charges, ComReg has decided that the charges for civil engineering access (including duct access) and dark fibre should be priced at no more than the BU-LRAIC plus costs in the CAM but adjusted where appropriate for fibre costs. This applies to CEI in the context of current generation and next generation services and this ensures consistency with the pricing approach for LLU and SLU and should avoid market distortions. Backhaul should be calculated consistent with the methodology used in the Copper Access Model but also adjusted where appropriate for fibre costs.
- 10.130 For civil engineering access and dark fibre (for both current generation and next generation), ComReg will allow Eircom three months to agree a price based on no more than the BU-LRAIC plus costs with an access seeker which may reflect local costs. Eircom shall be obliged to provide the access seeker with an offer price within one month of an access seeker's application (i.e. two months before agreement should be reached). This arrangement will be kept under review.
- 10.131 In general, Eircom shall notify ComReg of all wholesale prices for new and existing Next Generation WPNIA products, services and facilities no later than three months before the new price or the revised price is expected to come into effect, except that for a wholesale price increase to an existing Next Generation WPNIA product and service, Eircom shall pre-notify ComReg no later than four months before the revised prices are expected to come into effect. The periods of three (3) months and four (4) months notification to ComReg may be varied with the agreement of ComReg or at ComReg's discretion. Please refer to Chapter 7 for further discussion on the transparency obligations.
- 10.132 For fibre unbundling, given that Eircom has no plans to rollout any significant level of FTTH, the general obligation of cost orientation should be sufficient for now.

10.133 A general obligation not to margin squeeze also applies to products / services in the WPNIA market.

10.134 In response to Eircom's points on the link between NGA and LLU, ComReg has already dealt with this under Question 18 above at subsection 10.4.3 above.

10.135 ComReg considers that there are two main differences between LLU and VUA as follows:

- (1) The types (geography) of exchanges considered; and
- (2) The length of cables.

10.136 For the types of exchanges, it seems that there is no difference in this context given that the exchanges are broadly the same for LLU and for VUA (or NGA), except for the weighting applied to LLU, which is discussed below. For the length of cables, there are differences. For LLU, short loops are considered while VUA is deployed using only very short sub loops close to the cabinet.

10.137 Eircom also made a number of points as to why SLU may be reduced without impacting on LLU. ComReg agrees that a reduction in the price of SLU might not necessarily lead to precisely the same reduction in the price of LLU. Nevertheless, it is important that LLU and SLU are priced consistently by reference to the CAM as they reflect similar costs for the same network coverage. The key point is the link between LLU and VUA in order to ensure that there is no inappropriate discrimination between users using the same asset, as both products share similar infrastructure inputs. This should also ensure that LLU based operators are not foreclosed. Therefore, where there is a reduction in the price of SLU, there must also be a reduction to the price of LLU, as appropriate subject to the caveat described above.

10.138 However, it is important to note that any changes to the price of SLU (and LLU) as a result of the margin squeeze test from Market 5 (VUA) to Market 4 (SLU) cannot result in a price that is contrary to the objectives as set out in ComReg Decision D01/10⁹⁵ (the LLU pricing Decision). In ComReg Decision D01/10, ComReg clearly set out its statutory objectives (in line with Section 12 (1) (a) of the Communications Regulation Act, 2002), which are:

- (i) To promote competition;
- (ii) To contribute to the development of the internal market; and

⁹⁵ ComReg Document No 10/10 (ComReg Decision D01/10): Response to Consultation and Decision – Local Loop Unbundling (“LLU”) and Sub Loop Unbundling (“SLU”) Maximum Monthly Rental Charges; dated 9 February 2010.

(iii) To promote the interests of users within the Community.

10.139 These statutory objectives are clearly related to the exercise by ComReg of its function in ensuring compliance by Eircom with its legal obligation of cost orientation. It is important to point out that Regulation 13(4) of the Access Regulations sets out that the burden of proof that charges are cost oriented lies with the SMP operator. In relation to the objective of the promotion of competition, ComReg is required to ensure the following:

- (i) There is no distortion or restriction of competition in the electronic communications sector; and
- (ii) To encourage efficient investment in infrastructure and promoting innovation.

10.140 In relation to the objective of contributing to the development of the internal market, ComReg is required to take all reasonable measure to:

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

10.141 ComReg also notes that it is required to consult with the European Commission, BEREC and other NRAs in fulfilling its objective of contributing to the development of the internal market⁹⁶.

10.142 With regard to the promotion of the interests of users within the Community, ComReg is required to take all reasonable measures to encourage access to the internet at reasonable cost to users.

10.143 Therefore, any changes made to the LLU / SLU prices as a result of the margin squeeze test from Market 5 to Market 4 must at least comply with the objectives above and must be notified to ComReg in line with the obligations set out in Section 4.2 of the Decision Instrument in Chapter 7 of ComReg Decision D01/10.

10.144 In summary, ComReg Decision D01/10 is amended so that Eircom must charge the following for the SLU monthly rental charge, whichever is the lower:

⁹⁶ Regulations 13 (2) and 13 (3) of the Framework Regulations.

- (a) €10.53 per line per month (see Information Notice No 13/01⁹⁷ for recent reduction by Eircom to the SLU charge from €10.53 to €9.03);
- (b) The SLU monthly rental charge as amended by changes made by Eircom in line with the Copper Access Model under ComReg Decision D01/10 and subject to prior review by ComReg; or
- (c) A revised SLU monthly rental charges based on the margin squeeze test between SLU and VUA and subject to prior review by ComReg.

10.145 ComReg Decision D01/10 is amended too so that Eircom must charge the following for the LLU monthly rental charge, whichever is the lower:

- (a) €12.41 per line per month (See Information Notice No 13/01 for the recent reduction by Eircom to the LLU price from €12.41 to €9.91); or
- (b) The LLU monthly rental charge as amended by changes made by Eircom in line with the Copper Access Model under ComReg Decision D01/10 and subject to prior review by ComReg.

10.146 However, any changes made by Eircom to the SLU price as a result of the margin squeeze test between SLU and VUA at part (c) above, must also be consistency applied to the LLU monthly rental charges, as appropriate, using the Copper Access Model. This ensures consistency between the price for VUA and LLU.

10.147 While ComReg proposed in ComReg Document No 12/27 that a change to the price of LLU and SLU would only apply in the NGA Footprint Area, this will not be the case. Given that the LLU and SLU prices are national prices, the benefit of a price reduction must be given to all OAOs, nationally. Eircom has recently announced reductions to LLU and SLU of €2.50 and €1.50 respectively and these reductions will be offered nationally.

10.148 Eircom also sought clarity from ComReg on the NGA Footprint Area. To clarify, the NGA Footprint Area is those areas where Eircom launch and deploy its NGA services as published on its wholesale website, in accordance with its transparency obligations.

10.149 While Imagine agrees with cost orientation it stated that pricing should not in any way be related to retail pricing but be on a cost plus model only. ComReg has already considered this point in subsection 10.4.3 above.

⁹⁷ Information Notice – Price reductions to local loop unbundling ('LLU') and sub loop unbundling ('SLU'); 11 January 2013.

10.150 BT and ALTO raised the point about the need to review the exchange line threshold for LLU. ComReg has already considered this point in subsection 10.4.3 above.

10.151 Magnet's point on the difference in cost between VUA and LLU has been dealt with below in subsection 10.6.3.

Cost differences between NGA and Current Generation:

10.6.4 Views of Respondents:

10.152 The following gives a high level overview of the responses in relation to whether the underlying costs for providing NGA based services using SLU would be lower compared with current generation:

- Four respondents (Eircom, Magnet, Imagine and Digiweb) agree with ComReg;
- Four respondents (BT, Vodafone, Telefonica and ALTO) disagree with ComReg;
- One respondent (E-net) suggested that the CAM should be updated to assess the appropriate level of costs;
- Two respondents (UPC and ECTA) have no specific views.

10.153 **Digiweb** agrees with ComReg stating that:

“The selection of areas for NGA has been determined based on a number of factors, one of which is the density of customers in the exchange area. By definition, the costs of serving high density location will be lower than serving low density locations.”

10.154 **Eircom** also agrees that the cost of the sub loops for FTTC will be lower than the cost of the unbundled local loop and lower than the average cost of sub loops throughout the country. Eircom noted the following with regard to the approach for SLU: (1) the copper access model and the pricing calculations for SLU do not make any adjustment for long lines or for ‘remote’ areas in contrast to the approach for LLU. (2) The SLU pricing model does not include the costs of directly fed-loops, which are in any case unlikely to be served with FTTH. (3) FTTC is likely to be provided only to end-users who have loop length less than 1.5km from a large cabinet so the average sub-loop will be quite short. Therefore, longer lines from cabinets should not be included in the NGA SLU cost. (4) Small cabinets may not be served by FTTC so they should be excluded from the NGA SLU cost. (5) Initial estimates suggest that excluding both small cabinets and longer loops (over 1.5km) excludes less than 10% of lines, but over 30% of costs, so that the average SLU cost for FTTC reduces by about 30% compared to the current ‘national’ SLU price.

10.155 **BT, ALTO and Telefonica** shared similar views whereby they disagree with ComReg for a number of reasons as set out in their responses which are separately published within ComReg Document No 12/97.

10.156 **Vodafone** disagree and state that the difference between LLU (€12.41) and SLU (€10.53) of €1.88 suggests that 85% of the cost is placed in the 'last mile' of copper with only 15% for cost between local cabinet and exchange. Vodafone added that if Eircom are allowed to leverage a sunk cost and this avoids investment in last mile infrastructure it allows them to leverage the sunk value of the copper to the detriment of investment and the consumer.

10.157 **E-net** stated that the level at which the cost of providing NGA services over SLU should be set is one that has to be determined by way of an appropriate updating of the Copper Access Model. As a result, it is for ComReg, in the first instance, to revert with proposals for revised pricing in this area once the model has been updated.

10.158 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.6.5 ComReg's Assessment of Responses and Final Position:

10.159 Having considered the views of respondents, ComReg remains of the view that NGA services using VDSL equipment will only be available from much shorter sub loops than full loops (LLU) providing broadband using ADSL. Where these sub loops are shorter on average, this should be reflected in the access costs for NGA broadband services such as VUA. It is important to note that NGA will be rolled out in much denser areas of the country, at least initially, and therefore the cost per line will be lower.

10.160 In its response, Eircom proposes that the NGA SLU cost should be adjusted for smaller lines and larger cabinets (compared to LLU). ComReg considers that by doing so Eircom would create 3 different areas in a given exchange:

- 1) Areas with FTTH
- 2) Areas with FTTC (1.5km from cabinets and large cabinets only)
- 3) The remaining areas (small cabinets) or long lines.

10.161 ComReg believes that this would be likely to create significant price differences in each exchange area and would increase retail prices for those customers that are in small cabinets or have long lines. Therefore, ComReg considers that this approach does not seem reasonable or practical.

10.162 With regard to the two points raised by Vodafone on the cost of providing NGA services using SLU, ComReg considers that there are two reasons why VUA underlying access network costs may be lower than current generation:

- Coverage is more focused on denser areas of the country

- Loops are shorter.

10.163 On the first point, Eircom's NGA coverage seems to be similar to coverage used for LLU pricing. Eircom intend to cover approx. 1 million homes with NGA and the LLU pricing in 2009 was based on approx 1 million lines which means that the areas are similar.

10.164 On the second point, NGA loops are shorter for FTTH and for FTTC than average loops. Therefore, the underlying cost is lower. Vodafone has not considered this. However, if wholesale prices were following underlying access network costs this could create an issue whereby in the same exchange area, NGA customers will be subject to lower underlying costs than customers who are too far from the exchange (and these customers would have to pay more than today for slower speed services, compared to those customers in the NGA areas). This would increase the digital divide and increase Eircom's retail prices for these customers which cannot be covered by VUA.

10.165 BT, ALTO and Telefonica disagree with ComReg but ComReg considers that they seem to have misunderstood the question. The question was about the fact that NGA and legacy products have different geographical scope and therefore, NGA costs are lower because NGA is deployed in denser areas of the country. Therefore, it seems that the issues raised are irrelevant as they relate to the common cost stack between NGA and legacy in a given area where NGA and legacy have the same cost stacks.

10.166 With regard to the point raised by E-net on updating the CAM to determine the relevant SLU costs in the context of NGA, ComReg agrees that the current approach to network costing and pricing should be maintained for consistency and regulatory certainty. The European Commission intends to issue further guidance in 2013 with regard to access network costing methodologies and ComReg will review this and may consult further at a later stage.

Cost base for ducts and trenches:

10.6.6 Views of Respondents:

10.167 The following gives a high level overview of the responses in relation to amending the cost base for ducts and trenches to HCA in the context of civil engineering infrastructure:

- Five respondents (Vodafone, Telefonica, E-net, Magnet and ALTO) generally agree with ComReg;
- Two respondents (Eircom and UPC) disagree with ComReg for reasons set out below;
- Digiweb stated that it would welcome a review of the methodology assessing the current methodology versus the amended methodology under HCA;
- Imagine stated that there is not sufficient information available to state with certainty which approach is best;
- BT and ECTA did not provide any views.

10.168 **Vodafone** agrees stating that it: *“...strongly supports the view that the cost base for ducts and trenches should be amended to a HCA basis in the context of mandated civil engineering infrastructure.”*

10.169 Vodafone also added that it would appear that the useful life of such infrastructure assets are longer than the accounting asset lives and that this yields a situation where Eircom's internal costs of self-supply are based on assets that are fully or largely depreciated and which had an original book value lower than the inflation adjusted modern equivalent.

10.170 **Imagine** is of the view that at the current time adopting a HCA basis is a practical approach however it stated that: *“...there is insufficient information made available to state with certainty which approach would be best and therefore believe that the underlying methodologies in the Copper Access Model should be reviewed.”* **Digiweb** also stated that it would welcome a review of the current cost base versus the amended cost base.

10.171 **UPC** stated in its response that ComReg will need to ensure that NGA access pricing is set at an appropriate level such that it is neither priced excessively nor at a level that would encourage inefficient entry. In this regard, the use of historic costs (for example for access to Eircom's civil engineering infrastructure) could send the wrong signals to entrants and UPC referred to the EC NGA Recommendation (Annex I, section 2) which calls for consistency of the costing methodology for civil infrastructure access with the methodology adopted for unbundling of the copper loop.

10.172 **Eircom** stated that it is not immediately clear whether the HCA approach would lead to prices higher or lower than those indicated by a BU-LRAIC plus approach. Eircom also referred to the use of the BU-LRAIC model for LLU as an approach to incentivise entry by alternative platforms. Eircom is of the view that consistency of approach and expediency suggests the same methodology should be used for ducts and trenches, particularly as the use of HCA in this area would lead to OAOs paying a different price for the use of the same infrastructure based upon their choice of purchased and self supplied elements. Eircom added that it may be the more conventional and familiar to use the BU LRAIC approach that will prove both more predictable and less burdensome to operate.

10.173 **Magnet, Telefonica and ALTO** agree with HCA stating that it should be mandated in the context of CEI as the copper already is in the ducts and the cost of the civils and the installation of copper have been recovered via LLU and WBA costs. ALTO also added that this means that WSEA terminating services that will be carried in the same ducts are over-priced and the access elements thereto should be reduced.

10.174 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.6.7 ComReg's Assessment of Responses and Final Position:

10.175 Having considered the views of respondents, ComReg has decided to amend its approach from ComReg Document No 12/27 relating to civil engineering access. Therefore, the charges for civil engineering access (including ducts and trenches) should be priced at no more than the BU-LRAIC plus costs in the CAM. This ensures consistency with the pricing approach for LLU and SLU and should avoid market distortions. This was already considered by ComReg in subsection 10.6.3 above. The NGA Recommendation (Annex I, section 2) also calls for consistency of the costing methodology for civil infrastructure access with the methodology adopted for unbundling of the copper loop, stating that:

“Access to existing civil engineering infrastructure of the SMP operator on Market 4 should be mandated at cost-oriented prices. NRAs should regulate access prices to civil engineering infrastructure consistently with the methodology used for pricing access to the unbundled local copper loop.”

10.176 While it is true that it is not clear whether a HCA cost base would give higher or lower prices compared to BU-LRAIC, it is likely that the HCA price would be lower given that some trenches are likely to be fully depreciated but still in use. Eircom raises the point about consistency of approach and that the use of HCA would mean that an OAO would have to pay a different price for the duct element of a purchased civil engineering / self supplied fibre investment than they would pay for the duct element of a purchased NGA Bitstream investment. However, ComReg considers that this would be avoided by ensuring that wherever duct is used (duct access, LLU, Bitstream, etc.), that it would be the same cost input. Therefore, the BU-LRAIC plus methodology should be used for now for pricing civil infrastructure in order to be consistent with LLU.

10.177 ComReg considers that it is important to have a consistent approach for regulatory certainty. The European Commission recently issued⁹⁸ its draft recommendation on the costing methodologies, which is likely to be finalised in the first half of 2013. ComReg will take utmost account of the guidance set out by the European Commission in this regard. Therefore, until a review has been carried out on the appropriate methodology relevant to the access network (including ducts and trenches) the current BU-LRAIC plus approach should be used to ensure consistency with LLU access prices already in the market.

⁹⁸ <http://ec.europa.eu/digital-agenda/en/news/commission-seeks-berec-opinion-draft-recommendation-consistent-non-discrimination-obligations>

Link between Copper and Fibre:

10.6.8 Views of Respondents:

10.178 The following gives a high level overview of the responses in relation to whether the link between copper and fibre based services should be maintained during the transition or whether migration to fibre should be encouraged by way of differential pricing after a certain period of time. If the latter, how long should this period be and what triggers for a change should be considered.

- Eight of the respondents (BT, Vodafone, Magnet, Telefonica, E-net, Imagine, Digiweb and ALTO) generally agree.
- One respondent (Eircom) disagrees for the reasons set out below.
- Two respondents (UPC and ECTA) had no specific views on this question.

10.179 While **UPC** has no specific views regarding the link between copper and fibre, it made some general comments. UPC is of the view that ComReg has taken considerable care in its regulated pricing of current generation services to ensure that access-based players are incentivised to consider market entry via more infrastructure-intensive means, i.e. by way of WPNIA services, and in particular LLU, rather than by WBA services such as Bitstream. UPC notes that ComReg's proposed approach to regulatory pricing for NGA-based services retains this same incentive, one that should provide access seekers with appropriate price signals to migrate to own infrastructure and WPNIA-based NGA access services. UPC further added that it is also an approach which demonstrates ComReg's continued support for platform competition, which needs to continue to develop, given the important roles that alternative platforms such as cable, fixed wireless, LTE and 4G mobile are set to play in the provision of NGA services in Ireland.

10.180 **BT** in its response highlights the importance of LLU stating that

"BT has invested in LLU in Ireland which we consider has stimulated the growth of higher speed broadband services over recent years. We consider it just as reasonable to recover this investment as Eircom will clearly be seeking from its investment in NGA."

10.181 **Imagine, Digiweb, Vodafone and Magnet** stated that the migration to fibre should not be encouraged by differential pricing unless it is based on actual costs.

10.182 **Eircom** believes that the primary consideration should be to encourage end-users to move rapidly to higher speed services, consistent with the Digital Agenda targets. Eircom is of the view that during the transition two key tests are important as follows:

- (A) Can other operators use the NGA wholesale services to compete with Eircom at the NGA retail level? and
- (B) Does the NGA retail services price form a margin squeeze against legacy LLU based service?

10.183 Eircom also stated that it does not believe that an artificial direct linkage should be created between NGA retail charges and wholesale copper WPNIA LLU services. In the event that ComReg persists with discouraging migration, it rejected any mandated triggers linked to obsolescent services (such as only allowing migration incentives after LLU price falls below a certain level, or LLU volumes exceed a certain level) as such triggers would favour LLU over NGA and would therefore be incompatible with the Digital Agenda targets.

10.184 While **Vodafone** agrees with the linkage, it is concerned that ComReg's current solution will allow Eircom substantial flexibility in managing the price differential between legacy and NGA services and Eircom will use this flexibility to optimise customer switch-over to its own advantage and to the detriment of consumers.

10.185 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.6.9 ComReg's Assessment of Responses and Final Position:

10.186 Having considered the views of respondents, ComReg has decided that the link between copper and fibre should remain in place at least until the next market review. Please refer to the discussion at subsections 10.4.3 and 10.6.3 above where ComReg has already discussed the link between fibre and copper.

10.187 As stated by E-net: *"It is important that Eircom maintains a strong link between the price of copper-and fibre-based services. If Eircom, as the SMP operator, is allowed to reduce pricing unfairly in order to persuade end-users to migrate to fibre services this may damage other operators' business cases to innovate in the NGA space."*

- 10.188 The cost oriented SLU price is the main cost input to the VUA (NGA) product in the WBA market, given that it reflects the access cost from the cabinet to the premises. A reduction to the SLU price allows additional margin along the value chain and would allow Eircom to reduce either the wholesale prices for VUA or Bitstream or both. This may also allow for more retail pricing flexibility. Given ComReg's approach to ensure price consistency between SLU and LLU, a reduction to the SLU price would result in a reduction to the LLU price, as appropriate. This should ensure there is no inappropriate discrimination between users using the same asset, as both products share similar infrastructure inputs.
- 10.189 We consider that given that Eircom is rolling out an FTTC solution which requires copper from the cabinet to remain a critical piece of infrastructure, ComReg considers that the link between copper and fibre may in fact remain in place for some time to come. In addition, ComReg's regulatory policy to date has been to promote Line Share and full unbundling and it would seem reasonable that this continues for the foreseeable future. The flexibility being afforded in respect of NGA pricing is also made possible to some degree by pricing constraints arising from current generation products and it is important that this continues, at least for the period represented by the price control period.
- 10.190 At some point in the future, it may be appropriate for any additional cost associated with maintenance of dual networks to be recovered by the copper network. However, before this could happen, a successor voice product which meets all legal and regulatory requirements would be required. Also of importance would be the performance of the new NGA wholesale product set. ComReg will keep this under review and if appropriate will consult further.
- 10.191 Imagine, Digiweb, Vodafone and Magnet stated that the migration to fibre should not be encouraged by differential pricing unless it is based on actual costs. ComReg would like to clarify that the link between LLU and VUA is intended to ensure that differential prices are only based on actual cost differences.
- 10.192 While Vodafone agrees with the linkage, it is concerned that ComReg's current solution will allow Eircom substantial flexibility in managing the price differential between legacy and NGA services and Eircom will use this flexibility to optimise customer switch-over to its own advantage and to the detriment of consumers. ComReg considers that given the competitive constraint from UPC and indeed prospectively from LLU operators in those areas where NGA is rolled out, this should be of limited concern.

10.6.10 ComReg's Decision:

- 1. Eircom shall ensure that the charges for access to or use of those products, services or facilities including associated facilities in the context of NGA WPNIA is subject to a cost orientation obligation. This shall include all connection fees, fault repair charges and any other related charges.**
- 2. With regard to civil engineering infrastructure, Eircom shall base its charges on no more than the BU-LRAIC plus costs in accordance with the Copper Access Model.**
- 3. With regard to dark fibre, Eircom shall base its charges on no more than the BU-LRAIC plus costs in accordance with the Copper Access Model, as adjusted, where appropriate, for fibre costs.**
- 4. In order to determine a price for Civil Engineering Access or Dark Fibre that is compliant with the obligations above, Eircom shall negotiate in good faith with Access.**
- 5. With regard to unbundled access to the fibre loop (including GNP where required), Eircom shall ensure that the charges are cost oriented.**
- 6. With regard to co-location, Interconnection and shared sub loop unbundling, Eircom shall ensure that the charges are cost oriented.**
- 7. With regard to sub loop unbundling, Eircom shall ensure that the charges are cost oriented in line with ComReg Decision D01/10, as amended.**
- 8. With regard to Backhaul, Eircom shall ensure that the costs are calculated in a manner which is consistent with the methodology used in the Copper Access Model as adjusted, where appropriate, for fibre costs.**
- 9. Eircom shall ensure that the charges for fault repair associated with Next Generation WPNIA services and facilities are cost oriented.**
- 10. In accordance with the transparency obligation, Eircom shall notify ComReg of all wholesale prices for new Next Generation WPNIA products, services and facilities and for wholesale price changes to existing Next Generation WPNIA products, services and facilities no later than three months before the new price or the revised price is expected to come into effect, except that for a wholesale price increase to an existing Next Generation WPNIA product, service or**

facility, Eircom shall pre-notify ComReg no later than four months before the revised price is expected to come into effect. The periods of three (3) months and four (4) months may be varied with the agreement of ComReg or at ComReg's discretion.

11. Eircom shall have an obligation not to cause a margin / price squeeze.

12. The obligations for LLU and SLU under ComReg Decision D01/10 will now be amended as follows:

(i) Eircom is directed to charge the following price for SLU monthly rental to OAOs, whichever is the lower:

a) €10.53 per line per month (which has been reduced by Eircom to ~~€9.03~~ as set out in Information Notice 13/01);

or

b) The SLU maximum monthly rental charge as amended based on changes made by Eircom to the main parameter(s) of the Copper Access Model as set out in ComReg Decision D01/10. Any such amendment or changes would be subject to prior review by ComReg;

or

c) The revised charge derived by the application of the margin squeeze test between the VUA monthly charge and the SLU monthly charge based on the NGA Margin Squeeze Model (which is more particularly described in Section 11.14) of Decision Instrument (Wholesale Broadband Access) which is annexed to ComReg Decision No. D03/13. Any such amendment or changes would be subject to prior review by ComReg.

(ii) Eircom is directed to charge the following price for LLU monthly rental to OAOs, whichever is the lower:

a) €12.41 per line per month (which has been reduced by Eircom to ~~€9.91~~ as set out in Information Notice 13/01);

or

b) The LLU maximum monthly rental charge as amended based on changes made by Eircom to the main parameter(s) of the Copper Access Model as set out in ComReg Decision D01/10. Any such amendment or changes would be subject to prior review by ComReg.

(iii) Eircom shall ensure that any reduction to the SLU monthly rental charge as a result of part (i) (c) above is consistently applied to the LLU monthly rental charge at part (ii) above, where appropriate, using the Copper Access Model.

10.7 Cost Orientation: WBA Market

10.7.1 ComReg's Preliminary Views from Consultation Document:

10.193 In ComReg Document No 12/27, ComReg discussed cost orientation including its suitability depending on potential competition problems. Please refer to subsection 11.5.2 in ComReg Document No 12/27 for further details.

10.194 ComReg stated that the basis for not adopting a cost orientation obligation in the WBA market to date was to permit entry using the WBA services but to provide an incentive for more infrastructure intensive entry via WPNIA services such as LLU.

10.195 We set out a number of points for considerations in the context of NGA pricing in the WBA market as follows:

- WBA services are likely to be the predominant mode of entry in an NGA context.
- The demand profile for NGA services is not well understood at this point in time. This makes volume forecasting more difficult but, more importantly this may increase the investment risk to the incumbent.
- The cable operator, UPC, has made progress in the retail broadband market in urban areas in recent times. This may point to a lessening concern at the retail level, where cable is present.
- On the other hand these observations do not eliminate the concern about excessive pricing and constructive refusal to supply at the wholesale level.

10.196 In ComReg Document No 12/27 we proposed to allow Eircom pricing freedom for NGA retail services to allow it to explore what price levels are appropriate to enable Eircom to recover its risk adjusted rate of return empirically. Therefore, all wholesale prices – including those in the WPNIA market - must be set at a level that ensures users of these wholesale services are not squeezed out of the market by excessively low prices at the retail level or in the WBA market and that access to NGA services are provided to the standard outlined by the proposed measure for non-discrimination.

10.197 We considered that while not without its risks in terms of excessive pricing, this approach is justifiable in circumstances where UPC's share of the retail market in urban areas (i.e. those areas where NGA is likely to be rolled out) is increasing, and there is the potential for a pricing constraint to be exercised by LLU based competition over traditional copper.

10.198 In ComReg Document No 12/27, we set out our preliminary view that the margin squeeze approach can only be justified by the maintenance of copper as a viable form of access in the short term. If pricing or access rules were relaxed so as to encourage the closure of the copper access network and migration to NGA the basis for remaining with the proposed approach may need to be re-examined. We also recognised that a review of this methodology may be necessary two or three years after launch but we would continue to monitor the market during the price control period.

10.199 We also considered that in addition to the margin squeeze tests above, a cross-check to the relevant regulated prices (and associated models) used in the margin squeeze model should be carried out to ensure that prices are not below (or substantially above) the relevant costs.

10.200 Please refer to subsection 11.5.2 in ComReg Document No 12/27 for further details.

10.201 In ComReg Document No 12/27 ComReg asked the following question.

Q. 23 Do you agree with ComReg's preliminary view that a cost orientation obligation is not deemed appropriate for now in the context of the NGA rollout in the WBA market? Please provide reasons for your response.

10.7.2 Views of Respondents:

10.202 The following gives a high level overview of the responses in relation to ComReg's preliminary view that a cost orientation obligation is not deemed appropriate for now in the context of the NGA rollout in the WBA market:

- Six respondents (Eircom, BT, Magnet, Telefonica, E-net, Digiweb and ALTO) generally agree. However, Eircom, BT and ALTO raised a number of issues, which are discussed below.
- Two respondents (Vodafone and Imagine) disagree with ComReg's approach.
- One respondent (Telefonica) did not seem clear that ComReg proposed a margin squeeze price control for NGA services in the WBA market.
- Two respondents (UPC and ECTA) did not provide any specific views on this question.

10.203 **E-net** agree stating that:

"ComReg's approach to date – to incentivise more infrastructure-intensive entry via WPNIA services, in particular LLU – has meant that it has not imposed a cost-orientation obligation on Eircom in relation to the provision of current generation WBA. e|net agrees that this approach is also the correct one to take in relation to NGA WBA, where the current 'retail minus' control will be replaced by the proposed margin squeeze test."

10.204 **BT** and **ALTO** state that a concern with the retail minus price control is that such can be eroded through product variations and bundling with other products including non-regulated products (with reference to ComReg's retail bundles consultation 11/72). Therefore, a Margin squeeze is also required to set absolute pricing floors to prevent a Margin Squeeze and this price floor should be set at the cost plus price. BT and ALTO further stated that the floor price set by the Margin test should be the same as the cost plus price and that the WACC of 10.21% should raise the Margin Squeeze floor slightly for the reasons set out in its response. They also added that entrant operators in the upstream market are considerably smaller than Eircom and will experience reduced economies of scale, scope and externalities hence higher costs. The 10.21% added to the price floor will assist this imbalance.

10.205 **Magnet** stated that it is important to look at the cost stack and ensure that all of those outside the NGA areas get a suitable and fit for purpose product at competitive prices to those in the NGA areas.

10.206 **Eircom** agree with ComReg stating that:

"Cost orientation obligations, imposed at a point where costs and volumes are not known with any certainty, are unhelpful and may damage competition and slow NGA build and take-up."

10.207 However, Eircom raised a number of key points as follows:

- (1) Interaction between cost oriented WPNIA services, and the operation of the margin squeeze models between Retail and WBA, within WBA, and between WBA and WPNIA in practice will likely mean that there is little or no room for manoeuvre in WBA pricing, frustrating the intention to allow eircom *"to explore what price levels are appropriate to recover its risk related return empirically."*
- (2) ComReg is in fact imposing a cost based floor for WBA in all cases (built up from SLU) whether or not the SLU obligation is still in force, and is also proposing a retail minus ceiling for WBA (and indeed, WPNIA) which Eircom believes is a *"highly impoverished form of price freedom"*.
- (3) ComReg's proposals in paragraph 11.148 of ComReg Document No 12/27 to cross-check that the relevant regulated prices are not below or substantially above the relevant costs might also be regarded as a de-facto cost orientation obligation.
- (4) Eircom disagree with ComReg that the pricing freedom proposed can only be justified by the maintenance of copper and refer to the fact that UPC now have over 50% share of broadband in many areas (in fact in almost all areas where LLU or line share is active) which would justify this approach.
- (5) Eircom disagrees with the proposal to review the approach in 2 to 3 years time on the basis that it is essential that a commitment is made by ComReg that to the extent that continued regulation of the WPNIA is required, including a price control, then the level of regulation will not change once the investment is made.

10.208 **Vodafone** disagrees with ComReg for the reasons that it already raised in its response to Question 18 above.

10.209 **Imagine** also disagree and favours an overall approach based on cost plus rather than margin squeeze which it says has historically led to some of the highest pricing in the EU for unbundled and Bitstream services. Imagine believes that it is one of the main factors leading to the poor take up of LLU services in the Irish Market. Imagine is of the view that a cost orientation obligation for WBA is the only way to ensure that the pricing for WBA services are viable for OAO to migrate from the current service.

10.210 **Digiweb** agrees that a cost orientation obligation is not deemed appropriate in a 'white label' reselling scenario. On the contrary, where the alternative operator attempts to build its own independent solution on the back of Eircom's network (i.e. SLU), this risk-taking behaviour should be incentivized with the application of a cost-orientation scenario.

10.211 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.7.3 ComReg's Assessment of Responses and Final Position:

10.212 Having considered the views of respondents, ComReg has decided that cost orientation is not currently appropriate for NGA services in the WBA market. ComReg has already set out its position on why cost orientation is currently not appropriate for NGA services in the WBA market, in subsection 10.4.3 above.

10.213 ComReg has taken "utmost account" of the European Commission's views in the NGA Recommendation, as it is required to do under Article 19(2) of the Framework Directive, as transposed by Regulation 30(1) of the Framework Regulations. In so doing ComReg has had regard to the NGA Recommendation in the context of its application to the particular circumstances of the Irish market.

10.214 In response to the points raised by BT and ALTO, ComReg would like to clarify the following:

- The pricing approach for NGA services in the WBA market is a margin squeeze approach and not a pure retail minus. Please refer to paragraphs 11.27 and 11.28 of ComReg Document No 12/27 for a distinction between them.
- The risk related to bundling with unregulated products is equally relevant under the margin squeeze approach and also if cost orientation were imposed.
- WACC is already included in the margin squeeze tests.
- The key margin squeeze tests are based on a SEO test to take account of the fact that other operators do not have the same scale or scope as Eircom. Please refer to subsection 10.4.3 above for further discussion on this point.

10.215 With regard to each of the five issues raised by Eircom above, ComReg has set out its position on each one below:

- 1) In response to Eircom's point that ComReg's proposed margin squeeze approach will mean that there is little or no room for manoeuvre in WBA pricing, for clarity given the flexibility of ComReg's margin squeeze approach, the larger the decrease of the SLU / LLU input, the more room it will have at the WBA level. The LLU and SLU prices are maximum prices, derived from a hypothetical BU-LRAIC plus model. Where Eircom wholesale faces significant pressure at a retail / wholesale level to reduce prices, the full recovery of a BU-LRAIC plus price may not longer be sustainable, at which point prices may have to reduce. Oxera has also flagged this point in their report, which is published in ComReg Document No 12/27a.
- 2) In response to Eircom's point that the pricing approach is "*a highly impoverished form of price freedom*", ComReg considers that the ultimate cost floor will depend on the underlying price inputs for the network. ComReg believes that it is important that where a price control is still warranted and SMP exists in a wholesale market, then understanding the basis for the relationship between relative wholesale prices will be important. Competitors will require certainty over these key inputs to determine their own investment strategies and where there is no underlying understanding of costs and prices it may not be possible to provide regulatory certainty. The extent of any price floors or ceilings will depend on the extent that competition takes hold at the retail and at each of the wholesale levels. ComReg will keep such developments under review and where necessary we will allow further flexibility to any controls that may no longer be warranted. Any such changes would be subject to consultation as appropriate and be fully transparent.
- 3) While Eircom considers that the approach for pricing NGA services in the WBA market is very similar to a cost orientation obligation, ComReg would like to point out that much depends on the price level of SLU / LLU that Eircom sets.

- 4) In response to Eircom's point where it disagrees with ComReg that the pricing freedom proposed can only be justified by the maintenance of copper and where UPC has more than 50% share of broadband in many areas, ComReg would like to point out that it has carried out analysis of the level of competition by exchange area and from that analysis it is clear that copper based competition is likely to be a significant driver of overall competition in the broadband market in urban areas for some time to come. While NGA services will cover significant parts of the country, there will be areas where this may not happen for some time or maybe not at all. In such circumstances a copper based competitive platform may be the only alternative to Eircom's retail offering as UPC may not have a presence in these areas either.
- 5) Eircom's disagrees that a review should be carried out in 2 to 3 years times on the basis that it is essential that a commitment is made by ComReg once Eircom has made its investment. ComReg would like to point out that it has a statutory obligation to perform a market analysis every 3 years. The principles and obligations specified in this Decision shall apply until at least the next market review. However, this does not fetter ComReg's future discretion regarding the appropriate obligations that should apply in the context of NGA services in the WBA market.

10.216 Magnet believes that those areas outside of the NGA areas need a suitable and fit for purpose product at competitive prices to those in the NGA areas. ComReg considers that LLU investment remains important in areas outside of the NGA areas. Any reductions to LLU / SLU as a result of maintaining a sufficient margin between NGA products along the value chain will apply nationally. Therefore, operators competing inside and outside of the NGA areas will benefit from any such reductions.

10.217 Imagine disagrees with ComReg and favours an overall approach based on cost plus rather than margin squeeze which has historically led to some of the highest pricing in the EU for unbundled and Bitstream services. To clarify, LLU, which is currently a mandated product in the WPNIA market, is based on a cost orientation obligation, not a margin squeeze approach. ComReg is also mandating a cost orientation obligation in relation to NGA services in the WPNIA market. Please refer to subsection 10.4.3 above on the reasons why ComReg considers that a cost orientation obligation is not appropriate for now in relation to NGA services (VUA and NGA Bitstream) in the WBA market.

10.218 Digiweb believes that where an alternative operator attempts to build its own independent solution on the back of Eircom's network (i.e. SLU), this risk-taking behaviour should be incentivized with the application of a cost-orientation scenario. ComReg would like to highlight that the current LLU and SLU prices are based on a model which we believe sets out the appropriate incentives to invest. The margin squeeze tests for NGA services respect these services and their respective prices.

10.8 Retail Margin Squeeze test

10.8.1 ComReg's Preliminary Views from Consultation Document:

10.219 In ComReg Document No 12/27, ComReg discussed in detail the importance of achieving its regulatory objectives. ComReg also discussed the concept of the 'ladder of investment' and its relevance in terms of current generation and next generation investment. Please refer to subsection 11.5.3 of ComReg Document No 12/27 for further details.

10.220 We considered that the proposed margin squeeze tests should be applied consistently across the different access products. Given that legacy broadband and next-generation broadband are substitutes, they should not be treated separately. Legacy copper based services should not be squeezed by NGA based services at least in the interim.

10.221 In ComReg Document No 12/27 ComReg recognised that the goal of the margin squeeze tests was therefore:

- To facilitate the entry of operators with their own network where feasible by ensuring that they will not be squeezed by competitors with no network, buying the resale offer.
- To verify that the price of wholesale upstream products bought by operators having their own network will not be squeezed by the SMP operator itself, which means that the test should also apply between upstream wholesale products and to any self-supply resale products of the incumbent.

10.222 Therefore, we considered that the two principle margin squeeze tests were necessary in the context of NGA, these were as follows:

- A margin squeeze test to assess the appropriate economic space between the retail and the wholesale NGA Bitstream product (and End-to-end Next Generation Bitstream where it is provided); and
- A margin squeeze test to assess the appropriate economic space between the wholesale products in the WBA market and from the WBA market to the equivalent wholesale access product in the WPNIA market.

10.223 These are discussed in turn below.

Retail margin squeeze test:

10.224 In ComReg Document No 12/27 ComReg set out that the proposed retail margin squeeze test in the WBA market requires that there is sufficient economic space between the price of the regulated wholesale NGA Bitstream product (and End-to-end Next Generation Bitstream where it is provided) and the prices across the portfolio of relevant retail standalone broadband products to allow the necessary additional costs of providing the downstream product to be covered. The retail margin squeeze test would apply within all geographic areas where NGA networks are deployed (FTTC/FTTH) – NGA Footprint Areas.

10.225 In addition to the retail margin squeeze test, we considered that a cross-check to the relevant regulated prices (and associated model) used in the margin squeeze model should be carried out to ensure that prices are not below (or substantially above) the relevant costs. This cross-check is important to assess the approximate cost stack at a wholesale level - either based on existing current generation prices and associated costs models or as these cost models is amended by ComReg from time to time. This should ensure consistency across regulated access products and also with the NGA Recommendation.

10.226 ComReg explained that the retail margin squeeze test in this context would differ somewhat to the retail margin squeeze test currently in place under ComReg Decision D01/06. In this context the retail margin squeeze test would assess the economic space between the retail price or prices (in the case of a portfolio of products) for a standalone retail broadband product(s); and the price for Next Generation Bitstream (and End-to-End Next Generation Bitstream where it is provided).

Notifications and compliance with the retail margin squeeze test:

10.227 ComReg proposed that Eircom would provide a statement of compliance for NGA standalone broadband retail prices where they are likely to have a *material* impact on the market place. In ComReg Document No 12/27, we considered that 'material' would mean a new or existing retail broadband product launched in the market place and which would represent or is likely to represent the lower of either (i) 20% of Eircom's Next Generation retail customer base, in terms of subscriber numbers or (ii) 20,000 new retail subscribers for Eircom's next generation services.

10.228 In addition, we considered that the following additional obligations should apply to Eircom:

- 1) Eircom would be required to pre-notify ComReg of all NGA retail prices for new and existing retail standalone broadband NGA products 15 working days before the new (or revised) prices are expected to come into effect by email communication.
- 2) Within one year from the effective date of this Decision and annually thereafter, Eircom would be required to provide a statement of compliance to ComReg demonstrating its compliance with the retail margin squeeze test in the NGA Margin Squeeze Model. Please refer to ComReg Document No 12/27 for further details regarding the information required and also the subsequent review by ComReg.

10.229 We also proposed to continue to monitor Eircom's compliance with the NGA Margin Squeeze Model on an ongoing basis throughout the price control period.

Bundles:

10.230 For retail bundles, ComReg proposed that Eircom would be required to ensure consistency with the principles determined by this consultation (and any final decision) regarding next generation services and by any potential decision regarding ComReg Document No 11/72 for current generation services. In line with the principles to be determined by any potential decision regarding the bundles consultation, Eircom would be obliged to ensure it adheres to its notification procedures for the prior launch of any bundles that include Narrowband Access. This would be relevant in the context of the margin squeeze principles set out in the document and any subsequent decision.

10.231 In ComReg Document No 12/27 ComReg asked the following questions:

Q. 25 Do you agree with ComReg's preliminary views, as set out above, regarding the retail margin squeeze test as well as the pre-notification and statement of compliance obligations in the context of NGA in the WBA market? Please provide reasons for your response.

Q. 26 Do you agree with ComReg's preliminary views that 'materiality' should mean the lower of either (i) 20% of Eircom's Next Generation retail customer base, in terms of subscriber numbers or (ii) 20,000 new retail subscribers for Eircom's next generation services? Please provide reasons for your response.

10.8.2 Views of Respondents:

10.232 The following gives a high level overview of the responses in relation to the Retail Margin Squeeze test as well as the pre-notification and statement of compliance obligations in the context of NGA in the WBA market:

- Eight respondents (Eircom, Vodafone, Magnet, E-net, BT, ALTO, Telefonica and Digiweb) broadly agree but the majority noted a number of concerns, which are discussed below.
- One respondent (Imagine) disagrees.
- Two respondents (UPC and ECTA) did not provide any specific views on this question.

10.233 **Digiweb** agrees with ComReg stating that:

"As for the extension of the Margin Squeeze Tests from a wholesale-retail to wholesale-wholesale perspective, we welcome this initiative and agree this should incentivise further alternative operators to move into the investment ladder".

10.234 **Eircom** raised a number of key issues as follows:

- (1) It fundamentally disagrees with the proposal that the first stage of the margin squeeze test should be between the retail price and the end to end Bitstream price. Eircom believes that there is no basis for testing unregulated retail end-to-end prices against unregulated wholesale end-to-end products. Eircom also refers to ComReg Decision D01/06 where it believes that, that decision did not impose any obligations on it in terms of end-to-end/white label broadband pricing.
- (2) A more justifiable pricing approach would be to apply a single margin squeeze test between the retail price and VUA product.
- (3) Eircom believes that ComReg's preference for infrastructure based competition (10.158) on the basis that service based competition is dependent on technological choices made by the incumbent ignores the significant technology associated with so-called 'active' services, including those enabling VUA customers to configure their wholesale or retail services to suit their own customers' particular requirements.

- (4) Eircom stated that ComReg's argument that entrants progressively ascend the ladder of investment is no longer relevant and it referred to suggestions from DR Martin Cave where he conceded that he could imagine circumstances where because of existence of infrastructure competitors and/or because of new technologies, it would not be necessary to impose regulation up and down the line.

10.235 **BT** and **ALTO** also raised the following key issues:

- (1) Concerned at the ability of Eircom to influence the outcome of the margin squeeze tests to their advantage when operators don't even know the tests are being conducted and they consider the industry should be asked for input when this will impact the market.
- (2) ComReg should consult with industry on the agreement to the end of any interim period (i.e. period during which the legacy products should not be squeezed by NGA services).
- (3) In terms of notifications, as a safeguard ComReg should include a clause in the remedy that allows for the notification process to be triggered at ComReg's request.

10.236 **Vodafone** raise a number of key issues as follows:

- (1) An ex-ante margin squeeze test coupled with cost oriented price controls are workable for NGA provided that any such margin squeeze test fully reflects their position as set out in retail bundles.
- (2) The use of a 'Compliant spot price' for NGA broadband product or portfolio of NGA nominally available to the market outside a retail bundle coupled with the use of bundling can create a price point for the vertically integrated operator that other operators cannot compete with if they are also to create any degree of margin.
- (3) Testing a portfolio of products is inappropriate and will give rise to abuse.
- (4) The use and definition of promotional activity to create artificial permanent retail price points need to be controlled - no promotion should last any longer than 3 months.
- (5) Vodafone do not agree that a compliance statement is not needed in certain circumstances - this could be reviewed once the NGA rollout is complete and for an initial period of 3 years a compliance statement should be required in all instances.

10.237 Vodafone also raise concerns about bulk migrations where they believe that if bulk migrations take place from existing WLR + Bitstream services to NGA then the anticipated customer lifetime for the legacy product set will be shortened and any unrecovered costs must be factored into the assessment of the costs for the NGA product or some similar mechanism.

10.238 **Magnet** raised the following points:

(1) The compliance report should not just relate to standalone products but must also be furnished in relation to all NGA products including bundles.

(2) What is seen as 'material' should be reduced to 5,000 or 5% of customer base as otherwise there is potential to foreclose market segments such as small to medium business etc.

(3) The requirement for an annual statement of compliance is too long and thus, every 6 months such a statement should be given or maybe even 3 months from the date the product is launched.

10.239 With regard to ComReg's question on 'materiality' (i.e. the lower of 20% or 20k of Eircom's Retail customer base) regarding the provision of a statement of compliance to ComReg for NGA retail services, the following is a summary of the respondents views:

- Two respondents (Eircom and Digiweb) agree with ComReg;
- Seven respondents (BT, ALTO, Vodafone, Telefonica, Magnet, E-net, Imagine) disagree;
- Two respondents (UPC and ECTA) gave no specific views.

10.240 **Eircom** requested clarification around a number of points, including whether the materiality related to bundles. **BT** and **ALTO** considers that the proposal is more suited to a mature market. **E-net** is of the view that this would allow Eircom to engage in anti-competitive pricing in order to gain foothold of the NGA Retail market.

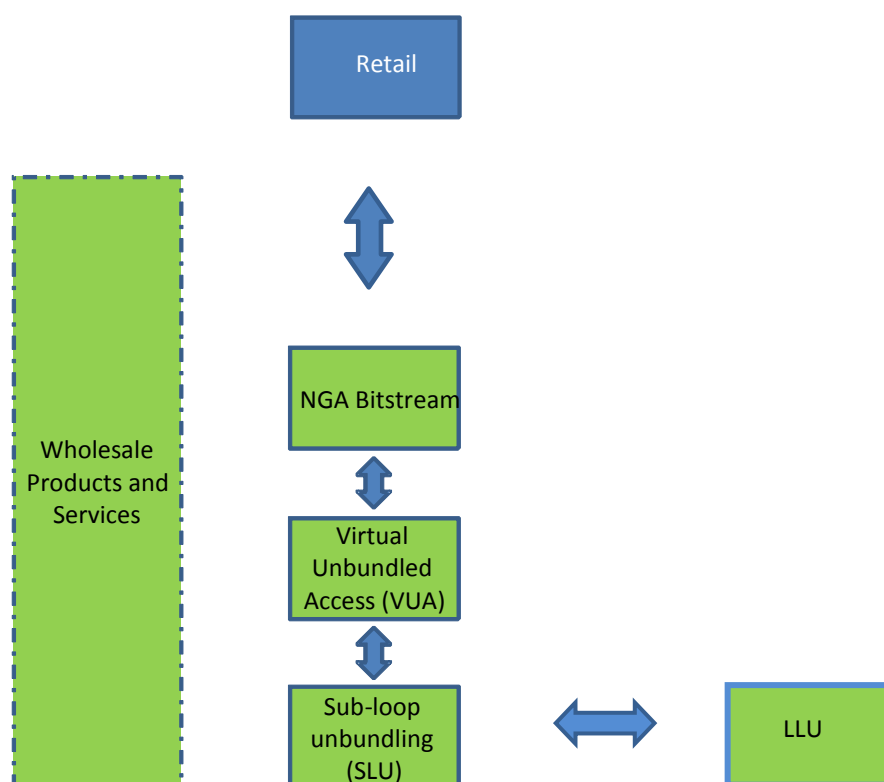
10.241 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.8.3 ComReg’s Assessment of Responses and Final Position:

10.242 Having considered the views of respondents, ComReg has decided that a Retail Margin Squeeze test is appropriate in the context of NGA services in the WBA market. The reasons for a margin squeeze approach were discussed in detail in subsection 10.4.3 above.

10.243 The retail margin squeeze test is illustrated graphically below.

Figure 10.1: Retail Margin Squeeze test



10.244 The main obligations on Eircom are discussed below under “*Retail Margin Squeeze test*” and “*Notification obligations and Statement of Compliance*” and are relatively consistent with the obligations already in place for current generation services under ComReg Decision D01/06.

Retail Margin Squeeze test:

10.245 The Retail Margin Squeeze test should ensure that Eircom does not create a retail margin squeeze between:

- (i) the retail price of a single retail product which is supported by a single wholesale offering or, the weighted average (by number of subscribers) of the retail products' individual prices where more than one retail product is supported by a single offering, and
- (ii) the price for Next Generation Bitstream.

10.246 The Retail Margin Squeeze test is applied against Next Generation (NGA) Bitstream and not End-to-end next generation Bitstream. End-to-end next generation Bitstream will form part of the wholesale margin squeeze assessment as described below, regarding the two components of national backhaul and IP connectivity only. ComReg believes that this slight change provides greater regulatory certainty because it does not directly regulate the provision of the End-to-end next generation product and it has not mandated access to such a product.

10.247 The Retail Margin Squeeze test in this Decision relates only to standalone NGA retail Broadband either sold on its own or sold as part of a bundle with other services but not in a bundle with retail fixed narrowband access / RFNA. A NGA broadband retail product sold with RFNA is subject to the obligation not to unreasonably bundle and therefore it is subject to a separate regime on bundles. Please refer to subsection 10.12 below for further discussion on bundles.

10.248 The Retail Margin Squeeze test is intended to ensure, where practicable, the economic replicability of a given bundle of services by competitors, when such competitors are relying on key access products from the SMP provider in order to provide the relevant bundle to the underlying fixed location, i.e. the replicability, at the specific fixed location, of a bundle which is sold / offered by Eircom (including to those who act as intermediaries). The appropriate retail revenue to take into account in the Retail Margin Squeeze test for the NGA bundle is the Eircom Retail headline monthly published price (for that bundle including any discount and / or promotions) together with any out of bundle revenue or associated revenues directly attributable to the bundle sold / offered at that fixed location.

10.249 The portfolio approach will be used to assess the Retail Margin Squeeze test, whereby Eircom must ensure that the average of Eircom's retail revenues for its Retail NGA Broadband products recovers the average total retail and wholesale costs (or ATC) in the margin squeeze test. This is discussed as part of the margin squeeze principles below at subsection 10.11.

Notification obligations and Statement of Compliance:

- 10.250 Eircom will be required to notify ComReg of all NGA retail prices for new and amendments to existing retail NGA products at least 5 working days before the new (or revised) prices are expected to come into effect, by email communication. If the new or amended retail price being notified gives rise to a wholesale adjustment then the notification period to ComReg of 3 months (or 4 months in the case of a wholesale price increase) applies. This is discussed in more detail as part of the wholesale margin squeeze tests below at subsection 10.9.3.
- 10.251 It is important to note that notification by Eircom to ComReg of a statement of compliance does not mean that the broadband product has been “approved” by ComReg. ComReg considers that assessing products for compliance with the price control obligations is an ongoing process and ComReg reserves it right to intervene at any stage (even post launch of a product / service) where it believes that Eircom may not be in compliance with its obligations.
- 10.252 The change in the notification period from 15 working days as proposed in ComReg Document No 12/27 to 5 working days is to ensure that timelines are responsive to market conditions and the change is also to ensure consistency with notification timelines for Bundles, which was previously notified to the European Commission in Case IE/2012/1381 and Case IE/2012/1382. A Decision on the regulatory framework for monitoring compliance with retail bundles that include RFNA will be published shortly. While the 5 day notice is a shorter period of time, it is expected that prior to the initial launch Eircom Retail will allow significant time for a ComReg review, otherwise they may run the risk of ComReg insisting on a delay to the NGA launch. The notification period for current generation services under ComReg Decision D01/06 has also been amended from 15 working days to 5 working days to ensure consistency between the bundles regime, next generation and current generation services.

- 10.253 At the point of notification of the retail price (as set out above) Eircom will provide ComReg with a statement of compliance for all NGA broadband retail product(s) (new prices and changes to existing prices) except where it is likely that the NGA retail broadband product being launched will not be purchased by any more than a total of 5,000 Eircom Retail customers. However, once the customer base rises to 5,000 or above, then Eircom must notify ComReg and provide a statement of compliance for the NGA broadband retail product. ComReg considers that the 5,000 threshold will allow Eircom some flexibility to test the demand for the NGA broadband retail products but Eircom must continue to monitor retail subscriber number for NGA broadband services on a monthly basis. Once any standalone NGA broadband retail offering reaches the 5,000 retail subscribers, then ComReg must be notified and a statement of compliance must be provided. It should be noted that ongoing changes to a NGA retail product within a bundle does not qualify for this.
- 10.254 The 5,000 subscriber threshold is a change from that proposed in the consultation. In ComReg Document No 12/27, ComReg proposed that the threshold for provision of a statement of compliance for retail prices should be the lower of 20k / 20% of Eircom's NGA retail customer base. However, we have reconsidered our position on this given that it is important that the main retail product offerings about to be launched by Eircom in the market are not anti-competitive and comply with the price control obligations. This should also ensure that where any issues arise, that these are addressed before the retail product is launched rather than subsequently having to withdraw a retail offer from the market place. For the avoidance of doubt, small changes to existing products would not qualify for this exemption.
- 10.255 Where NGA broadband retail products are sold in a bundle with other services (e.g. TV and Mobile), then Eircom should notify ComReg 5 working days before the retail prices are expected to come into effect, by email notification. A statement of compliance will be required for the NGA retail broadband component of a bundle only, however Eircom must ensure that the overall bundle (including NGA retail broadband and another service(s)) does not create any issues relating to cross subsidisation or leverage which would be considered to be anti-competitive and that the standalone NGA broadband retail product does not create a margin squeeze. In any event the unregulated services in the bundle will be subject to competition law assessment in the event of any disputes / complaints raised.
- 10.256 Similar to the information provided as part of the statement of compliance for current generation services in ComReg Decision D01/06, the statement of compliance should include the following:

- (i) A full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control and the Retail Margin Squeeze test based on the NGA Margin Squeeze Model.
- (ii) All relevant supporting documentation for the purpose of demonstrating compliance with the price control and the Retail Margin Squeeze test based on the NGA Margin Squeeze Model.
- (iii) Demonstration of how any amendments to the price of the equivalent wholesale offering of an existing product are and will be in compliance with the price control and the wholesale margin squeeze test(s) based on the NGA Margin Squeeze Model.

10.257 Eircom must also ensure that any promotions and /or discounts and bundles relating to the new or existing NGA retail products, comply with the Retail Margin Squeeze test and the obligations relating to notification and the provision of a statement of compliance to ComReg.

10.258 Once ComReg receives the statement of compliance from Eircom, it will assess it within 5 working days. Following the review, ComReg has a number of options in terms of how it proceeds, including the following:

- (i) Provide Eircom with both (a) an appropriate written view, insofar as possible based on the information provided by Eircom at that point in time, in relation to the statement of compliance and (b) written confirmation that the making available or offering for sale of the new or existing retail product appears to be in line with the Retail Margin Squeeze test. However, any such written *prima facie* view provided by ComReg does not fetter ComReg's future discretion in relation to its statutory powers;
- (ii) Request any further information from Eircom and set a deadline by which such information shall be provided;
- (iii) Inform Eircom in writing that the amendment(s) would in ComReg's view, not be in compliance with the price control and the Retail Margin Squeeze test, giving reasons therefor and also inform Eircom that the amendment if made operative will or could result in the issuing of a notification of non-compliance;
- (iv) For the purpose of further requirements to be complied with by Eircom relating to the price control and the Retail Margin Squeeze test, issue a direction or directions to Eircom, to refrain from making operative the corresponding amendment(s) to the equivalent wholesale offering of any new or existing product; or
- (v) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the

Retail Margin Squeeze test, issue a direction or directions to Eircom, to refrain from making available or offering for sale, the equivalent wholesale offering of any new product.

10.259 ComReg considers that the options above should ensure that a product offering either about to be launched by Eircom or already launched in the market is not anti-competitive and is in compliance with the price control obligations imposed on Eircom. The options allow ComReg to take action where appropriate and to ensure that products launched by Eircom can be effectively replicated by other operators, where appropriate, and are beneficial to consumers and the marketplace.

10.260 In addition, to the above, Eircom will be required to provide a statement of compliance to ComReg one year from the date of launch of NGA retail products and subsequently on the request of ComReg. Eircom will be required to demonstrate, by means of the NGA Margin Squeeze Model, that it has complied with the Retail Margin Squeeze test. The information to be provided by Eircom as part of the statement of compliance will be the same as that set out above for new retail prices / changes to existing retail prices. This should include the NGA Margin Squeeze Model with the updated actual information (e.g. cost and volumes) and where available the forecasted data for volumes and costs going forward. After ComReg's review of the statement of compliance, it will proceed on the basis of the options already set out above regarding new retail prices / changes to existing retail prices.

10.261 With regard to the issues raised by Eircom above, ComReg has considered each point in turn below.

10.262 The Retail Margin Squeeze test in this decision is between the retail price of the NGA retail product and NGA Bitstream. The price of the End-to-end NG Bitstream product will be assessed against NGA Bitstream. This has been discussed further in subsection 10.17 below.

10.263 With regard to Eircom's point on the multiple margin squeeze tests, ComReg's view is that the margin squeeze approach ensures that wholesale operators are not squeezed out of the market over the period of transition to fibre and while a wider LLU footprint develops. For now the multiple layer margin squeeze approach is required to safeguard infrastructure based competition, until such time as LLU, VUA or other infrastructure based competition is entrenched and it is evident that services are being delivered on a truly non-discriminatory basis. In the meantime, entrants will require regulatory certainty if they are to invest. Where these conditions are met over the medium term ComReg may then be in a position to relax some of the layers of margin tests at the wholesale level. ComReg intends to keep this under review.

10.264 It may be desirable to simplify the price control and to focus on a margin squeeze test from retail NGA broadband to VUA in the future if certain conditions are met. Currently, we consider that it is important to protect wholesale competitors that are making significant network investments. Operators using simple resale inputs from Eircom are not in the best interests of the market. OAOs should be incentivised to build their own backhaul and broadband capability through either LLU or VUA to ensure that there continues to be the retail and wholesale constraint which is currently evolving.

10.265 ComReg has considered the issues raised by ALTO and BT below:

- (1) In relation to the point that Eircom may influence the margin squeeze tests to their advantage, ComReg would like to point out that Eircom must notify the NGA retail broadband offers to ComReg with a statement of compliance. Therefore, ComReg considers that the risk is low.
- (2) With regard to the point on the time period for linking copper and fibre, ComReg will continue to monitor market developments around demand for NGA and assess the take-up for NGA services once launched. The link should remain in place at least for the transitional period represented by the price control period. In any event, legacy services, such as LLU, will continue to be important for the foreseeable future in areas not covered by Eircom's NGA rollout.

(3) In relation to the points raised on monitoring compliance, ComReg has amended the Decision Instrument so that Eircom is obliged to provide a statement of compliance one year from the date of launch of the NGA retail services and thereafter on the request of ComReg. In addition, Eircom is also obliged to provide a statement of compliance (except where a retail offer is expected to be sold to less than 5,000 Eircom Retail customers) once it launches new NGA products and services or makes changes to existing NGA services, for both retail and wholesale products. ComReg considers that this is sufficient as a statement of compliance every quarter or every six months would be considered to be overly burdensome. In addition, it will take some time for NGA to be rolled out and for demand to emerge therefore there is likely to be little benefit of requiring a statement of compliance every few months as the market evolves.

10.266 The issues raised by Magnet have already been considered by ComReg above.

10.267 The point raised by Vodafone on ComReg's approach for pricing NGA services in the WBA market has already been considered by ComReg in relation to Question 18 at subsection 10.4.3 above.

10.268 With regard to Vodafone's concern about the risk of abuse by Eircom from using a portfolio approach, ComReg is of the view that if Eircom were to set the price(s) of one or more of the retail NGA products at a level contrary to the margin squeeze test, then it would risk a compliance case and / or a reduction to its wholesale prices at a later stage given that ComReg intends to monitor the NGA margin squeeze tests regularly. In addition, as each retail service is notified to ComReg prior to launch, ComReg will be in a position to assess each product price for consistency with the principles of the NGA margin squeeze tests. Where ComReg has significant concerns it will be in a position to intervene at any time.

10.269 Vodafone also states that, with bundling, Eircom will be able to manipulate the spot price. However, OAOs such as Vodafone should also be in a position to offer the same bundle as Eircom to achieve the same average prices.

10.270 With regard to Vodafone's point on promotions, promotions must also comply with the NGA margin squeeze tests and this has been reflected in the Decision Instrument in Annex 2 of this document.

10.271 Vodafone also raise an issue with unrecovered costs from migration charges already incurred but it is not clear what types of costs Vodafone are referring to. ComReg considers that NGA should not have to recover the costs of legacy assets, as this would not respect the principle of technological neutrality. Asset lives for legacy services are set with the knowledge that the technology of the asset may be replaced by another technology at some point in the future. Therefore, given the lower asset lives set for electronic equipment, this ensures that costs are fully recovered.

10.272 Please note that all ancillary charges for current and next generation products and services in the WBA market are subject to a cost orientation obligation. Please refer to subsection 10.21 below for the details.

10.8.4 ComReg's Decision:

- 1. With regard to Next Generation WBA, Eircom shall have an obligation not to cause a Retail Margin Squeeze for the purposes of establishing a wholesale price for products, promotions, discounts and bundles in the market for WBA.**
- 2. Notwithstanding the above, Eircom shall ensure that it does not create a Retail Margin Squeeze between:- (i) the retail price of a single retail product which is supported by a single wholesale offering or, the weighted average (by number of subscribers) of the retail products' individual prices where more than one retail product is supported by a single offering, and (ii) the price for Next Generation Bitstream. The retail margin squeeze test is based on the NGA Margin Squeeze Model.**
- 3. Eircom shall notify ComReg, by email, of all retail prices for new retail products and for retail price amendments to existing retail products no later than 5 working days prior to the date that the new or revised price is to become operative. For the avoidance of doubt the timelines relating to wholesale prices shall not apply in this respect, where no wholesale price amendment is required.**
- 4. For the purposes of new Retail Products and for amendments to existing Retail Products, Eircom shall furnish to ComReg, at the same time as it notified ComReg of the retail price, a detailed written statement of compliance demonstrating Eircom's compliance and proposed compliance with the price control and the Retail Margin Squeeze test except where the NGA retail product will not be purchased by any more than a cumulative total of 5,000 Eircom Retail**

End Users. The statement of compliance shall include the following:

- (i) A full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control, which is based on the Retail Margin Squeeze test in the NGA Margin Squeeze Model.**
- (ii) All relevant supporting documentation for the purpose of demonstrating compliance with the price control, which is based on the Retail Margin Squeeze test in the NGA Margin Squeeze Model.**
- (iii) Demonstration of how any amendments to the price of the equivalent wholesale offering of an existing product are and will be in compliance with the price control based on the NGA Margin Squeeze Model.**

5. Upon receipt of the statement of compliance referred to above, ComReg shall review the statement of compliance. Within the 5 working day period referred to above, ComReg may do one or more of the following things:

- (i) Provide Eircom with both (a) an appropriate written view, insofar as possible based on the information provided by Eircom at that point in time, in relation to the statement of compliance and (b) written confirmation that the making available or offering for sale of the new or existing retail product appears to be in compliance with the Retail Margin Squeeze test. However, any such written *prima facie* view provided by ComReg does not fetter ComReg's future discretion in relation to its statutory powers;**
- (ii) Request any further information from Eircom and set a deadline by which such information shall be provided. Eircom shall provide the requested information by the deadline and in such format and to the level of detail as stipulated by ComReg. Upon receipt of the requested information from Eircom and within the 5 working day period, ComReg may do one or more of the things referred to in sub-sections (i), (iii), (iv) or (v) of this section;**
- (iii) Inform Eircom in writing that the amendment(s) would in ComReg's view, not be in compliance with the price control and the Retail Margin Squeeze test, giving reasons therefor and also inform Eircom that the amendment if made operative will or could result in the issuing of a notification of non-compliance;**
- (iv) For the purpose of further requirements to be complied with by Eircom relating to the price control and the Retail Margin Squeeze**

test, issue a direction or directions to Eircom, to refrain from making operative the corresponding amendment(s) to the equivalent wholesale offering of any new or existing product; or

- (v) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the Retail Margin Squeeze test, issue a direction or directions to Eircom, to refrain from making available or offering for sale, the equivalent wholesale offering of any new product.**

6. For the purposes of Promotions and Discounts and Bundles, the obligations above in relation to the Retail Margin Squeeze test, the notifications and the statement of compliance will apply to new and existing Retail Products.

7. One year from the date of launch of the NGA retail products and thereafter where formally requested by ComReg, Eircom shall submit to ComReg for review a detailed written statement of compliance demonstrating Eircom's compliance with the Retail Margin Squeeze test based on the NGA Margin Squeeze Model. The obligations already set out above regarding the details to be provided with the statement of compliance and ComReg's review thereof will also be relevant to this review.

10.9 Wholesale Margin Squeeze tests

10.9.1 ComReg's Preliminary Views from Consultation Document:

10.273 In ComReg Document No 12/27 we set out that the economic space between the various wholesale products in the WBA market must be sufficient so that OAOs have the incentives to invest in their own infrastructure and should ensure that any investments made are not stranded, nor retail competition distorted to the detriment of competing infrastructure-based operators, as a result of a margin/price squeeze by Eircom. Please refer to subsection 11.5.5 of ComReg Document No 12/27 for further details.

10.274 We considered that where a margin squeeze risk exists, Eircom would be required to amend any anomaly that this may create at a wholesale level so as to avoid a margin squeeze at the wholesale and possibly retail levels. Please refer to Figure 8 in ComReg Document No 12/27 for an illustration of the risk of margin squeeze between next generation and current generation broadband products.

10.275 ComReg was of the preliminary view that it is essential that OAOs know what prices are available at each investment choice in the value chain, in order to make investment decisions over the long term. The proposals would strive to give this certainty by outlining what we believe is the appropriate economic space at each 'rung' on the ladder of investment which should send the appropriate signals to the market to make business decisions.

10.276 In ComReg Document No 12/27 ComReg indicated that the main wholesale NGA services on offer would be NGA Bitstream and VUA.

Notifications and compliance with the wholesale margin squeeze tests:

10.277 In ComReg Document No 12/27 ComReg proposed that Eircom would be obliged to comply with a number of notification and compliance requirements in relation to the wholesale margin squeeze tests. These proposed requirements would be as follows:

- 1) Eircom would pre-notify ComReg of all new wholesale prices and changes to existing wholesale prices for next generation products and services three months (with two months notice to the Industry) before the prices are expected to come into effect. This is consistent with existing transparency obligations. We considered that email communication would be a sufficient form of pre-notification in this regard.

- 2) For all wholesale price notifications, Eircom would be required to provide ComReg with a detailed written statement of compliance with the wholesale margin squeeze tests in the NGA Margin Squeeze Model, including all relevant supporting information to demonstrate its compliance.
- 3) Within one year from the effective date of this Decision and annually thereafter, Eircom would be required to provide a statement of compliance to ComReg demonstrating its compliance with the wholesale squeeze test in the NGA Margin Squeeze Model, including detailed supporting information. Please refer to subsection 11.5.5 of ComReg Document No 12/27 for further details.

10.278 We also proposed to continue to monitor Eircom's compliance with the NGA Margin Squeeze Model on an ongoing basis throughout the price control period and in the case where Eircom is non-compliant with the margin squeeze test(s) in the NGA Margin Squeeze Model, changes to the relevant wholesale prices may be required.

10.279 In ComReg Document No 12/27, ComReg asked the following question:

Q. 27 Do you agree with ComReg's preliminary views, as set out above, regarding the wholesale margin squeeze tests as well as the pre-notification and statement of compliance obligations in the context of NGA in the WBA market? Please provide reasons for your response.

10.9.2 Views of Respondents:

10.280 The following gives a high level overview of the responses regarding the wholesale margin squeeze tests as well as the pre-notification and statement of compliance obligations for NGA in the WBA Market:

- Seven respondents (BT, ALTO, Digiweb, UPC, Magnet, E-net and Telefonica) generally agree;
- One respondent (Eircom) raises concerns, as set out below;
- One respondent (Vodafone) requests a 6 month pre-notification period for price changes;
- One respondent (Imagine) reiterates its view that a cost-plus approach should be used instead of a margin squeeze approach
- One respondent (ECTA) provided no specific views.

10.281 **BT** agrees stating that:

“Eircom have the both the ability and the motive to foreclose wholesale competition and we believe they will actively pressure competitors in this market. A margin squeeze test is required between regulated access products and end-to-end “white label” wholesale products otherwise the wholesale market will be damaged by squeezing out wholesale competitors.”

10.282 **Vodafone** is of the view that the pre-notification period should be 6 months to allow sufficient time for industry to develop their own product and pricing strategies.

10.283 While **Magnet** agrees, it is of the view that the statement of compliance obligation needs to have a shorter time span such as every quarter or every six months to ensure that no market distortions take place.

10.284 **Digiweb** also agrees with ComReg but states that ComReg should set up a procedure to allow OAOs the ability to report a potential case of margin squeeze.

10.285 **Eircom** has two major concerns with ComReg's proposal around pre-notification and compliance statements as follows:

(1) As a transitional matter, it is possible that initial NGA offerings could be launched before the decision is in force, but if so, a compliance statement will be provided within one year of the date of the decision. However, if NGA offerings were clearly signalled and published, but not actually launched on the date of the direction, and the direction had not been complied with, then a significant delay may ensue. This anomaly could be provided for with a transitional arrangement, delaying full effect of the actual decision for a period not less than the notice period.

(2) It is possible that retail and/or wholesale offerings launched based on assumptions will fail aspects of the Margin Squeeze test, perhaps requiring some retail prices to be increased and some wholesale prices to be reduced. Preparation of the compliance documentation for the required changes may be complex and time consuming, and long lead times for the changes may be unhelpful.

10.286 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

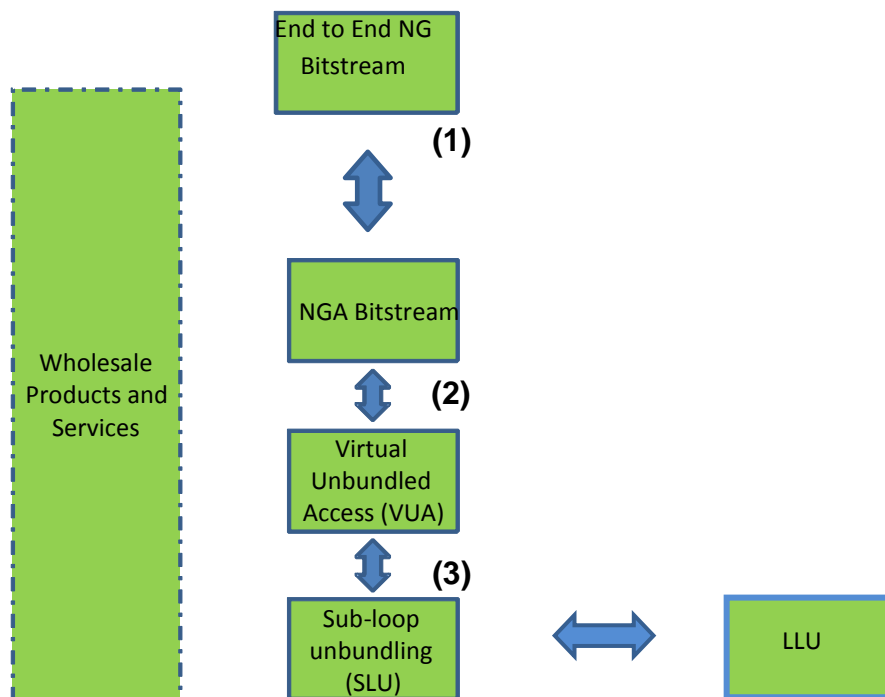
10.9.3 ComReg’s Assessment of Responses and Final Position:

10.287 Having considered the views of respondents, ComReg has decided that the wholesale margin squeeze tests should be applied to the various wholesale products along the value chain. This is discussed under the heading of “*Wholesale Margin Squeeze tests*” and “*Notification obligations and Statement of Compliance*”.

Wholesale Margin Squeeze tests:

10.288 The wholesale margin squeeze tests are illustrated graphically below.

Figure 10.2: Wholesale Margin Squeeze tests



10.289 The wholesale margin squeeze tests are applied between the various products along the value chain to ensure that operators are not squeezed particularly when using LLU and VUA. The details of the specific wholesale margin squeeze tests are discussed later in this chapter.

Notification obligations and Statement of Compliance:

- 10.290 The notification period for ComReg and industry are essential to the proper functioning of the wholesale market and are necessary in order to protect competition. ComReg believes that for the purpose of the initial launch of NGA, a six month advance publication period to industry is required. Given that publication of product and pricing information took place on the 20 November 2012, a launch of retail products cannot occur before 20 May 2013. This has been reflected as part of the transparency obligations in the Decision Instrument.
- 10.291 Eircom will be obliged to notify ComReg, by email, of wholesale prices for new next generation WBA products, services and facilities or changes to existing next generation WBA products, services and facilities three months before the prices are expected to come into effect, except that in the unlikely event of wholesale price increases, Eircom should increase the pre-notification period to four months notice to ComReg with three months notice to the industry. The difference between a new wholesale product and a change to an existing wholesale product is set out in Chapter 8. ComReg considers that these timelines should be sufficient to consider the likely business case for new products. The additional months notice for a price increase should allow operators sufficient time to update their billing systems and to amend any of its retail prices and marketing campaigns. However, the periods of three (3) months and four (4) months notification to ComReg may be varied with the agreement of ComReg or at ComReg's discretion.
- 10.292 Similar to the point above regarding notification of retail products, it is important to note that notification by Eircom of a statement of compliance to ComReg regarding a wholesale product(s) does not mean that the product has been "approved" by ComReg. ComReg considers that assessing products for compliance with the price control obligations is an ongoing process and ComReg reserves it right to intervene at any stage (even post launch of a product / service) where it believes that Eircom may not be in compliance with its obligations.
- 10.293 As part of the notification to ComReg, Eircom are required to provide a statement of compliance which demonstrates that the new wholesale price or change to existing wholesale price is in line with the wholesale margin squeeze tests in the NGA Margin Squeeze Model.
- 10.294 The supporting information to be provided by Eircom in terms of demonstrating its compliance with the wholesale margin squeeze tests is consistent with what has been provided by Eircom over the past number of years under ComReg Decision D01/06 for WBA legacy services. The statement of compliance should include, but not limited to the following:

- (i) A full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control and the wholesale margin squeeze tests which are based on the NGA Margin Squeeze Model.
- (ii) All relevant supporting documentation for the purpose of demonstrating compliance with the price control and the wholesale margin squeeze tests which are based on the NGA Margin Squeeze Model.
- (iii) Demonstration of how any amendments to the price of the equivalent wholesale offering of a new or existing product are and will be in compliance with the price control and the wholesale margin squeeze tests which are based on the NGA Margin Squeeze Model.

10.295 Given that pre-notification obligations only relate to a limited number of wholesale NGA products i.e. VUA and NGA Bitstream, rather than a range of services, ComReg believes that the requirements should not be overly burdensome.

10.296 Once a statement of compliance is submitted by Eircom in terms of its NGA wholesale offers, the options available to ComReg in terms of how it can proceed are consistent with the approach for the NGA retail offers and in line with requirements over the past number of years for legacy Bitstream products under ComReg Decision D01/06. This regime has not given rise to any issues to date and therefore it seems reasonable to use a similar approach in the context of NGA in this decision document. In summary, ComReg has a number of options in terms of how it proceeds following a compliance review, including the following:

- Provide Eircom with both (a) an appropriate written view, insofar as possible based on the information provided by Eircom at that time, in relation to the statement of compliance provided; and (b) written confirmation that the making available or offering for sale of the new or existing product appears to be in compliance with the wholesale margin squeeze tests. However, any such written *prima facie* view provided by ComReg does not fetter ComReg's future discretion in relation to its statutory powers of enforcement.
- Inform Eircom that further analysis is required by ComReg and perhaps requesting further information from Eircom
- Inform Eircom that the new product(s) would not be in compliance with its price control and the wholesale margin squeeze tests

- Issue a direction(s) requiring Eircom to make specified corresponding adjustments to the price of the equivalent wholesale product
- Issue a direction(s) to Eircom to refrain from making available or offering for sale, the equivalent wholesale offer of any new product.

10.297 Any promotions, bundles and discounts offered by Eircom at a wholesale level are also subject to the wholesale margin squeeze tests and therefore subject to the requirements in relation to notifications and provision of a statement of compliance to ComReg.

10.298 In addition to the above, a review will take place one year from the date of launch of Eircom's next generation WBA (wholesale) products, rather than one year from the date of ComReg's decision as initially proposed in the consultation. This should ensure that there is sufficient time for demand to emerge for NGA services so that the compliance review is more meaningful. This review will assess whether Eircom is complying with the wholesale margin squeeze tests per the NGA Margin Squeeze Model. The statement of compliance should demonstrate that Eircom is complying with the NGA Margin Squeeze Model. The information to be provided by Eircom as part of the statement of compliance will be the same as that set out above for new wholesale prices / changes to existing wholesale prices and should include an update to the NGA Margin Squeeze Model for actual information but also for forecasted information for future periods, where available. After ComReg's review of the statement of compliance, it will proceed on the basis of the options already set out above regarding new wholesale prices / changes to existing wholesale prices.

10.299 In response to Digiweb's point about procedures for reporting potential margin squeeze issues, ComReg would like to clarify that there is a process in place regarding disputes / complaints brought to ComReg. Please refer to ComReg Document No 10/18R, ComReg Decision No: D03/10⁹⁹ on Dispute Resolution Procedures.

⁹⁹ Response to Consultation and Decision Notice: Dispute Resolution Procedures - Framework Regulations (Response to Consultation Document No. 09/85) (Decision No: D03/10, Document No: 10/18 R, Date: 29 March 2010).

- 10.300 In relation to Eircom's concerns about timing above, ComReg has taken account of these concerns and has now revised the timelines for submission of a statement of compliance. Given that ComReg's Decision on NGA will be in place before Eircom launch its wholesale / retail services, ComReg has now decided that a statement of compliance is required one year from the date of launch of retail / wholesale services and not from the date of the ComReg Decision, to allow sufficient time for demand for NGA services to evolve before a compliance review takes place.
- 10.301 In the event that an access seeker submits a reasonable request to Eircom for the provision of a NGA WBA product for which Eircom does not have an equivalent retail product, it is important that some guidelines are in place to determine an appropriate wholesale price for that service. ComReg considers that the 'retail minus' or 'retail margin squeeze' price control would not be appropriate in this case given that there is no Eircom Retail offer or retail price point. Therefore, ComReg considers that in this case the wholesale price should be set on a 'fair and reasonable' basis.
- 10.302 In setting a fair and reasonable price for a NGA WBA product (where there is no retail offer) Eircom should take account of the price of comparable wholesale product(s) while also taking account of any additional incremental costs associated with the specific NGA WBA product at hand.
- 10.303 Similar to the approach for civil engineering access, Eircom should provide a fair and reasonable price to the access seeker within three months. An initial offer price submitted to the access seeker within one month of an access seeker's request (i.e. two months before agreement should be reached). The fair and reasonable price proposed by Eircom should be notified to ComReg.

10.9.4 ComReg's Decision:

1. Eircom shall notify ComReg, by email, of all wholesale prices for new Next Generation WBA products, services and facilities and for wholesale price changes to existing Next Generation WBA products, services and facilities no later than three months before the new price or the revised price is expected to come into effect., except that for a wholesale price increase to an existing Next Generation WBA product, service or facility, Eircom shall pre-notify ComReg no later than four months before the revised price(s) are expected to come into effect. The periods of three (3) months and four (4) months may be varied with the agreement of ComReg or at ComReg's discretion.
2. For all new wholesale prices or changes to existing wholesale prices associated with Next Generation WBA products and services, Eircom shall furnish to ComReg, at the same time as it notifies ComReg of the wholesale price, a written statement of compliance demonstrating Eircom's compliance with the wholesale margin squeeze tests. The statement of compliance shall include the following:
 - (i) A full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control and the wholesale margin squeeze tests, which is based on the NGA Margin Squeeze Model.
 - (ii) All relevant supporting documentation for the purpose of demonstrating compliance with the price control and the wholesale margin squeeze tests which are based on the NGA Margin Squeeze Model.
 - (iii) Demonstration of how any adjustments to the price of the equivalent wholesale offering of a new or existing product are and will be in compliance with the price control and the wholesale margin squeeze tests which are based on the NGA Margin Squeeze Model.
3. Upon receipt of the statement of compliance, ComReg shall review the statement of compliance. Within one month ComReg may do one or more of the following things:
 - (i) Provide Eircom with both (a) an appropriate written view, insofar as possible based on the information provided by Eircom at that time, in relation to the statement of compliance and (b) written confirmation that the making available or offering for sale of the new or existing product appears to be in compliance with its wholesale margin squeeze tests. However, any such written

***prima facie* view provided by ComReg does not fetter ComReg's future discretion in relation to its statutory powers of enforcement;**

- (ii) Request any further information from Eircom and set a deadline by which such information shall be provided. Eircom shall provide the requested information by the deadline and in such format and to the level of detail as stipulated by ComReg. Upon receipt of the requested information from Eircom ComReg may do one or more of the things referred in (i), (iii), (iv) or (v);**
 - (iii) Inform Eircom in writing that the amendment(s) to either the new or existing prices would in ComReg's view, not be in compliance with the price control and the wholesale margin squeeze tests, giving reasons and also inform Eircom that the amendment to the existing product or the new product if made operative or available will or could result in the issuing of a notification of non-compliance;**
 - (iv) For the purpose of further requirements to be complied with by Eircom relating to the price control and the wholesale margin squeeze tests, issue a direction or directions to Eircom, to refrain from making operative the corresponding amendment(s) to the equivalent wholesale offering of any new or existing product; or**
 - (v) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the wholesale margin squeeze tests, issue a direction or directions to Eircom, to refrain from making available or offering for sale, the equivalent wholesale offering of any new product.**
- 4. One year from the date of launch of NGA WBA products and thereafter where formally requested by ComReg, Eircom shall submit to ComReg a detailed written statement of compliance demonstrating Eircom's compliance with the wholesale margin squeeze tests. The obligations already set out above regarding the details to be provided with the statement of compliance and ComReg's review thereof will also be relevant to this review.**
- 5. For the purposes of Promotions and Discounts and Bundles, the obligations above relating to the wholesale margin squeeze tests, notifications and the provision of a statement of compliance will apply to new and existing Next Generation WBA products.**
- 6. In the event that Eircom provides a Next Generation WBA product for which Eircom does not have an equivalent retail product, Eircom shall ensure that the charges are fair and reasonable in accordance with**

paragraph 10.302 of this Decision.

10.10 Specific Margin Squeeze tests

10.10.1 ComReg's Preliminary Views from Consultation Document:

10.304 In ComReg Document No 12/27 ComReg proposed the following wholesale margin squeeze tests in the WBA market and from the WBA market to the equivalent wholesale access product in the WPNIA market:

- Wholesale Margin Squeeze test between End-to-end Next Generation Bitstream and NGA Bitstream;
- Wholesale Margin Squeeze test between NGA Bitstream and VUA;
- Wholesale Margin Squeeze test between VUA and SLU.

10.305 In the context of the various tests, as outlined above, we considered that where a margin squeeze risk arises that Eircom should adjust the relevant wholesale inputs in order to secure the economic space for NGA services and between current generation services and next generation services.

10.306 Figure 9 in ComReg Document No 12/27 illustrated how a movement in the retail prices would give rise to a necessary corresponding adjustment to the wholesale prices in order to ensure that no margin squeeze existed. Please refer to Figure 9 in ComReg Document No 12/27 for the full details. ComReg also pointed out that where the SLU price reduces, Eircom must ensure price consistency with LLU and amend the LLU price where appropriate using the CAM. Eircom could also reduce prices across the value chain so long as it reduced the price for SLU and had reference to the NGA Margin Squeeze Model.

10.307 Given that SLU is a common input into both LLU and VUA products, ComReg considered that a consistency requirement between SLU and LLU on the one hand and SLU and VUA on the other indirectly implies a consistency requirement between LLU and VUA, where services are delivered over the same basic infrastructure which carry the same or similar cost characteristics.

10.308 ComReg considered that this approach would ensure that there is a consistent treatment of the charges both in the context of current generation and next generation products and services.

10.309 In ComReg Document No 12/27 ComReg asked the following question:

Q. 28 Do you agree with the proposed margin squeeze tests in the WBA market and from the WBA market to the WPNIA market in the context of NGA? Please provide reasons for your response.

10.10.2 Views of Respondents:

10.310 The following gives a high level overview of the responses regarding the specific retail and wholesale margin squeeze tests, regarding NGA in the WBA Market:

- Seven respondents (BT, Magnet, Telefonica, E-net, Digiweb, ALTO and UPC) generally agree;
- Three respondents (Eircom, Vodafone and Imagine) disagree
- One respondent (ECTA) did not provide any specific views.

10.311 **UPC** states that:

“ComReg will need to satisfy itself that appropriate “economic space” is maintained between all of the various retail and wholesale price elements that are included as inputs to the proposed margin squeeze tests. In doing so, ComReg will also have to be mindful of the impact that Eircom’s NGA pricing could have on the deployment of alternative NGA networks, including cable, given the distinct possibility that anti-competitive pricing by the SMP operator could discourage alternative operator build.”

10.312 **Magnet** and **ALTO** while agreeing with ComReg stated that they would like to see a hypothetical worked example using costs known to members to ensure that there is sufficient margins allowed for.

10.313 **Vodafone** is of the view that cost orientation is the most appropriate approach for VUA but suggests that if ComReg opts to implement a retail minus control for VUA, then in assessing the economic space between VUA and SLU we should adopt a SEO rather than a EEO cost standard.

10.314 **Eircom** disagree with the need for multiple layers of margin squeeze tests and if such tests are required at all, then the scope needs to be significantly reduced. Eircom considers that the following two tests are sufficient to ensure that a margin squeeze is avoided: (A) Test A - Retail 'price' tested against VUA price. (B) Test B - Legacy retail price tested against LLU price. Eircom believes that SLU and LLU relationship is not fixed and if one were to set an NGA SLU price in a manner similar to the LLU price, then it would be necessary to consider which cabinets are most likely to be unbundled within the NGA area, and assign a low weighting to those not economical to unbundle, as well as to lines over 1km or 1.5km, lines in small cabinets, and all lines in "inaccessible" cabinets. Eircom is also of the view that it would be premature to link VUA to SLU given the uncertainty around costs and volumes. Two further arguments considered by Eircom against the linkage between VUA and SLU are the use of an absolute rather than proportionate margins at every level, and the use of SEO between Retail and VUA.

10.315 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.10.3 ComReg's Assessment of Responses and Final Position:

10.316 Having considered the views of respondents, ComReg has decided that there should be a wholesale margin squeeze between each of the relevant wholesale products along the value chain. ComReg has already discussed in detail the wholesale margin squeeze approach at subsection 10.9 above. In summary, the wholesale margin squeeze tests in the context of NGA should be as follows:

- Wholesale Margin Squeeze test between End-to-end NGA Bitstream and NGA Bitstream
- Wholesale Margin Squeeze test between NGA Bitstream and VUA
- Wholesale Margin Squeeze test between VUA and SLU.

10.317 The wholesale margin squeeze tests are applied between the various products along the value chain to ensure that operators are not squeezed particularly when using LLU and VUA. NGA Bitstream is the regulated wholesale product furthest down the value chain and it is appropriate to evaluate retail prices against it to ensure retailers using Bitstream are not squeezed.

- 10.318 In addition, it is necessary to ensure an adequate economic space between NGA Bitstream and VUA. This is in order to protect operators using VUA and to provide the certainty which would encourage other operators to use this service. The VUA service requires considerable investment in infrastructure and at this time only one operator (BT) is in a position to use it extensively. Other players are likely to rely on Bitstream services in the short run. As use of VUA (or LLU) becomes more entrenched it may be possible to remove the NGA Bitstream to VUA economic space test. This will be kept under review.
- 10.319 With regard to the point raised by Magnet and ALTO about a worked example to demonstrate sufficient margins, the costing information contained in the NGA Margin Squeeze Model is largely based on Eircom data and is confidential. Therefore, the actual numbers cannot be disclosed. ComReg considers that given that the margin squeeze tests are largely based on SEO costs this should allow for sufficient margin to ensure effective competition between operators not benefiting from the same economies of scale and scope and having different unit network costs.
- 10.320 Further to Vodafone's point that an SEO should be used instead of an EEO test for VUA, ComReg considers that the EEO costs of Eircom are relevant given that it is currently the only operator providing the SLU service and in general there are no economies of scale or scope differences to be considered in this regard given that there is a high probability that OAOs would not unbundle a cabinet which Eircom intends to unbundle or has already unbundled. Therefore, in areas where this OAO has unbundled cabinets, it will have same economies of scale as Eircom because it will be the only operator present there.
- 10.321 Eircom's point on the multiple layers of the margin squeeze tests has already been addressed by ComReg earlier in subsection 10.8.3 above. In relation to Eircom's proposal on the two test approach, Eircom does not explain how the imputed legacy price would be calculated in test B and this may be extremely subjective. We recognise that the SLU to LLU relationship is not fixed. However, as explained in response to question 19 in subsection 10.6.3 above, the link between LLU and VUA is very important as they both share the same assets in the same areas. Calculating a cost for SLU for NGA areas is not realistic (as suggested by Eircom) nor reasonable as it would create several different input costs in the same exchange. Eircom states that the reference modern equivalent asset ('**MEA**') for VUA should be the DOCSIS3.0 network. However, if this were the case then this would impact the copper valuation. As already discussed above, for the moment LLU and VUA should be treated consistently given that the assets used by both access services are common to LLU and VUA (i.e. copper cables, trenches).

10.10.4 ComReg's Decision:

- 1. Eircom shall ensure that it does not create a Wholesale Margin Squeeze between (i) the price for End-to-End Next Generation Bitstream; and (ii) the price for NGA Bitstream based on the NGA Margin Squeeze Model.**
- 2. Eircom shall ensure that it does not create a Wholesale Margin Squeeze between (i) the price for NGA Bitstream; and (ii) the price for VUA based on the NGA Margin Squeeze Model.**
- 3. Eircom shall ensure that it does not create a Wholesale Margin Squeeze between (i) the price for VUA; and (ii) the price for SLU, based on the NGA Margin Squeeze Model.**

10.11 Principles to apply to the margin squeeze tests

10.11.1 ComReg's Preliminary Views from Consultation Document:

10.322 The principles or analytical stages of the margin squeeze test are discussed in turn under the following headings:

- Operator cost base
- Operator volume base
- Appropriate cost standard
- Appropriate model type
- Portfolio or product by product
- Appropriate cost stack.

Operator cost base:

10.323 As set out in ComReg Document No 12/27 there are three options for determining an operator cost base where a particular margin squeeze test is applied, these include:

- Equally efficient operator ('EEO')
- Reasonably efficient operator ('REO')
- Similarly efficient operator ('SEO').

10.324 In summary, the EEO test assumes the efficient costs based on the volumes of the incumbent and is more often associated with ex-post competition case law. SEO means an operator who shares the same basic cost function as Eircom Limited but does not yet enjoy the same economies of scale and scope as the incumbent (Eircom). In essence, this is similar to the REO test as the cost function is adjusted to reflect the fact that an OAO does not yet enjoy the same economies of scale and scope as Eircom. The main difficulty with the REO test is the availability of reliable OAO data.

- 10.325 In ComReg Document No 12/27, we considered that in the Irish context the limited LLU take-up to date is indicative of sub-scale competitors; notwithstanding the financial resources and brand benefits of some OAOs, OAOs have relatively low volumes after being active in the fixed market for several years. We noted, however, that the recent increased take-up of unbundling suggests that these firms might reach efficient scale in the future but at this stage no communications operator can match Eircom's scale in an Irish context and certainly not in a fixed line context. However, we considered that there may be certain retail cost categories e.g. advertising costs in the context of NGA that may differ in this regard and we invited respondents' views on the proposal to use the EEO cost base for advertising costs.
- 10.326 We also proposed that if there is significant take up of VUA or LLU in more exchanges with a greater number of lines than today, then a move to an entirely EEO approach may be considered. However, given the take-up of LLU to date and the number of exchanges unbundled, we considered that the SEO is largely the more appropriate cost base for now in the context of the retail margin squeeze test and the wholesale margin squeeze tests.
- 10.327 Given that Eircom's market share of DSL broadband lines has not changed significantly over the years we considered that the SEO test is the appropriate basis at this stage, for both the retail to wholesale margin squeeze test and for the wholesale margin squeeze test between End-to-end Next Generation Bitstream and NGA Bitstream and between NGA Bitstream and VUA.
- 10.328 For the retail margin squeeze test we considered that a SEO approach is largely the more appropriate approach but we invited views on whether there are certain retail cost categories e.g. advertising costs which may be more akin to an EEO approach in the context of NGA.
- 10.329 We acknowledged the fact that the NGA Recommendation promotes a REO margin squeeze test and that while we are open to this approach, generally the necessary operator information is not readily available to implement such a test. Therefore, we have, in the past, tended to use the SEO test as Eircom's costs are reasonably well known and are supported by a set of audited separated accounts. In ComReg Document No 12/27 we also pointed out that the SEO and REO test are very similar in nature as they both take account of the fact that operators currently have a different basic cost function to Eircom and they do not yet enjoy the same economies of scale and scope as Eircom.

10.330 In ComReg Document No 12/27 we proposed that for the wholesale margin squeeze test from the WBA market (VUA product) to the WPNIA market (SLU product) that it may be more appropriate to derive the economic space on the basis of an EEO test. We considered that given that there may be no realistic prospect for any significant provision of an alternative wholesale input further upstream from VUA and a test based on SEO costs may not be appropriate.

10.331 Insofar as there is no business case, to date, for OAOs to build out their own fibre networks to cabinets (and purchase SLU from Eircom) we considered that it would not seem reasonable to provide 'entry assistance' through an SEO-based economic space between VUA and SLU. However, we considered that the EEO costs of Eircom are relevant given that it is currently the only operator providing the SLU service and in general the same costs would apply if another SLU operator were to provide the services. Therefore, generally there are no economies of scale or scope differences to be considered in this regard.

Operator volume base:

10.332 As set out in ComReg Document No 12/27, there are three possible options to adjust the test to account for differences in economies of scale between Eircom and the access seekers. These options are:

- 10% market share
- 15% market share
- 25% market share.

10.333 We considered that the margin squeeze test between the retail and wholesale products and the wholesale margin squeeze test between End-to-end NG Bitstream and NGA Bitstream and NGA Bitstream and VUA should be based on the 25% market share.

10.334 Firstly, the 25% market share is consistent with the market share percentage previously applied in the WBA retail minus Decision (ComReg Decision D01/06). Secondly, Eircom retail itself faces considerable demand uncertainty for NGA based services and it may be more realistic to assume a narrower gap in market shares for NGA based services than has materialised in the past. Given that we wish to avoid inefficient entry we considered that the 25% market share approach is on balance reasonable. However, we proposed to keep this under review.

Appropriate cost standard:

10.335 As set out in ComReg Document No 12/27, the cost standard options considered include the following:

- Average Variable Cost ('**AVC**')
- Average Avoidable Cost ('**AAC**')
- LRAIC
- LRAIC plus
- Average Total Cost ('**ATC**').

10.336 In summary, the AVC standard approximates to the variable cost of producing an additional unit of output. AVC does not include an allocation of fixed costs, which are the major cost component faced by telecom operators. AAC represent the short-run avoidable variable and incremental fixed costs of the additional sales of the product in question. This standard is distinct from AVC insofar as it includes fixed costs which would otherwise be avoided if the incremental output were no longer produced.

10.337 The remaining three options presented above all include a fixed cost allocation. LRAIC is the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run. This approach does not include an apportionment for common costs. 'LRAIC plus' is the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run, plus a mark-up for joint and common costs. ATC is the average total cost and includes variable, fixed, joint and common costs based on historical cost data but with no adjustments for efficiencies.

10.338 In ComReg Document No 12/27, we considered that to apply an AAC cost rule in an ex-ante context could lead to sub-optimal entry conditions with little entry occurring. This would be to the detriment of competition and, in turn, consumers. In addition, the avoidable costs is the relevant measure when assessing whether there is concerns around future exclusion or exit of current efficient competitors from the market. Given that this is not the issue, we considered that the ATC approach is the appropriate cost standard for the retail margin squeeze test. The current DCF model from ComReg Decision D01/06, which we proposed to use in the context of the proposed retail margin squeeze test are based on the ATC costs of Eircom. We considered that the difference between ATC and LRAIC plus in the context of the retail costs is generally not material and by using the ATC approach we are being consistent with the approach taken to date in ComReg Decision D01/06.

10.339 In ComReg Document No 12/27 we also proposed that where the retail NGA standalone broadband product being sold is only to a relatively small customer base, e.g. less than 5,000 customers, Eircom may sell at a lower cost standard than that allowed by ATC in the NGA Margin Squeeze Model so long as Eircom recovers the overall ATC costs in the long-run. In addition and in exceptional circumstances ComReg may allow the launch or promotion of products based on the recovery of LRIC costs, which excludes a contribution to the network costs. However, ComReg noted that this proposal would also be subject to the pricing pre-notification obligations.

10.340 We considered that the margin squeeze test for retail bundles would require the recovery of the ATC over any given period.

10.341 In ComReg Document No 12/27 we proposed that 'LRAIC plus' is more appropriate for the wholesale margin squeeze tests, that is the test from End-to-end NG Bitstream to NGA Bitstream, from NGA Bitstream to VUA and from VUA to SLU, given that it promotes entry, takes account of all incremental costs of starting to provide a service and includes a mark-up for common costs. We considered that the main reason is the fact that it is a forward looking approach which can reflect the cost structure characterised by both economies of scale and scope. It also promotes entry to the market which is consistent with ComReg's regulatory objectives. We also considered that the 'LRAIC plus' costs is the calculus faced by any operator when deciding to enter or expand in the market. As a result, new entrants participate in the cost savings of the incumbent due to economies of scale and scope.

10.342 We recognised in ComReg Document No 12/27 that if the majority of Eircom's retail broadband base moved to NGA services then the recovery of the ATC cost standard may need to be reviewed to ensure that the 'LRAIC plus' does not lead to anti-competitive effects and losses by Eircom. The recovery of all of the company common costs by Eircom is particularly important in this regard.

Portfolio or product-by-product:

10.343 In ComReg Document No 12/27 we set out that a margin squeeze can be conducted either on a single product offered by the SMP operator or on a number of products as a whole i.e. a portfolio of products. This is relevant to retail and wholesale services offered by Eircom.

10.344 As recognised in the Oxera Report, there are sound economic reasons to allow some efficient price discrimination and hence cost recovery from a broader range of services.

10.345 Given that the portfolio approach had been proposed in the bundles consultation, in ComReg Document No 11/72, we considered that it is important to ensure regulatory consistency across various regulated products and services. Therefore, we proposed that the retail margin squeeze test should be based on a portfolio approach where Eircom should recover the ATC costs for standalone broadband services in aggregate on a SEO cost basis.

10.346 We proposed that the portfolio in the context of the retail to wholesale margin squeeze test would be based on a weighted average portfolio of expected customers for each of the relevant retail services against the wholesale NGA Bitstream (and End-to-end NG Bitstream service where it is provided). We also proposed to continue to monitor the expected weighted average portfolio against the actual results.

10.347 In ComReg Document No 12/27 we also proposed some exceptions regarding pre-notifications, where we considered that Eircom should only be obliged to provide a statement of compliance where the new or existing product is likely to represent the lower of (i) 20% of the Eircom next generation retail customer base in terms of subscriber numbers or (ii) 20,000 additional retail subscribers for Eircom's next generation services.

10.348 For the wholesale margin squeeze test in the WBA market, we considered that Eircom may offer a number of wholesale services, either passive or active and that these may be sold to operators in a number of ways. In ComReg Document No 12/27 ComReg proposed that a product-by-product analysis is more appropriate in this context and this is consistent with other wholesale margin squeeze tests i.e. leased lines and WBA.

Appropriate model type:

10.349 In ComReg Document No 12/27 we considered two model options in the context of the margin squeeze tests:

- Discounted cash-flow ('**DCF**') model (also known as a dynamic model); or
- Static model.

10.350 In summary, a DCF (or dynamic) model estimates all future cash flows of the offer under consideration and discounts them to arrive at their present value. A static model is an analysis over one period, generally an accounting year.

10.351 We considered that the retail margin squeeze test should be based on a DCF model as it is more appropriate in the context of NGA, rather than a static model, given the uncertainty over volumes in the context of the fibre network rollout and the fact that some offers, in order to be of any interest to consumers, may have to be priced at a loss at small volumes in the early days of their availability. A DCF model has been used for the past number of years under the WBA retail minus Decision (ComReg Decision D01/06).

Appropriate retail costs:

10.352 In ComReg Document No 12/27 we discussed that the retail cost stack is relevant in the context of the retail to wholesale margin squeeze test for NGA in the WBA market.

10.353 We considered that the cost categories in the context of the DCF model for current generation Bitstream services may be used as a starting point in the context of the DCF model for NGA services – but that amendments should be made to reflect the different costs between current generation and next generation. The cost categories from the DCF model for current generation Bitstream services included Marketing, Sales, Product management and development, Accommodation, Help desk, Billing, Modems, Order handling, Backhaul charges, Servers and collocation, Corporate overhead, Internet connectivity, wholesale connection.

10.354 In ComReg Document No 12/27 we considered that such costs as sales, marketing, modems and internet connectivity costs may need to be amended for NGA services. We considered that the installation costs of Customer Premises Equipment ('CPE') are important costs to consider in light of NGA deployment and we were of the preliminary view that this cost should be capitalised and written off over a defined period of time.

10.355 In ComReg Document No 12/27 ComReg we asked the following questions:

Q. 29 Do you agree with ComReg's preliminary views, as set out above, in relation to the principles of the margin squeeze test in the context of NGA, for the retail to wholesale margin squeeze test and the wholesale to wholesale margin squeeze tests? Please provide reasons for your response.

Q. 30 Do you agree that Eircom should be required to follow the product-by-product approach, as opposed to the portfolio approach, where the new or existing product is likely to represent at least 20% of the Eircom retail NGA customer base? Please provide reasons for your response.

10.356 The views of respondents to each of the two questions above and ComReg's assessment of those responses and its final position are discussed under the following headings:

- Principles of the margin squeeze tests
- Portfolio versus product-by-product assessment.

Principles of the margin squeeze tests:

10.11.2 Views of Respondents:

10.357 The following sets out the high level views of the respondents regarding the principles of the margin squeeze tests:

- Six respondents (BT, Magnet, Telefonica, E-net, Digiweb and ALTO) generally agree but had some comments which are outlined below;
- Two respondents (Eircom and Imagine) disagree;
- One respondent (Vodafone) had a number of comments;
- Two respondents (UPC and ECTA) provided no specific views.

10.358 **BT** and **E-net** generally agree but both of them are of the view that a product by product approach is preferred over a portfolio approach. In addition, both operators believe that the 20% threshold allows too much flexibility to Eircom.

10.359 For the retail margin squeeze test, **Vodafone** believes that the entirety of the cost stack should be on a SEO basis. Vodafone also believes that it is wholly unreasonable that ComReg has not included any margin provision in the cost stack. Vodafone agrees that it may be possible for some costs to be EEO but only in the event that an operator has reached the threshold of 25% DSL market share. For the wholesale to wholesale margin squeeze tests Vodafone agrees in principle with the concept of economic space but VUA should be cost oriented. Vodafone is of the view that if VUA is controlled on a margin squeeze test then the space to SLU should be based on a SEO test.

10.360 While **ALTO**, **Magnet** and **Digiweb** generally agree, they had concerns about the hypothetical market share of 25%. Some of these respondents believe that a 10% or 15% market share would be more appropriate. .

10.361 **Magnet** and **ALTO** also raised concerns with the use of ATC versus LRAIC plus.

10.362 **Eircom** disagrees with the continuing use of the SEO approach. Eircom believes that neither at the service level or retail market does Eircom have scale or scope advantages as compared to its main competitors, which are regional and international market players with the ability to leverage group advantages, such as centralised marketing and product development functions. Under the proposed SEO approach Eircom claims that it would not have freedom to set retail prices. Eircom gave an example to illustrate, where if it were to match UPCs broadband price of €33, it would need to have an SLU price of zero or even a negative number. Eircom also believes that the real competitors could have lower costs compared to Eircom because of their larger EU wide/worldwide operation, significant economies of scale from regional or worldwide operations. Eircom believe that Vodafone, Sky and UPC have significant scale in Ireland with established customer base, a strong brand, sophisticated billing systems and the ecosystem to develop products with similar scale and scope economies as those available to Eircom. Eircom states that if ComReg continues with the SEO approach there are a number of points to consider regarding significant double counting of costs e.g. NTU costs, planning and design costs and migration costs.

10.363 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.11.3 ComReg's Assessment of Responses and Final Position:

10.364 Having considered the view of respondents, ComReg has decided that the principles for each of the margin squeeze tests as set out in ComReg Document No 12/27 remains appropriate with one exception regarding the Retail Margin Squeeze test. The Retail Margin Squeeze test shall be largely based on a SEO test but with some retail costs based on EEO costs. In summary, the principles which the margin squeeze tests are based on are as follows:

- The Retail Margin Squeeze test is based on SEO costs, with the exception of some EEO costs, which are discussed further below. The wholesale margin squeeze test from End-to-end next generation Bitstream to NGA Bitstream and from NGA Bitstream to VUA is based on SEO costs while the wholesale margin squeeze test from VUA to SLU is based on EEO costs;
- The DCF model is used for determining retail costs;
- A portfolio assessment is used in the context of the Retail Margin Squeeze test based on ATC;
- A hypothetical market share of 25% is applied.

- 10.365 For the Retail Margin Squeeze test, ComReg would like to point out that the portfolio approach only relates to standalone NGA retail broadband offers. It is important to note that there is only one VUA product which is configurable by OAOs to provide a multiplicity of retail offers. This approach is in fact consistent with our approach for legacy broadband where a similar wholesale product is provided.
- 10.366 The reason for using the portfolio approach for the Retail Margin Squeeze test is to give Eircom flexibility to price different products, in the face of demand uncertainty. In the early days of NGA rollout, actual demand for NGA based products will be uncertain and ComReg believes that Eircom should be given the flexibility to price specific products above or below retail costs (provided it meets the overall portfolio margin squeeze test) so that Eircom can alter prices in response to actual take-up of NGA products. Since Eircom faces retail pricing constraints from the cable operator (and from current generation broadband products from OAOs), this pricing flexibility is unlikely to lead to excessive prices. In addition, OAOs buying Eircom's NGA wholesale inputs will have the same pricing flexibility as Eircom.
- 10.367 Where an NGA retail broadband product is sold in a bundle with PSTN voice which is regulated as part of Market 1, then it is subject to the obligation not to unreasonably bundle and it must pass the same tests prescribed under the bundles regime. The draft measures on Bundles were previously notified to the European Commission in Case IE/2012/1381 and Case IE/2012/1382. A decision on Bundles will be published shortly.
- 10.368 In relation to the issues raised by respondents on the threshold of 20% for the Retail Margin Squeeze test, this has since been revised. Please refer to subsection 10.8.3 above.
- 10.369 In response to Vodafone's point that the entire Retail Margin Squeeze test should be based on a SEO test, ComReg considers that there are certain retail costs e.g. advertising, where other operators such as Vodafone and UPC, have a large customer base and extensive product ranges over which to spread its advertising costs. ComReg believes that it is reasonable in this case to use EEO costs rather than SEO costs for these particular cost categories. In relation to Vodafone's point on the inclusion of a margin, ComReg would like to clarify that the WACC at 10.21% has been included in the NGA Margin Squeeze Model. Vodafone's point about cost orientation for VUA has already been considered in subsection 10.4.3 above.

- 10.370 While a number of respondents raised issues with the 25% market share, ComReg considers that this market share is consistent with WBA floors for current generation services and is also consistent with the margin squeeze approach for leased lines. The market share of 25% is a target market share that should be achieved by OAOs in the medium term in LLU areas only. A lower market share could give incentives not to further unbundle exchanges (because the margin between VUA and NGA Bitstream would be high enough and if further exchanges are unbundled, this margin will reduce because floors will decrease). The 25% market share is 25% of DSL lines, not of the total market.
- 10.371 With regard to Magnet's point on the difference between ATC and LRAIC plus, ComReg would like to clarify that ATC and LRAIC plus are similar in this case as a portion of common costs are included in 'LRAIC plus'.
- 10.372 With regard to Eircom's point on the SEO approach, there is no OAO using Eircom's platform that has a market share of 25%, or near it. Eircom's share of the retail DSL broadband market stands at circa 71% in Q3 2012.
- 10.373 While Eircom points out the number of mobile customers of Vodafone and TV customers of Sky or UPC, it doesn't acknowledge the fact that it also has mobile customers, and that it could also launch TV services. It is important to note that in the short-term it is unlikely that these OAOs will be in a position to invest in the network and climb the investment ladder.
- 10.374 The double counts highlighted by Eircom have been dealt with in the NGA Margin Squeeze Model.

Portfolio versus product-by-product assessment:

10.11.4 Views of Respondents:

10.375 The following gives a high level overview of the responses on the product-by-product approach as opposed to the portfolio approach where the new or existing product is likely to exceed 20% of the Eircom Retail customer base:

- One respondent (Eircom) disagrees;
- Eight respondents (BT, Vodafone, Magnet, Telefonica, E-net, Imagine, ALTO, Digiweb) generally agree but with proposed changes;
- Two respondents (UPC and ECTA) did not provide any specific views.

10.376 **Eircom** disagrees and states that there is a need for many-to-many portfolio tests (comparing weighted average of FFTC/H wholesale prices to a portfolio of retail products), and product-by-product tests are unreasonable and disproportionate in the context of multiple retail products supported by a single wholesale product, with shared traffic or transport elements. Eircom is of the view that the problems raised by product-by-product tests are exacerbated in the context of layer 2 wholesale products, where one configurable wholesale product underpins a large range of retail offerings. Eircom is also of the view that there is no justification for the product-by-product test at a wholesale level.

10.377 **Vodafone** and **E-net** are of the view that there should be no threshold and that all retail to wholesale offerings should be on a product-by-product test. On the other hand, **BT**, **ALTO** and **Telefonica** believe that the threshold should be lowered to 10% while **Magnet** believes that it should be lowered to 5% or 5k.

10.378 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.11.5 ComReg's Assessment of Responses and Final Position:

10.379 Having considered the views of respondents, ComReg has set out below its decision regarding the assessment approach for the margin squeeze tests.

- 10.380 All of the Eircom retail NGA broadband offers will be assessed on a portfolio basis, where Eircom must ensure that the average of Eircom's retail revenues for its Retail NGA Broadband products recovers the average total retail costs in the Retail Margin Squeeze test. Eircom will have some flexibility to price above or below the retail costs on certain retail NGA broadband products but it must ensure that the weighted average total retail and wholesale costs are covered by the retail NGA broadband revenues.
- 10.381 ComReg considers that given that Eircom have confirmed that there will only be one main NGA wholesale product, a product-by-product assessment is not as relevant in this context. In essence, there will only be one configurable wholesale NGA product underpinning a large range of retail offerings.
- 10.382 The Retail Margin Squeeze test will be applied through the means of the NGA Margin Squeeze Model by taking the aggregate of retail services and testing these against the aggregate of the retail and wholesale costs. Only where the total average revenues are not likely to cover total average retail costs should a wholesale price change be required to the underlying Bitstream cost input.
- 10.383 Please also refer to subsection 10.11.1 above for further consideration by ComReg on why a portfolio is preferred to a product-by-product in the context of retail NGA offerings.
- 10.384 A product-by-product is more appropriate for the wholesale services. This approach also ensures consistency with other wholesale margin squeeze tests e.g. for current generation services in the WBA market and in the leased lines market.

10.11.6 ComReg's Decision:

The Retail Margin Squeeze test is based primarily on a SEO cost base with some costs based on an EEO cost base (as described in subsection 10.16.3 of this decision document), and calculated based on a portfolio of products across the average total costs.

The Wholesale Margin Squeeze between End-to-end Next Generation Bitstream and Next Generation Bitstream is based on a SEO cost base.

The Wholesale Margin Squeeze between the Next Generation Bitstream and VUA products is based on a SEO cost base.

The Wholesale Margin Squeeze between VUA and SLU is based on an EEO cost base.

10.12 Wholesale Line Rental ('WLR') and relevance of the Bundles Regime

10.12.1 ComReg's Preliminary Views from Consultation Document:

10.385 In ComReg Document No 12/27 ComReg set out some background regarding WLR and its importance for the foreseeable future, especially in the context of Eircom's network.

10.386 ComReg recognised that the relevance of WLR may decrease as voice over broadband ('VoB') becomes more prevalent in NGA areas. ComReg considered that WLR should be priced consistently with other fixed access products to avoid the anomaly of much higher access prices for consumers in the same geographic areas as those availing of higher speeds over upgraded fibre networks. This should therefore ensure that all operators serving all contestable customers can compete on the basis that current generation services may have to be priced consistently with the NGA services. Otherwise in the short term some of these OAOs, who have played a key role in providing retail competition, could be foreclosed from the retail broadband market.

10.387 In ComReg Document No 12/27, ComReg recognised that a likely significant development over the next few years will be the transition of the fixed traditional voice service, currently known as plain old telephony service ('POTS'), to voice over internet protocol ('VoIP') based voice service.

10.388 While it seems likely that the copper line will not be switched-off for some years to come, this POTS based service will in certain circumstance be provided over a parallel running fibre network, and therefore the question arises as to whether the traditional WLR service referred to earlier is the relevant wholesale input to any Margin Squeeze test in the context of NGA broadband provided with POTS.

10.389 Please refer to ComReg Document No 12/27 for further details on the discussion around the provision of voice in the context of NGA.

Options to account for WLR/VoIP in the context of NGA:

10.390 In ComReg Document No 12/27 we considered a number of options where we sought the views of industry. The options considered in the consultation are summarised below.

Option 1:

10.391 This option would treat the provision of POTS in tandem with NGA broadband services as the equivalent to the VoIP based service on the principle that the MEA is VoIP. This would decouple the POTS service from the WLR service and therefore the proposed margin squeeze test explained earlier in this paper for NGA Bitstream would only include an add-on for the likely wholesale cost of VoIP voice.

Option 2:

10.392 This option would mean that either a) nationally or b) only in areas where NGA broadband is rolled out, all lines, current generation and next generation, could avail of a wholesale bundle discount where WLR is sold with Bitstream (subject to the overriding requirement to avoid a margin squeeze against LLU provision). This option would also require compliance with the margin squeeze tests in order to maintain an economic space against SLU. Where WLR is sold with NGA Bitstream it would be necessary to make the relevant adjustment for the Market 4 Access network cost to ensure there is no double counting of costs.

Option 3:

10.393 This option would be the same as Option 2 except that the price of the current generation (legacy) lines may eventually rise to encourage migration of customers to the next generation broadband and IP network.

Option 4:

10.394 This option would mean that all copper lines in the NGA areas are priced on a cost orientation basis (currently WLR is based on a retail minus price control) regardless of whether the lines are providing voice only or broadband (current generation or next generation) based on the CAM used for the LLU/SLU prices (as amended from time to time).

Option 5:

10.395 This option would retain the status quo.

10.396 ComReg was of the preliminary view that Option 2 may be the most appropriate given that it ensures consistency between current generation and next generation prices, it allows flexibility to Eircom where retail constraints exist and it ensures that all operators are treated in an equal manner, which is in line with the obligation of non-discrimination. However, end users who do not use broadband would lose out in relative terms. Option 2 (a) (a discount available everywhere Bitstream is available) would have the merit of allowing retail customers outside the NGA area to gain the benefits of competitive pressures in that area and would allow OAOs to provide better value services to these users. On the other hand this option may create or increase the differential between revenues and costs in these areas as these are likely to be more expensive to serve. Potentially this could have implications for the funding of any future USO obligation. Option 2 (b) on the other hand loses these benefits as described but reduces the risk of any divergence between revenues and cost.

10.397 Please refer to subsection 11.6.3 of ComReg Document No 12/27 for ComReg's consideration of the other options.

10.398 ComReg also proposed that where WBA (next and current generation) is bundled with WLR, all lines must be priced in accordance with the relevant margin squeeze principles set out in this consultation for next generation services as well as any decision from Consultation Document No 11/72 on Bundles and ComReg Decision No. D07/61 (which includes the price control for WLR).

10.399 ComReg also recognised that any reduction to the WLR price can be made in accordance with ComReg Decision No. D07/61 (which sets a maximum price). ComReg proposed that where WLR is bundled with a broadband service (including Copper based services such as Bitstream and LLU Line Share), in line with the notification requirements contained in ComReg Decision No D07/61 and the proposed notification requirements in the context of NGA, Eircom would not implement any discount in respect of a bundled WLR/next generation WBA wholesale input without prior notification to ComReg. Regardless of the option chosen we considered that the maintenance of an appropriate economic space between LLU and services such as WLR and VUA and Bitstream (legacy or NGA) was necessary.

10.400 In ComReg Document No 12/27 ComReg asked the following question:

Q. 31 Which option do you consider is the most appropriate in relation to the treatment of WLR/VoIP, in the context of NGA, in the WPNIA and WBA markets over the next three to five years? If there is an alternative option which you consider relevant and which is not discussed above please describe it. Please provide reasons for your response.

10.12.2 Views of Respondents:

10.401 In summary, the views of the respondents were mixed in terms of the preferred option for the treatment of WLR / VoIP in the context of NGA.

10.402 **Eircom** stated that while the considerations set out in ComReg Document No 12/27 appear reasonable it regrets that ComReg has not completed a new market analysis that would have allowed ComReg to ascertain the changes in market conditions. In addition, Eircom believes that ComReg's proposals seems to emphasis a desire to protect investment that operators have made in copper based services, which Eircom believes is unrealistic. Eircom also made a number of comments on each option. On option 1, Eircom believes that option 1 is the most appropriate as it recognises competitive and market dynamics that are already well established in urban markets, and recognises that POTS based services are included in the NGA portfolio as a pragmatic technological transition that is in the interests of all operators using Eircom's network. On option 2, Eircom considers that Option 2a would be hugely damaging to its NGA investment case. It would result in competitive prices from urban areas being forced by regulation into rural areas where the costs of provision of service are much higher. This would severely reduce Eircom's revenues in these areas and would undermine the investment case for NGA investment. With option 2b, Eircom views it as having some of the characteristics and benefits of option 1. In addition, a possible mitigation would be to limit the application of the WLR bundle discount to a limited period as part of option 2b. Eircom mainly disregards the other options as being inappropriate for various reasons as set out in their response.

10.403 **BT and ALTO** are of the view that there is an alternative to the options presented and that is to reduce the sub-loop component as this is used in the price stacks of all the impacted products i.e. WLR and Full unbundling and Line Share and current generation Bitstream as both use WLR as a component.

10.404 **Vodafone and E|net** believe that the status quo should be maintained and therefore they both support ComReg's proposed option 5 (retain status quo). Vodafone stated that it is inappropriate and wrong to allow POTS based NGA services to be priced other than in accordance with established principles applying to current generation services whereby the narrowband access path cost recovery is by way of the PSTN line rental. In summary, Vodafone made the following points: (1) Option 5 ensures consistency and balances the protection of current generation investment with the incentives to move to next generation IP voice services. (2) Maintaining the current cost recovery models for POTS based and standalone services give rise to appropriate incentives. Operators and customers who wish to continue to avail of current generation voice services can do so based on current access path cost recovery constructs. Those who wish to avail of next generation voice services benefit from cost advantage that comes from recovering the access costs entirely within the NGA access service charges. This differential gives the appropriate signals to the market and encourages adoption of NGA enabled services. (3) Allowing a situation whereby the vertically integrated operator SMP operator can obtain the cost benefits of network investment without actually making the investment in network replacement removes the incentives for other operators to make infrastructure investments. (4) A price control regime for NGA which maintained the principles that apply to current generation POTS base and standalone services would provide positive incentives for a move to NGA based services.

10.405 **Magnet** believes that Option 4 (all copper lines in NGA areas are priced based on cost orientation regardless of whether they are providing voice or broadband) may be the best option for the moment. Magnet does not support any discounts for WLR within NGA areas.

10.406 **Imagine** believes that where WBA (next and current generation) is bundled with WLR, all lines must be priced consistently with all other components of the offering. Imagine also believes that those lines that are not able to receive NGA services should also benefit from this new pricing.

10.407 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.12.3 ComReg's Assessment of Responses and Final Position:

10.408 Having considered the views of respondents, ComReg is of the view that any discount offered by Eircom for WLR must be compliant with its non-discrimination obligations and must not create any anti-competitive effects in the marketplace.

- 10.409 Eircom is also subject to the overriding requirement to avoid a margin squeeze against LLU provision and it must also ensure compliance with the margin squeeze tests in order to maintain an economic space against SLU. While the WLR discount is not relevant in terms of this Decision on NGA, ComReg will closely monitor the WLR discount for compliance with the various obligations in ComReg Decision D07/61, especially in terms of Eircom's obligation of non-discrimination and price control.
- 10.410 It is clear from the responses and from developments in the NGA forum over recent months that a VoIP solution will not be available for the mass market for some time and the current POTs solution will continue with the rollout of NGA services. While this may be a pragmatic approach for now, it is important that the correct incentives remain in place to ensure that investment in new voice technology is incentivised through the appropriate regulatory price control.
- 10.411 ComReg considers that it would be inappropriate to allow Eircom retail the benefit of a reduced cost input in the margin squeeze test where they have yet to invest or roll out a VoIP platform. Therefore, any discounts applied to WLR should ensure that WLR plus VUA is not cheaper than VoIP plus VUA otherwise, the incentives to deploy VoIP platforms will be significantly reduced.
- 10.412 As highlighted by other respondents, investment in VoIP is expensive and challenging and those that make the investment should be allowed sufficient time to reap the benefits commercially. It is also important that consumers in the same area are not discriminated against by virtue of a hypothetical technology choice in a margin squeeze test. However, ComReg would note that it is unlikely that VoIP will be available to all customers across the country over the next three to five years from the Eircom network and some will continue to be served via PSTN technology - where commercially it is not viable to upgrade certain exchange areas for new technologies. Therefore, such developments may naturally evolve and result in different methods or providing voice in different areas.
- 10.413 Given that it is more likely that NGA retail broadband products will be sold as part of a retail bundle with narrowband / PSTN voice, it is important to highlight that the principles determined in the context of Bundles, which was previously notified to the European Commission in Case IE/2012/1381 and Case IE/2012/1382, will apply in that regard. A Decision on Bundles will be published shortly.

10.414 ComReg Decision D07/61 imposed an obligation on Eircom not to unreasonably bundle RFNA with other retail services. The controls in ComReg Decision D07/61 are intended to ensure that Eircom bundles which include retail line rental (or RFNA) are not priced in such a way as to force OAOs which use Eircom's network to sell their retail bundles at a loss. The test that assesses whether or not Eircom is covering its costs and thereby complying with the obligation not to unreasonably bundle services under ComReg Decision D07/61 is called a 'net revenue test' or ('**NRT**').

10.415 The following is a summary of the draft measures that were previously notified to the European Commission in Case IE/2012/1381 and Case IE/2012/1382, that would apply to Eircom in the context of Bundles (that include RFNA):

- For bundles sold / offered in the larger exchange area ('**LEA**'), there will be a two-part ex-ante NRT test. The test is combinatorial and the tests are evaluated simultaneously. That is to say that both tests must be passed.
- The first part is on an individual bundles basis (i.e. a bundle-by-bundle assessment for individual bundles sold / offered in the LEA). An individual bundle may use the lower cost standard for retail calls of LRIC (as opposed to ATC).
- The second part of the NRT test is on an overall portfolio basis, where all bundles on offer or on sale by Eircom to end-users in the LEA are aggregated together and together must pass the NRT on an ATC basis.
- For bundles sold / offered outside the LEA the bundles are assessed on an individual bundle basis (i.e. bundle-by-bundle) only (i.e. there is no portfolio NRT for bundles sold / offered outside the LEA).
- The assessment of individual bundles (sold / offered within and outside the LEA) will, however, be subject to an overriding competitive impact assessment.

10.416 A Decision on the Bundles framework will be published shortly.

10.13 Migrations - WPNIA and WBA Markets

10.13.1 ComReg's Preliminary View from Consultation Document:

10.417 In ComReg Document No 12/27, ComReg considered the importance of migration both in terms of the copper network and of the fibre network, the timeliness of such migration and the relevant options.

10.418 The main points are discussed under the following headings:

- Non-discrimination
- Migration options
- Appropriate incentives to migrate.

Non-discrimination:

10.419 In ComReg Document No 12/27 we considered that it is important that Eircom do not price discriminate on the basis of migration charges for current generation products against migration charges for NGA based products and that they do not create a barrier for OAOs that either have recently invested or are wishing to invest in the broadband market. We also considered that Eircom should not price discriminate between operators by virtue of an operators size. All operators should be treated equally as part of the migration process.

Migration options:

10.420 In ComReg Document No 12/27 ComReg referred to the review carried out by Eircom in 2011 on the migration process between the various services, i.e. from Bitstream to Line Share (or LLU) and from Line Share to LLU, and the related cost reductions to an average migration charge of €15.

10.421 ComReg also pointed out that the migration process to date for current generation based services, in particular for migrations up the ladder of investment has not worked well in the past two years and while the actual processes had improved the pricing of migrations remained a key issue and possibly a barrier to investment.

10.422 ComReg was of the view that the existing migration charge of €15 per customer can give rise to significant cash outflows in any given month where a large number of customers are migrated and this can distort investment decisions. In light of these concerns we considered a number of options for determining the most appropriate mechanism for setting migration charges to ensure that Eircom recovers the cost of the migration process while at the same time operators are not dis-incentivised from investing.

10.423 We also considered options on whether the cost of migrations should be based on either:

- A one-off charge; or
- As part of a recurring monthly charge.

10.424 While Eircom proposed to include the cost of migrations (including connection costs where appropriate) as part of the recurring charge for VUA, this approach is inconsistent with the current approach for migrations for current generation products e.g. LLU, where a separate migration charge is imposed.

10.425 In ComReg Document No 12/27 ComReg welcomed the views of industry on whether a one-off migration charge should be imposed or whether the cost of migrations should be included as part of the recurring monthly charge for migration of current generation and fibre based products in the WPNIA and WBA markets. We considered that where the cost of migrations are relatively small that a one-off charge may be more appropriate but where the migration cost is more significant that it should be recovered as part of the recurring monthly charge.

10.426 The following options were considered by ComReg in terms of the recovery of the cost of migrations by Eircom:

- Option 1: Universal migration charge
- Option 2: Migration charge depending on the stage of investment
- Option 3: Distinct migration charges for current generation and for next generation.

Option 1: Universal migration charge

10.427 As discussed in ComReg Document No 12/27, this option would mean one common or universal charge regardless of whether the migration was between current generation and next generation products and services and regardless of the type of service.

10.428 The likely cost of migrations (including connection costs where appropriate) for all current generation and NGA products/services in the WBA and WPNIA market over a period of time would be required as well as the likely volume of migrations during this same period, including all access paths likely to be served by NGA. Under this option a cross-check to Eircom's Regulated Accounts would be required annually to ensure that there is no over or under recovery of costs on the part of Eircom. This may result in a revised charge and/or refunds to operators who may have been overcharged during the period.

10.429 This option would ensure that during the transition operators migrating between current generation based services are not unduly discriminated against compared with those operators migrating to NGA based products and services. In addition, we considered that this option should not act as a barrier to investment for OAOs. Furthermore, it may serve to eliminate distortions in OAO behaviour caused by different migration charges for different services. On the other hand while the charges would be cost oriented in aggregate they may not be cost oriented in respect of every migration process which arguably may result in economically inefficient pricing signals.

Option 2: Migration charge depending on the stage of investment

10.430 As discussed in ComReg Document No 12/27, this option would mean that the migration charge would depend on the stage of the ladder of investment which the operator is on.

10.431 This approach would take account of the extent of physical activity involved, for example jumpering the line may be required at the exchange or cabinet for each of the migration processes. We considered that the different charges may dis-incentivise investment by operators.

Option 3: Distinct migration charges for migrations to current generation and for next generation migrations

10.432 As discussed in ComReg Document No 12/27, this option would be consistent with the principle of 'cost causation', where costs should be allocated on the basis of the factors that cause the costs to be incurred. However, ComReg was of the preliminary view that having different migration charges between current generation and NGA services may act as a barrier to investment by OAOs and may in fact dis-incentivise infrastructure investment. This option would mean that the status quo would remain in place for the migration charges for current generation based products and services in the WBA and WPNIA market.

Appropriate incentives to migrate:

10.433 In ComReg Document No 12/27, ComReg set out that where appropriate the migration price structure should incentivise efficiency and early adoption.

10.434 While we would not consider it appropriate for Eircom to force the migration of OAO customers onto the fibre-based network during the transition, if and when the new network is fully rolled out to the NGA areas and all relevant services are supported over the new network, then operators should be incentivised to migrate to the new network.

10.435 ComReg was of the preliminary view that once the fibre network is in place, in the NGA Footprint Areas, and it fully supports all the relevant services of operators, then Eircom may consider setting its migration charges in such a way that it incentivises the move to fibre as soon as possible.

10.436 In the event that operators do not migrate to the new fibre network during the transition, we considered that it may be necessary to consider an incremental cost approach for the cost of running the copper network. This may be appropriate in cases where Eircom are forced to run two networks in parallel to facilitate the service provision of an alternative operator(s) who have not taken the commercial decision to migrate to the new fibre network. Under these circumstances, the additional incremental cost to Eircom of running the copper network may be charged to the operators who remain on the copper network.

10.437 In ComReg Document No 12/27 we asked the following questions regarding migrations:

Q. 33 Do you believe whether a one-off migration charge or whether the migration costs (including connections where appropriate) should be included as part of the recurring monthly charges for the various products and services in the WBA and WPNIA markets is more appropriate? Please provide reasons for your response.

Q. 34 Do you agree that a universal migration charge (Option 1) is the most appropriate option for migrations in the WPNIA and WBA markets? Please provide reasons for your response.

10.438 The views of respondents to each of the two questions above and ComReg's assessment of those responses and its final position are discussed under the following headings:

- Migration charges: one-off versus monthly charges
- Appropriate cost recovery mechanism for migrations.

Migration charges: one-off versus monthly charges:

10.13.2 Views of Respondents:

- 10.439 The views of respondents were mixed on whether migrations should be one-off charge or included as part of the monthly rental charge. The main points raised by the respondents are set out below.
- 10.440 **Vodafone** is of the view that migration charges should be cost oriented and that there needs to be a distinction between installation of the NTU ('network elements') and the provision of services ('service elements') and they should be charged differently. Installation of the NTU may be carried out by Eircom or a service provider. For the migration of services, this should be charged in line with current migration charges such as WPNIA/LLU and WBA. For the provision of the NTU, this should be part of the monthly services fee as a network device. By having a once-off and a recurring charge, this is in line with the current migration charges. Vodafone agrees that a higher charge could be placed on traditional services over time.
- 10.441 **BT** disagrees to a regime where migrations to NGA appear free at the time of the transaction whereas other services have to apply a charge at the time of transaction. **Digiweb, E-net** and **Imagine** believe that a one-off migration charge is the most appropriate approach for migrations to NGA.
- 10.442 **Eircom** believes that ComReg's approach for migrations should comply with the costing principles; cost causation, cost minimisation, distribution of benefits, effective competition, reciprocity, practicality. The main point Eircom raised in relation to cost causality was that the OAO has the option to select between fitting the NTU or requesting Eircom fit the NTU. To the extent that this choice by the OAO causes Eircom additional cost this principle indicates that it would be reasonable for Eircom to raise two different levels of charge.
- 10.443 **ALTO** raises concerns about Eircom not charging a migration transaction fee for NGA and in their view this would lower barriers to switching from current services that have and continue to endure significant Eircom switching costs. ALTO also state that with Eircom's proposed mass migration of hundreds of thousands of customers to NGA that such an approach would give a huge and disproportionate benefit to Eircom.
- 10.444 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.13.3 ComReg's Assessment of Responses and Final Position:

- 10.445 Having considered the views of respondents, ComReg is of the view that the overriding principle of cost orientation should apply in relation to migrations. ComReg intends to revisit the migration charges for current generation and next generation in early 2013. The approach set out below ensures that the concerns raised by Vodafone and Eircom regarding distinct charges for different elements of the migration process are addressed.
- 10.446 For now, Eircom have set the price for VUA to include connection costs at the cabinet. In the case of NGA, the engineer will tend to migrate a large number of customers at the cabinet. The migration costs included in the VUA monthly rental excludes the cost of installing the NTU but includes the cost of the actual NTU itself. Eircom proposes to charge separately for the NTU installation, where they carry out the NTU installation on behalf of the OAO.
- 10.447 The costs at the cabinet are spread over a twenty year period to ensure no one OAO is charged the full costs for the one-off civil work and to ensure that Eircom recovers its total costs. The actual migration cost of the jumpering work at the cabinet is discussed in more detail as part of the VUA cost stack later in subsection 10.19.3 below. (Note: the assumptions, costs and prices quoted in this section are Eircom's proposals at the time of publication of this document. They do not necessarily represent ComReg's views).
- 10.448 Eircom has also published a one-off / upfront migration charge(s) of either €2.50 or €27.50, depending on whether the OAO installs the NTU / ONT itself. Where Eircom installs a new NTU on behalf of an OAO, then Eircom charges the OAO a one-off separate charge for this (see Eircom charge of €27.50 on the Bitstream Price List). If the OAO installs the NTU themselves then there is no separate charge from Eircom, except a one-off transaction charge of €2.50, similar to that charged for other soft migrations such as WLR.
- 10.449 The approach above differs from LLU where Eircom charges separately for the jumpering costs at the exchange. In the case of LLU, the visits by the engineer(s) to the exchange for a migration tend to be on a one-off or bulk migration basis. However, unlike NGA, it is not clear how long LLU migrations will remain on that platform and therefore costs of migration may have to be recovered over a shorter timeframe.
- 10.450 In general, Eircom are required to ensure compliance with the cost orientation obligation in terms of its migration charges and ComReg will review this in more detail over the coming months.

Appropriate cost recovery mechanism for migrations:

10.13.4 Views of Respondents:

10.451 The following sets out the high level views of respondents regarding the preferred Option 1 (universal charge) for migrations:

- Three respondents (Magnet, E-net and Digiweb) agree with Option 1;
- Three respondents (Eircom, BT and ALTO) disagree with option 1;
- One respondent (Vodafone) agrees in principle but had some issues in terms of the approach;
- One respondent (Imagine) requested worked examples for each of the options set out;
- The other three respondents did not provide any views.

10.452 **Eircom** proposes that a variant of Option 3 is the most appropriate. Eircom proposes that the single NGA universal migration charge will apply for the VUA and Bitstream services where Eircom staff is responsible for minimal network intervention (i.e. a cabinet jumper but no visit to the customer premises). To avail of this charge the OAO will be responsible for fitting the NGA NTU at the customer premises when they visit to deliver and commission CPE. If the migration service purchased includes the Eircom technician fitting the NTU then a higher migration charge will apply. Eircom anticipates that the cost-based charge for this enhanced migration service will be close to €< per NGA line when delivered at NGA cut over. Eircom also stated that Option 1 would lead to averaging of costs across services and connection types, deterring operators from undertaking resource-intensive tasks and penalising those who prefer to do their own wiring.

10.453 **Vodafone** believes that in principle a universal charge is the most appropriate however; a distinction needs to be made in relation to the network and service elements (as noted above in Q33).

10.454 **BT** and **ALTO** disagree that a universal migration charge is the most appropriate option for migrations as this is highly discriminatory and effectively makes current generation access (CGA) products subsidise NGA products. BT does not agree with the Eircom proposal to recover migration through Wholesale rental pricing as such is discriminatory against current generation products. BT state that it has estimated the migration cost (in question 34) and it concludes that the cost of bulk migrating from CGA to NGA is €233 per line compared with a bulk CGA migration fee of only €15 per line. BT considers that this proposal is discriminatory against CGA products and effectively means that they will cross subsidise NGA.

10.455 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.13.5 ComReg's Assessment of Responses and Final Position:

10.456 Having considered the views of respondents, ComReg has decided that for now there should be separate charges for current generation migrations and next generation migrations based on cost orientation in all cases, instead of a universal charge. ComReg considers that cost oriented charges may be more appropriate than a more complex charging mechanism that could distort incentives to migrate.

10.457 However, Eircom proposes to charge current generation connections upfront and NGA connections as part of the ongoing monthly rental for VUA. While there may be legitimate reasons for this, ComReg will keep this under review to ensure that this does not create unforeseen distortions in the broadband market.

10.458 As already outlined above, Eircom will be required to ensure that the migration charges are cost oriented and ComReg will review the migration charges in detail in early 2013.

10.13.6 ComReg's Decision:

WPNIA Market:

With regard to charges associated with Next Generation Migrations, Eircom shall ensure that the charges are cost oriented.

WBA Market:

With regard to charges associated with Next Generation Migrations, Eircom shall ensure that the charges are cost oriented.

With regard to charges associated with Current Generation Migrations,

Eircom shall ensure that the charges are cost oriented.

10.14 NGA Margin Squeeze Model

10.459 In ComReg Document No 12/27, ComReg discussed the NGA Margin Squeeze Model, containing the four margin squeeze tests, which Eircom would be obliged to comply with as part of ComReg's Decision.

10.460 The main points in this section are discussed under the following headings:

- Retail to wholesale NGA Bitstream margin squeeze test
- Wholesale Margin Squeeze test from End-to-end Next Generation Bitstream to NGA Bitstream
- Wholesale Margin Squeeze test from NGA Bitstream to VUA
- Wholesale Margin Squeeze test from VUA to SLU
- Outputs from the NGA Margin Squeeze Model.

10.15 Retail to NGA Bitstream margin squeeze test

10.15.1 ComReg's Preliminary View from Consultation Document:

10.461 As stated in ComReg Document No 12/27, one of the key areas for consideration in determining the appropriate margin between the retail broadband market and the wholesale broadband market is the appropriate retail costs.

10.462 In Figure 11 in ComReg Document No 12/27, we set out the main retail costs relevant in the context of current generation broadband services, based on the DCF model used in ComReg Decision D01/06, as well as ComReg's preliminary view of the retail costs that we considered are relevant in the context of NGA. The table also contained our preliminary view on the nature of the retail costs, be it fixed or variable, as well as our assessment of those cost categories most susceptible to economies of scale and scope. Please refer to subsection 11.10 of ComReg Document No 12/27 for the details.

10.463 We also noted that the retail cost information used in the NGA Margin Squeeze Model is largely based on data provided by Eircom, cross checked with some costing information obtained from other operators for comparable purposes.

10.464 In ComReg Document No 12/27 we asked the following question:

Q. 35 Do you agree with ComReg's preliminary views, as set out above in the table in Figure 11, regarding the retail costs in the context of NGA? Please provide reasons for your response.

10.15.2 Views of Respondents:

10.465 The following gives a high level view of the responses regarding the retail cost categories for NGA:

- Seven respondents (Eircom, BT, Vodafone, Magnet, Telefonica, Digiweb and ALTO) generally agree;
- One respondent (Imagine) disagrees;
- Three respondents (E-net, UPC and ECTA) did not provide any specific views.

10.466 **BT** and **ALTO** agrees but believe that the following costs should also be added: (1) Cost of voice services – WLR and or VoIP. (2) Service Assurance. (3) Cost of White Label Wholesale Service which should include a proxy for interconnect and general network connectivity.

10.467 **Vodafone** also agrees but made a number of points as follows:

- (1) Disagrees that backhaul charges are 'fixed' with the exception of self-supplied backhaul.
- (2) Increasing usage patterns will confer additional backhaul charges on operators and substantial additional costs.
- (3) Risk of new tiered charging system proposed by Eircom for different traffic queues, whereby Unicast, Multicast and QoS traffic will be billed under separate usage queues. Vodafone believes that depending on how this is done, it has the potential to maximise wholesale costs for OAOs who may use the network at quiet times with the result of a higher cost.
- (4) Vodafone has concerns in terms of Eircom's self supply of resilient services that would require operators to pay to replicate.

10.468 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.15.3 ComReg's Assessment of Responses and Final Position:

10.469 Having considered the views of respondents, ComReg has decided that the retail costs for current generation services are also relevant in the context of NGA but with amendments for certain cost categories such as marketing and sales, IP connectivity costs, modem costs (including installation costs) and Multicast costs in light of cost differences associated with NGA. Those main retail cost categories that differ in the context of NGA are discussed in more detail below in subsection 10.16. In any event, the retail costs should be kept under review by Eircom as NGA is rolled out and updated accordingly where appropriate.

10.470 With regard to the point on additional costs raised by BT and ALTO, the cost of PSTN voice does not relate to standalone broadband and is therefore not included. To clarify, service assurance costs are included in help desk costs and the cost of white label are also already included in the model.

10.471 Vodafone's points have been addressed by ComReg as follows:

- (1) Regarding Vodafone's point where it disagrees that backhaul charges are 'fixed', ComReg considers that that backhaul is variable to traffic rather than the number of lines;

- (2) In relation to Vodafone's point that increasing usage patterns will confer additional backhaul charges on operators and substantial additional costs, ComReg would like to clarify that this has been factored into the NGA Margin Squeeze Model. This calculates the average backhaul costs over 4 years while demand and traffic increase.
- (3) With regard to Vodafone's point on the risk of a new tiered charging system by Eircom for different traffic queues, ComReg would like to point out that Eircom must respect the margin between each of the products along the value chain in terms of setting its wholesale charges. Therefore, Eircom itself will be constrained by the potential disadvantages of the tiered charging system identified by Vodafone given that it would impact its retail prices despite constraints at the retail level from alternative platforms. In addition, IPTV/multicast pricing by Eircom is different from broadband pricing as it is based on capacity ordered (for BPM and BPE) rather than based ex post on the observed 95th percentile.
- (4) In relation to Vodafone's point that Eircom's self supply of resilient services would require operators to pay to replicate it, ComReg would like to clarify that a resilient WEIL is included in the NGA Margin Squeeze Model.

10.16 Retail Costs

10.472 The main retail costs that differ (from current generation services) in the context of NGA are now discussed under the following headings:

- Marketing and sales
- Help desk costs
- IP connectivity costs
- Modem costs (incl. installation costs)
- Multicast costs.

10.473 Any changes to the retail costs since the consultation process are also noted below.

Marketing and sales:

10.16.1 ComReg's Preliminary View from Consultation Document:

10.474 In ComReg Document No 12/27 ComReg set out that the marketing and sales costs, include the following:

- One-off start up costs
- Ongoing costs
- Campaign costs (initial costs and promotion costs).

10.475 We considered that the initial campaign costs in the context of NGA include the customer acquisition costs. Customer acquisition costs could be significant, especially if the customer being acquired is on an alternative fixed broadband platform i.e. cable.

10.476 In order to inform the level of retail costs deemed reasonable for a retail margin squeeze test, we welcomed the views of industry on the typical customer acquisition costs. Please refer to Figure 12 of ComReg Document No 12/27 for the specific details of the information requested from operators on customer acquisition costs as part of the consultation process.

10.477 ComReg considered that one of the other more significant costs from a marketing and sales perspective is campaign/advertising costs.

10.478 We considered that the advertising costs contained within 'marketing and sales' may lend itself to an EEO approach within the SEO model where operators such as Vodafone, O2, BT, UPC etc have a large customer base and extensive product set over which to spread the cost of its national advertising campaigns.

10.479 In ComReg Document No 12/27 ComReg asked the following questions:

Q. 36 Do you agree that an EEO approach could be applied in the case of some retail cost categories (e.g. advertising), where other large network operators in Ireland are susceptible to similar economies of scope to that of Eircom? Please provide reasons for your response including examples of any specific retail costs that you believe are susceptible to EEO in the context of NGA, with detailed reasons and justification.

Q. 37 Do you believe that an operator (OAO) can leverage its retail costs e.g. advertising costs from one part of its business i.e. mobile business to another part of its business i.e. fixed broadband business? Please provide reasons for your response.

10.16.2 Views of Respondents:

10.480 In summary, the following gives the high level views of respondents regarding the EEO approach for certain retail costs e.g. advertising costs:

- One respondent (Eircom) agrees with the EEO approach and further added that EEO costs should be applied to all retail costs between the retail NGA services and VUA;
- Seven respondents (BT, Vodafone, Magnet, Telefonica, Imagine, Digiweb and ALTO) disagree with the EEO approach and some of the comments raised by respondents are further discussed below;
- Three respondents (E-net, UPC and ECTA) had no specific views.

10.481 **Eircom** believes that in those areas where UPC are present and have deployed DOCSIS 3.0 and where Eircom will deploy VDSL with vectoring there will be retail broadband competition between Eircom, UPC and VUA based OAOs. Eircom also believes that most respondents in their response to Consultation Document No 11/72 fail to distinguish between the network layer (where any economies eircom enjoys are shared with other operators in the form of lower wholesale prices) and the retail layer – where operators with customers on many platforms and in many countries can enjoy scale and scope economies exceeding those of Eircom.

10.482 **Vodafone** made the following points:

- No DSL operator has reached a market share of 25% to date.
- Vodafone did not believe that backhaul charging should be based on EEO.
- Vodafone disagrees that advertising should be treated on an EEO basis. Vodafone state that while advertising unitary rates can be purchased by large operators at similar prices, advertising has to be measured in terms of cut through to the target audience, market awareness and advertising effectiveness.

10.483 **BT** and **ALTO** disagrees with the EEO approach for the following reasons:

- Eircom still hold a huge fixed market share compared to other providers and competition is only in its infancy. Only when Eircom's retail share starts to be equivalent to others should this action be taken.
- Most operators cannot avail of the advantages of scale and scope; hence this proposal acts to undermine the smaller players of which there are many.
- BT should be removed from the comparison as it is not in the consumer market and by comparison to the consumer volumes our customer base would be relatively small.

10.484 In relation to ComReg's question (Question 37) on whether an operator (OAO) can leverage its retail costs e.g. advertising costs from one part of its business to another part of its business, the majority of operators that responded to this question agreed.

10.485 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.16.3 ComReg's Assessment of Responses and Final Position:

10.486 Having considered the views of respondents, ComReg has decided that the SEO cost model is by in large the most appropriate for the Retail Margin Squeeze test for the reasons already set out in subsection 11.6.2 of ComReg Document No 12/27, except for certain retail costs which should be based on EEO costs. ComReg has decided that the following retail costs should be based on EEO costs:

- Advertising costs
- Billing costs
- Product management costs.

10.487 ComReg believes that there are large operators in Ireland with an international presence who can take advantage of economies of scale and scope between their operations in Ireland and other countries in which they operate. ComReg considers that the costs above are most susceptible to such scale / scope advantages especially in the context of bundle offers (with fixed voice, mobile voice, broadband, IPTV, etc.) which are more often sold in the market. This impacts both advertising costs but also product management costs since the latter can be spread over a wide scope of products. Billing costs are mainly variable costs and therefore EEO costs and SEO costs are similar. ComReg will keep this under review.

10.488 In response to Eircom's point on retail competition, ComReg has already addressed the issues regarding retail competition in its response to question 18 above at subsection 10.4.3.

10.489 In relation to Vodafone's point on the 25% market share, ComReg considers that the 25% market share should not correspond to the market share of any operator today but to the market share of an efficient operator in the medium term. If market shares are set too low, there could be a risk of not incentivising operators to grow sufficiently.

Help desk costs:

10.16.4 ComReg's Preliminary View from Consultation Document:

10.490 In ComReg Document No 12/27 we also considered help desk costs as part of the review of the retail costs in the context of NGA. Given the transition to the new NGA technology, we considered that help desk costs may increase in the early stages of product launch, once the NGA services are rolled out and customers are migrated over. The cost of help desk facilities could be significant, at least initially while the customer familiarises itself with the new equipment and software. A large portion of this cost will also depend on the nature of the installation programme from Eircom and OAOs and how seamless the migration will be.

10.491 In ComReg Document No 12/27, we invited the views of operators together with financial estimates from industry of the likely costs they would likely incur during the migration process and post the migration process based on expected take up.

10.492 In ComReg Document No 12/27 ComReg asked the following question:

Q. 38 Do you agree with ComReg's preliminary view that help desk costs for Eircom (retail costs) in the context of NGA should be adjusted for the SEO unit cost scenario? Please provide reasons for your response.

Q. 39 What do you consider would be the likely estimate of help desk costs during the migration process and post migration process based on an expected level of take up for NGA services? Please provide the details

10.16.5 Views of Respondents:

10.493 In summary, the following gives a high level overview of responses on whether help desk costs (retail) for Eircom in the context of NGA should be adjusted for the SEO unit cost:

- Three respondents (Vodafone, Magnet and Digiweb) generally agree
- One respondent (Eircom) disagrees
- Two respondents (BT and ALTO) appear to have misunderstood the question
- The other five respondents did not provide any comment.

10.494 **Eircom** believes that there is no reason why an OAO should incur higher help desk costs in selling NGA services than the Eircom level modelled at EEO costs. The reasons provided by Eircom included (1) Increased functionality of the eircom Unified Gateway used to support wholesale NGA services and (2) Minimal scale effects for help desks after a moderate size of installed base. Eircom believes that the level of help desk costs will depend on the migration model - either the post-out model or the truck-roll model. Eircom is of the view that the help desk cost incurred by the OAO depends on the complexity of the NGA CPE and on the level of technical know-how shown by the calling customer. Eircom also added that the level of help desk costs currently included in the DCF model is broadly consistent with Eircom's recent experience of retail repair costs and will serve as a sensible basis for modeling customer care for NGA after installation.

10.495 **BT** and **ALTO** disagree and believe that EEO should be applied for the following reasons: (1) The concept is wrong as the reference operator is the incumbent hence any comparison with yourself must be EEO. (2) Eircom has considerable experience of working at large scale, it has the largest number of fixed service customers and associated information and should be well capable of achieving help desk efficiency very quickly. (3) Eircom should be able to manage its help desk costs efficiently. ComReg considers that BT and ALTO seems to have misunderstood the question. The question is not to determine whether EEO should apply to Eircom but whether it should apply for the economic space between retail and wholesale.

10.496 In relation to ComReg's question on the likely estimate of help desk costs during the migration process to NGA and post the migration process, only a few respondents provided their views and very little costing information was submitted regarding the estimate of likely help desk costs.

10.497 **Magnet** provided confidential costing information on its help desk costs. However, it proved difficult to carry out a direct comparison with Eircom's costs as Magnet's help desk costs related to a mixture of copper and fibre infrastructure.

10.498 **Vodafone** agrees that the rollout of NGA will give rise to increased helpdesk costs for operators as customers get familiar with new technology but the magnitude of this cost will be entirely be driven by the services provided by that operator. Vodafone also believes that these costs could greatly increase if services such as IPTV, Home security etc. is also provided. Vodafone also believes that given the level of unknowns this has the potential to have an impact on call centers in the following ways:

- Increasing call duration

- Increasing call complexity, which may in turn require a more skilled agent to answer
- Increasing call propensity, call volumes increase as more customers may potentially seek help.

10.499 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.16.6 ComReg's Assessment of Responses and Final Position:

10.500 Having considered the views of respondents, ComReg has decided that the level of helpdesk costs should be based on the SEO costs, based on the current level of help desk costs in the DCF model for legacy Bitstream. The level of help desk costs incorporated in the model is consistent with Eircom's recent experience of retail repairs and for the moment it seems a reasonable basis for modelling the help desk costs.

10.501 ComReg considers that other large operators in the Irish telecoms market e.g. Vodafone, UPC, Sky, who provide multiple services, have the ability to gain scale / scope efficiencies from their help desk facility which would result in lower unit costs.

10.502 However, Eircom must keep the retail costs under review and update them as appropriate as NGA is rolled out.

IP connectivity:

10.16.7 ComReg's Preliminary View from Consultation Document:

10.503 In subsection 11.10 of ComReg Document No 12/27, ComReg discussed IP connectivity including the cost of transit and peering for internet protocol ('IP') traffic on Eircom's network and the difference between transit and peering between Internet Service Providers ('ISPs').

10.504 ComReg pointed out that the information used for IP connectivity was the information provided by Eircom with a cross check to information received from another operator.

10.505 We recognised that IP connectivity costs can be quite material, depending on the volume of traffic an operator can commit to and larger operators are obviously in a much better position to negotiate with carriers internationally and avail of a cheaper cost per Mbps.

10.506 We welcomed the views of industry regarding our proposal for setting the IP connectivity costs in the context of NGA.

10.507 In ComReg Document No 12/27 ComReg asked the following question:

Q. 40 Do you agree with the proposed approach taken for determining the IP connectivity costs for NGA services? Please provide reasons for your response.

10.16.8 Views of Respondents:

10.508 In summary, the following gives a high level overview of the responses relating to the approach for determining the IP connectivity costs for NGA:

- Three respondents (Eircom, Vodafone and Imagine) generally agree
- Three respondents (BT, Digiweb and ALTO) disagree
- One respondent (Magnet) provided confidential costing information on its IP connectivity costs
- The other four respondents provided no views.

10.509 **BT** and **ALTO** believes that the costs for IP connectivity are incomplete, stating that the IP costs must include the cost of interconnect to the backhaul network and the cost of the operators IP core, i.e. operators public internet routers and the costs of transit and peering.

10.510 **Vodafone** agrees in principle with the approach taken by ComReg but made the following points:

(1) There is a cost risk regarding BECS and WEIL pricing based on growing usage patterns.

(2) Vodafone is concerned with Eircom's tiered approach to backhaul pricing.

(3) For backhaul, Vodafone stated that it would be more appropriate if a slightly higher per MB 95th percentile charge was levied as opposed to any flat circuit charge. In this way the circuit charge is recovered as the number of customers and usage grows and the question of over recovery does not come into play.

10.511 **Magnet** provided confidential costing information relating to its IP connectivity costs which have been compared against Eircom's costs for reasonableness.

10.512 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.16.9 ComReg's Assessment of Responses and Final Position:

10.513 Having considered the views of respondents ComReg has decided that the level of IP connectivity costs in the NGA Margin Squeeze Model should be based on Eircom's costs.

10.514 ComReg considers that operators have many options to obtain IP interconnect rates at competitive market rates and therefore we see no need to uplift the Eircom IP connectivity costs.

10.515 While BT and ALTO believes that the costs for IP connectivity are incomplete, stating that the IP costs must include the cost of interconnect to the backhaul network and the cost of the operators IP core, ComReg would like to clarify that all of these elements have been included by ComReg in calculating IP connectivity costs.

10.516 ComReg believes that Vodafone seems to misinterpret the margin squeeze test. To clarify, we are not imposing a flat rate charge for Bitstream as a charging mechanism instead we are calculating the average cost per customer in the margin squeeze test whatever the charging basis is. Please also refer to the points made by ComReg in response to Question 35 at subsection 10.15.3 above.

Modem costs (incl. installation costs):**10.16.10 ComReg's Preliminary View from Consultation Document:**

10.517 In ComReg Document No 12/27 ComReg considered that the cost of modems and installation costs (or customer premises equipment) would be more expensive for NGA services compared to current generation broadband services.

10.518 ComReg pointed out that the current modem costs included in the NGA Margin Squeeze Model for the retail margin squeeze test were based on manufacturers' offers to Eircom for modems in the context of NGA. This was also compared with information obtained from an OAO in order to ensure that the relevant input is comparable with the modem costs incurred by other operators in the context of NGA.

10.519 We welcomed the views of industry on the likely costs of installation (including modem costs), regardless of who would be required to install it.

10.520 We considered that a period of 5 years would be a more appropriate timeframe to write off the modem costs.

10.521 In addition, as the costs of technicians visiting the customer premises, are one-off and would not be required a second time if the end user were to transfer to a different VDSL provider, or even to migrate to a service provided over unbundled sub-loops, a longer depreciation period of 20 years seemed more appropriate.

10.522 In ComReg Document No 12/27 ComReg asked the following question:

Q. 41 Do you agree that the cost of modems should be written off over 5 years and the cost of technicians visiting the customer premises should be written off over 20 years in the context of NGA? Please provide reasons for your response.

Q. 42 What do you consider is a reasonable estimate of the likely installation costs involved in NGA services? Please provide the details as part of your response.

10.16.11 Views of Respondents:

10.523 In summary, the following gives a high level overview of the responses on whether modems should be written off over 5 years and the cost of technicians over 20 years.

- Three respondents (Eircom, Imagine and Digiweb) agree
- Three respondents (BT, Vodafone and ALTO) disagree

- One respondent (Magnet) provided a confidential response
- Four respondents (Telefonica, E-net, UPC and ECTA) had no views on the question.

10.524 **BT** refers to Eircom's plans to deploy the technology known as 'Vectoring'. It stated that although it is not known who the vendor is, there appears to be only one vendor who is providing generally available vectoring equipment at this time, with others up to a year away. Deployment of non-vectoring equipment or early generation vectored equipment carries the risk that future improved versions of the network equipment force upgrades to the customers CPE. Hence, BT is of the view that there is a risk that early deployed CPE will have a relatively short lifespan of say two to three years as the technology matures. Likewise, **ALTO** also believes that modem depreciation should be 2 years if vectoring is deployed and 5 years if it is not.

10.525 **Vodafone** is of the view that the current time period of 42 months for modems is too long and instead it proposes a time period of 30 months for modems. Vodafone further suggests that engineering visits should be written off over a period of 15 years for new installs only and 10 years for service calls.

10.526 ComReg also sought the views of respondents on the likely installation costs involved in NGA services. While only a few respondents provided their views on the likely installation costs, the data was provided in confidence to ComReg. Of the non-confidential data provided by respondents, **BT** suggests that a reasonable estimate of the likely installation costs is in excess of €233 and BT refers to its response to Question 34.

10.527 **Telefonica** and **ALTO** both consider a reasonable estimate of the likely installation costs is in excess of €100 as this is the current cost oriented charge Eircom applies when an engineer visits the customer premises where no fault is located on the eircom network.

10.528 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.16.12 ComReg's Assessment of Responses and Final Position:

10.529 Having considered the views of respondents, ComReg has decided that a period of 5 years is appropriate for the modem lifetime for now. In addition, the cost of technicians visiting the customer premises should be written off over 20 years.

- 10.530 With regard to the modem lifetime of 5 years, the customer acquisition lifetime is 42 months but ComReg considers that even as customers move, the modem can still be used. Given that NGA has not yet been rolled out and technology choices (i.e. vectoring) are evolving, ComReg intends to keep the modem lifetime and the customer lifetime in the context of NGA under review.
- 10.531 The costs of technicians visiting the customer premises, are one-off and would not be required a second time if the end user were to transfer to a different VDSL provider, or even to migrate to a service provided over unbundled sub-loops, therefore a depreciation period of 20 years is appropriate. ComReg considers that once a customer moves to NGA it is unlikely that they will move back to a current generation service.
- 10.532 In relation to Vodafone's response, ComReg believes that it did not provide any justification and therefore ComReg cannot see reasons why modems should be written off over a shorter time period.
- 10.533 With regard to the point raised by Telefonica and ALTO that a reasonable estimate of the likely installation costs is in excess of €100, ComReg considers that it is difficult at this point to form a view on this until the NGA rollout commences and the actual costing information is available. ComReg intends to keep this under review.
- 10.534 With regard to BT's point on the migration charge calculation, ComReg has already discussed this point at subsection 10.13 above.

Multicast costs:

10.16.13 ComReg's Preliminary View from Consultation Document:

10.535 In ComReg Document No 12/27 ComReg recognised that the retail cost stack for current generation Bitstream services (under ComReg Decision D01/06) did not include any retail costs related to multicast services.

10.536 ComReg noted that at some point in the future it would be reasonable to assume that Eircom may include multicast services as part of a wholesale NGA offering.

10.537 Therefore, in ComReg Document No 12/27 we considered that where multicast services are offered at a retail level that the typical retail costs would include the following:

- Multicast platform costs
- Marketing costs.

10.538 We welcomed the views of industry on the likely estimate of retail costs associated with the provision of multicast services.

10.539 In ComReg Document No 12/27 ComReg asked the following question:

Q. 43 What do you consider is a reasonable estimate of the retail costs associated with multicast services? Please provide the details as part of your response.

10.16.14 Views of Respondents:

10.540 While a number of respondents have no specific views, those operators that did respond had mixed views on the likely retail costs for multicast.

10.541 **Digiweb** is of the view that the costs associated with provision of multicast are likely to be quite low and that the service is natively supported by the deployed equipment so no additional costs arise from this source.

10.542 **Eircom** provided a detailed multicast submission to ComReg in confidence. The submission is however based on provision of a wholesale multicast service rather than a retail service.

10.543 **Vodafone** stated that it has concerns about the traffic queue pricing proposed by Eircom and how much multicast traffic may be charged to low density areas. Vodafone provided additional confidential costing information associated with the provision of multicast services to end customers. Vodafone believe that a different scheme may be needed for multicast whereby it is charged based on enabling multicast on a per customer basis rather than on the traffic itself or possibly a hybrid charge with the majority of the cost being on enabling the customer port for multicast rather than on the multicast stream itself. However, Vodafone stated that it is simply too early at this stage to provide details of exact retail costing as there are so many parts undecided.

10.544 While **Magnet** provided ComReg with costing information on multicast in confidence, Magnet, ALTO and Telefonica set out their views on the main costs relevant to IPTV / multicast retail services:

- DSLAM costs.
- Content.
- Bandwidth usage costs and transit costs.
- Equipment to receive the channels, interpret them and to change them into IP, then to encrypt the channels and send them out.
- Each TV content provider requires unique encoder cards to receive each channel as each potentially comes in via different frequencies.
- Satellites / transponders.
- Helpdesk costs including cost of someone on call 24/7/365 to repair TV faults.

10.545 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97

10.16.15 ComReg's Assessment of Respondents Views and Final Position:

10.546 Having considered the views of respondents, ComReg is of the view that it is too early at this stage to determine the retail costs for Multicast (IPTV) services. If Eircom decides to launch an IPTV service in the future, the NGA Margin Squeeze Model will need to take account of the relevant retail costs. ComReg intends to keep this under review where an IPTV service is launched by Eircom.

10.17 Wholesale Margin Squeeze test from End-to-end NGA Bitstream to NGA Bitstream

10.17.1 ComReg's Preliminary View from Consultation Document:

10.547 In ComReg Document No 12/27, we stated that the End-to-end NG Bitstream product allows the Access Seeker to purchase Next Generation WBA without the need to have its own infrastructure for example Backhaul and ISP services.

10.548 The End-to-end NG Bitstream costs in the NGA Margin Squeeze Model include the NGA Bitstream costs plus the additional costs associated with additional NGN backhaul and IP connectivity costs.

10.549 ComReg proposed to base the associated backhaul costs on Eircom's Wholesale Ethernet Interconnect Link ('WEIL') product¹⁰⁰ by using the customer sited ('CSH') handover version of the WEIL product to handover traffic between a nominated point of handover and the ISP.

10.550 The proposed IP connectivity costs were based on an estimated forward looking throughput (based on Kbps peak hour usage) where the cost is subject to change as user profiles evolves and actual throughput is measured.

10.551 In ComReg Document No 12/27 ComReg asked the following question:

Q. 44 Do you agree with the proposed approach for determining the cost stack for End-to-end Next Generation Bitstream? Please provide reasons for your response.

10.17.2 Views of Respondents:

10.552 In summary, the following gives a high level overview of the responses on the cost stack for the End-to-end Next Generation Bitstream product:

- One respondent (Eircom) disagrees
- Eight respondents (BT, Vodafone, Magnet, Telefonica, E-net, Imagine, Digiweb and ALTO) agree while a number of these respondents also proposed other costs that should be considered (see below)
- Two respondents (UPC and ECTA) had no specific views.

¹⁰⁰ Reference Eircom Wholesale Network Price List; Service Schedule 013 - Wholesale Ethernet Interconnect Link.

10.553 **Eircom** does not accept that there should be a margin squeeze test between Retail and end-to-end/white label given that both products are unregulated. Eircom stated that if the starting point of the test is an operator purchasing NGN Bitstream from Eircom and competing with Eircom in the provision of white label services, then any additional costs must be limited to the incremental NGN backhaul costs, and the incremental IP connectivity costs. This means that it would be entirely inappropriate to calculate margins on the basis of the average costs faced by an OAO competing in the market for end-to-end NGA Bitstream. Eircom also stated that any floor for end-to-end NGA Bitstream must take into consideration the cost structure of the backhaul and its influence on OAOs' pricing decisions for end-to-end NGA Bitstream.

10.554 **BT, Telefonica** and **ALTO** agree but added that QIB and PIB costs should also be included.

10.555 **Vodafone** agrees in principle but it believes that there are other costs involved as follows:

(1) As usage increases, the number of customers that can be supported on each circuit decreases giving rise to more circuits being needed even if the number of customers remain static. This will also hold true for the end-to-end circuits based on the WEIL input proposed by ComReg.

(2) Vodafone has assumed that by end-to-end Bitstream that ComReg are referring only to the IP pipe itself and not over the top services such as the actual provision of IPTV, VoIP etc. If a service provider was taking an end-to-end IP service, how would they provide any form of OTT service as network level integration would be required? For example, Multicast would require multicast injection points, VoIP would require CoS flags to be honoured and so on.

10.556 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97

10.17.3 ComReg's Assessment of Respondents Views and Final Position:

10.557 Having considered the views of respondents, the following sets out the changes to the End-to-end Next Generation Bitstream cost stack since the consultation process:

- **National Backhaul:** There has been a small increase to the national backhaul costs as ComReg has changed the starting year of the model from 2012 to 2013 which has resulted in higher traffic volumes.

- **IP Connectivity:** There has been an overall reduction to the cost of IP connectivity to reflect (1) change to the cost per Mbps for IP connectivity to reflect Eircom's costs (2) a change by ComReg to the starting year of the model from 2012 to 2013 which has resulted in higher traffic volumes.

10.558 The End-to-End NGA Bitstream costs must be kept under review by Eircom and updated as appropriate as NGA is rolled out. Please refer to Figure 10.3 below for the outputs of the NGA Margin Squeeze Model. It is important to note that these may change once NGA is rolled out and costs, volumes, usage, etc become known.

10.559 The wholesale End-to-end Next Generation Bitstream product is a simple resale product offered by Eircom wholesale to those operator who wish to offer retail services but have no infrastructure at all, for example a mobile operator. While such wholesale offers are welcomed by ComReg, it is the lowest possible rung of the ladder of investment and is unlikely to offer much in the way of innovation or price differentiation for consumers and is therefore not actively promoted by ComReg as facilitating deeper and more sustainable competition. This cost element in the NGA Margin Squeeze Model is quite small relative to the other wholesale product costs. The precise form of the margin squeeze control has changed slightly since the consultation: the test is now between the End-to-end product and NGA Bitstream (which is regulated) with a parallel test between retail services and NGA Bitstream. ComReg believes that this addresses Eircom's difficulty.

10.560 With regard to Eircom's point that any additional costs must be limited to the incremental NGN backhaul costs, and the incremental IP connectivity costs, ComReg believes that if all customers were to migrate to NGA (which Eircom expect to happen relatively quickly), then the incremental backhaul costs will not be sufficient to recover all costs.

- 10.561 In the European Commission Decision of 04.07.2007 relating to proceedings under Article 82 of the EC Treaty¹⁰¹, the Commission, when assessing the replicability of Telefonica's retail prices, notes that the process of climbing of the ladder of investment can only be effective if there is a margin between all the steps of the ladder. It also points to a report by Prof. Martin Cave: "A key precondition for neutrality across different wholesale broadband products is satisfaction of a margin squeeze test. [...] A prohibition of a margin squeeze thus lends itself to the task of ensuring that prices are set in a way designed to prevent the dominant firm from leveraging its market power from one stage of the production process into a neighbouring one. Applying it consistently over a range of broadband wholesale (and retail) products should avoid exclusionary behaviour of this kind. [...]"¹⁰².
- 10.562 In response to Vodafone's comments about the link between usage and backhaul costs, ComReg would like to clarify that the link between usage and backhaul costs have been reflected in the NGA Margin Squeeze Model where the cost of backhaul is calculated over 3-4 years and takes into account the projected increase in speeds. This allows for some stability in price over this period of time.
- 10.563 In addition, ComReg would like to clarify to Vodafone that the white label / End-to-end next generation Bitstream product that ComReg is referring to is only the Internet service and not the OTT services. Additional costs would have to be added for any such additional services.
- 10.564 While BT, Telefonica and ALTO agree, they stated that QIB and PIB costs should also be included. ComReg would like to point out that these costs have already been included in the cost stack.

¹⁰¹ Case COMP/38.784 – *Wanadoo España vs. Telefónica*; dated 4 July 2007.

¹⁰² Martin Cave, Remedies for Broadband Services, Paper prepared for DG INFSO, September 2003

10.18 Wholesale Margin Squeeze test from NGA Bitstream to VUA:

10.18.1 ComReg's Preliminary View from Consultation Document:

10.565 As already discussed in ComReg Document No 12/27, an OAO will have two available wholesale products to offer broadband and other services over the top of the NGA broadband network to its retail customer. These two current products are VUA and NGA Bitstream. Please refer to subsection 11.10.3 of ComReg Document No 12/27 for a background discussion on the VUA network structure and the NGA Bitstream network structure.

10.566 The major difference between VUA and NGA Bitstream is that VUA requires an individual backhaul rental from each exchange whereas with NGA Bitstream Eircom aggregates all the OAO's broadband data on the Eircom network for a single point of handover for the OAO.

10.567 In ComReg Document No 12/27 ComReg considered that given its objective of encouraging infrastructure investment, it is critical that VUA investment by OAOs is promoted as there is less use of Eircom's own network with VUA. Consequently, the price for NGA Bitstream should always be higher than the price of VUA plus all its associated costs to get the customer's broadband data back to the OAO's own network.

10.568 ComReg proposed that the assumed cost for NGA Bitstream in the NGA Margin Squeeze Model should be the sum of the VUA costs (this is discussed in the subsection below) plus the costs associated with getting the retail customer broadband data from each exchange onto its own network, namely:

- WEIL cost at each exchange aggregation node to the OAO own network because an OAO would need to connect VUA to its own network
- Backhaul costs
- Broadband remote access servers ('BRAS') and other applicable costs to aggregate and route the OAO's customers' data onto its own network.

10.569 In ComReg Document No 12/27 we considered that the kbps peak-hour assumption needs to increase for NGA. Therefore, for the purposes of determining relevant prices for NGA, we proposed that broadband throughput at peak hour should increase to between approximately 140 kbps to 230 kbps for broadband over the next three years or so.

10.570 Therefore, broadband throughput of between 140 and 230 Kbps over the period from 2012 to 2015 was factored into the NGA Margin Squeeze Model in 2012. This is based on data obtained from Eircom and is also consistent with the WBA model but with an uplift applied for the higher speeds expected over NGA. Furthermore, we stated that an increased kbps assumed peak usage would increase, for example, the required capacity of the WEIL backhaul line and other kbps related usage costs. We welcomed the views of industry on this approach.

10.571 In terms of Multicast, we recognised in ComReg Document No 12/27 that while it is a proposed mandated product in the context of WBA, it is unclear what Eircom's plans are for multicast services at a wholesale level. It was proposed that the NGA Margin Squeeze Model would include the NGA Bitstream product with the option of including estimated costs with and without multicast.

10.572 We considered a number of assumptions that may be appropriate for determining the cost of Multicast services:

- The number of standard definition channels and high definition channels at the retail level;
- The bandwidth required in Mbps for a standard definition channel;
- The bandwidth required in Mbps for a high definition channel;
- The number of channels sent to the DSLAM and the number of channels sent to aggregation node (which allows us to dimension the backhaul from the aggregation node).

10.573 We considered that Multicast and broadband share the same backhaul. Therefore, it would be necessary to allocate the backhaul costs between multicast and broadband. By including multicast services, the backhaul costs would increase given that more capacity is required so the cost of the backhaul which is based on the wholesale Ethernet leased lines offer increases. However, this would reduce costs allocated to broadband.

10.574 ComReg also proposed that if Eircom decided to provide Multicast services, the price for Multicast would be subject to the normal pre-notification procedures to ComReg and Industry. In addition, ComReg believed that where Multicast services are provided that Eircom should ensure that any pricing is non-discriminatory.

10.575 We sought the views of Industry regarding the proposed parameters set out in the context of Multicast.

10.576 In ComReg Document No 12/27 ComReg asked the following question:

Q. 46 Do you agree with the proposed approach for determining the cost stack for NGA Bitstream? Please provide reasons for your response.

Q. 47 What are your views regarding the parameters for determining the relevant costs for a Multicast service. Please provide reasons for your response.

10.577 The views of respondents to each of the two questions above and ComReg's assessment of those responses and its final position are discussed under the following headings:

- Cost stack for NGA Bitstream
- Costs for Multicast

Cost stack for NGA Bitstream:

10.18.2 Views of Respondents:

10.578 In summary, the following gives a high level overview of the responses regarding the cost stack for NGA Bitstream:

- Eight respondents (Eircom, BT, Vodafone, Telefonica, E-net, Imagine, Digiweb and ALTO) generally agree but also raised a number of comments which are set out below.
- Two respondents (Magnet and UPC) did not agree or disagree but provided comments, as set out below.
- One respondent (ECTA) did not provide any comments on this question.

10.579 **Eircom** believes that it is inappropriate for ComReg to use such a cost stack in a simplistic way to regulate the price level for Eircom NGA Bitstream and it stated that it has a major concern that actual VUA users can achieve costs less than the model suggests by using a combination of own network, third party facilities (e.g. eNet, Bord Gais etc.), and Eircom elements. Eircom also raised concerns regarding the average throughput (between 140kbps and 230 kbps) on every Bitstream seeker, where it believes that this approach will benefit a Bitstream user with excessive throughput and penalise those which manage their demand.

- 10.580 **BT** and **ALTO** believe that the backhaul charges should be compared to the costs experienced by other providers as the physical connection arrangement for Bitstream Plus is different to the VUA connection arrangement. In addition, both of these respondents are of the view that Eircom will be able to avail of shared network services within the NGN/NGA node which will enable increased efficiencies over other operators. BT considered that a weighting should be applied for this additional benefit.
- 10.581 **Vodafone** agrees with the costs outlined by ComReg but believes that additional costs exist that ComReg must take account of in determining the cost stack. In its response to Question 35 Vodafone highlighted that there would be additional costs that operators would have to bear in providing resilience for Eircom backhaul services, including the need to purchase additional WEILS in order to provide the same level of redundancy.
- 10.582 In addition, Vodafone considers that it is not clear which two inputs (VUA or NGA Bitstream) will be used by Eircom for the self-supply of NGA services. Vodafone raised concerns regarding Eircom's self-supply of resilient services to their own footprint and stated that these costs should also be factored in as they provide a real advantage to Eircom and a substantial cost to access seekers. In addition, Vodafone stated that it has substantial concerns regarding the way in which different traffic queues will be measured and charged in the context of NGA not only for multicast but also for CoS.
- 10.583 Vodafone also believe that given that Multicast traffic will be contained in the same backhaul circuit, this also decreases the use of that circuit for unicast traffic. As Multicast is likely to be priced at a premium, it is likely that over-recovery could occur. Vodafone also raised concerns with ComReg's proposal to review usage on a per customer basis at least annually. Vodafone believe this period is too long and that a 6 month window should be used.
- 10.584 **Magnet** is of the view that a single point of handover between Eircom and the OAO may lead to a potential failure in the system. In addition, Magnet believes the expected raise in bandwidth usage outlined by ComReg is too low and should be revised upwards.

10.585 **UPC** is of the view that ComReg's projection of peak hour rate for VDSL broadband would appear to be too low and therefore the proposed cost and resulting wholesale charge levels are also too low. UPC added that there are significant network costs associated with managing high bandwidth and ensuring that there is sufficient capacity to meet peak time usage and that this will have to be borne in mind as Eircom rolls out its NGA network and Eircom and access takers on the Eircom network start to attract increasing number of NGA customers (at both the wholesale and retail level). Furthermore, and based on its own experience, UPC is of the view that consumer adoption of higher bandwidth services is increasing and that the often suggested premise that consumers expect regular speed upgrades at constant or even falling prices is not holding. In this regard UPC would recommend that ComReg amends the proposed pricing structure to reflect future costs of supplying higher bandwidth services and higher take-up thereof by users.

10.586 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.18.3 ComReg's Assessment of Respondents Views and Final Position:

10.587 Having considered the views of respondents, the following sets out the changes to the NGA Bitstream cost stack since the consultation process:

- **WEIL:** Further to the issue raised by Vodafone regarding the need for an additional WEIL for resilience, there has been an increase in the WEIL costs to account for an additional WEIL. A second WEIL has been added at a national level for resilience purposes, so that OAOs can have a similar level of resilience as Eircom with its own network. In addition, a second WEIL is also necessary if the first WEIL were to breakdown.
- **Backhaul:** Since the same backhaul will be reused for NGN and for NGA, ComReg is of the view that costs per Mbps for backhaul in a NGA context should be the same as costs per Mbps for backhaul as calculated in the Bitstream cost floor model. Therefore, the cost per Mbps of the Bitstream cost floor model is also used in the context of NGA to ensure consistent treatment.

- **Aggregation Node:** A cost is now included in the NGA Margin Squeeze Model to reflect an additional layer of aggregation, which was overlooked in the model at the consultation stage. Previously, aggregation nodes were only deployed at each MDF to aggregate traffic from DSLAMs. However, no aggregation node was installed to aggregate traffic from the different MDF / aggregation nodes across the country. However, aggregation nodes have now been incorporated into the NGA Margin Squeeze Model.
- **BRAs:** There has been an overall reduction in the cost of BRAs mainly as a result of (1) a change by ComReg to the take-up assumption for NGA (a more conservative view on take-up has now been adopted) and (2) a change in the asset life of BRAs. The BRA costs are now spread over a longer period given that these assets will remain relevant where FTTC is replaced by FTTH.
- **Multicast:** This is discussed below in subsection 10.18.5.

10.588 The costs for NGA Bitstream must be kept under review by Eircom and updated as appropriate as NGA is rolled out. Please refer to Figure 10.3 below for the outputs of the NGA Margin Squeeze Model. It is important to note that these may change once NGA is rolled out and costs, volumes, usage, etc become known.

10.589 ComReg considers that it is necessary to ensure an adequate economic space between NGA Bitstream and VUA. This is in order to protect operators using VUA and to provide the certainty which would encourage other operators to use this service. The VUA service requires considerable investment in infrastructure and at this time only one operator (BT) is in a position to use it extensively. Other players are likely to rely on Bitstream services in the short run. As the use of VUA (or LLU) becomes more entrenched it may be possible to remove the NGA Bitstream to VUA economic space test. This will be kept under review.

10.590 ComReg has addressed the issues raised by respondents below.

- 10.591 In response to the points raised by Eircom, ComReg is of the view that the approach suggested by Eircom is inconsistent with the approach used for Bitstream floors and ceilings where the cost of Eircom's wholesale WEIL and WSEA are used rather than the OAO's own costs. In addition, the preferred approach for OAOs for backhaul traffic seems to be the WEIL and WSEA and therefore this should be used to facilitate further infrastructure deployment. Regarding the point on traffic usage, it is important to note that the costs for NGA Bitstream in the NGA Margin Squeeze Model will depend on the level of traffic while ensuring that the price respects the economic space based on the throughput. Therefore, if an OAO uses excessive throughput these costs will have to be recovered by Eircom from the relevant OAO. Eircom's charging basis for NGA Bitstream includes a price per Mbps component which means that the more an OAO generates traffic, the more it will have to pay Eircom which gives incentives to manage traffic.
- 10.592 In relation to the point raised by BT and ALTO on backhaul charges, ComReg would like to clarify that the backhaul costs are calculated as the backhaul costs of an OAO using WSEA and this is consistent with the approach used for the Bitstream floors.
- 10.593 In relation to Vodafone's point on whether Eircom will gain advantages over OAOs depending on the option taken, for example, resilient backhaul by default, ComReg would like to point out that a resilient backhaul has been included in the NGA Margin Squeeze Model. In relation to the issue of over-recovery, this is not a concern since backhaul is priced at the cost floor based on the costs of an OAO. Therefore, if Eircom were to price backhaul above the cost floors, this gives the incentive for OAOs to use VUA and therefore it encourages OAOs to climb the investment ladder. With regard to Vodafone's point that Multicast is likely to be priced at a premium which is likely to lead to over-recovery of costs, it is important to note that the NGA Margin Squeeze Model includes the incremental cost of multicast and this has been discussed further below. In relation to the point about reviewing usage every 6 months, Eircom are obliged to review the usage factor for current and next generation WBA products on a quarterly basis and to update the cost models (i.e. DCF cost model and NGA Margin Squeeze Model) and if necessary the associated prices, as appropriate.
- 10.594 In response to Magnet's point that a single point of handover between Eircom and the OAO may lead to a potential failure in the system, ComReg would like to clarify, that a resilient WEIL is included in the cost stack for NGA Bitstream in the NGA Margin Squeeze Model.

10.595 In relation to UPC's point on throughput, ComReg believes that for now it seems more appropriate to use the data provided by Eircom. While UPC believes that Eircom's input is too low and it has proposed a higher throughput for NGA, the throughput rate from Eircom is more consistent with the reality of the products that Eircom intends to launch. Therefore, the broadband throughput of between 190 and 225 Kbps over the period from 2013 to 2015 has been factored into the NGA Margin Squeeze Model. The main reason for the change since the consultation is the fact that 2012 has elapsed and no NGA was deployed during 2012, therefore the starting point is now 2013. While ComReg intends to rely on Eircom data for now, Eircom are obliged to review the usage factor for current generation and next generation services in the WBA market on a quarterly basis and to update the relevant cost models (and where necessary the associated prices), as appropriate.

10.18.4 ComReg's Decision:

Next Generation:

Eircom shall review the usage / throughput rate (based on Kbps peak hour usage) for next generation WBA products on a quarterly basis and it shall update the NGA Margin Squeeze Model for any amendments as a result of its review, as appropriate.

Current Generation:

Eircom shall review the usage / throughput rate (based on Kbps peak hour usage) for current generation WBA products on a quarterly basis and it shall update the WBA cost model from ComReg Decision D01/06 for any amendments as a result of its review, as appropriate.

Costs for Multicast:

10.18.5 Views of Respondents:

10.596 The views of respondents regarding the relevant costs that should be considered for a Multicast service were mixed and a number of respondents (Telefonica, E-net and ECTA) had no specific comments on this question.

10.597 Digiweb, BT and ALTO provided some views on Multicast and these are set out in the published responses at ComReg Document No 12/97. Magnet provided a confidential response to this question.

10.598 The main points raised by respondents are set out below.

10.599 **Eircom** stated that the relevant costs for the Multicast service in any NGA cost stack are the price elements charged by Eircom for the wholesale variant. Only if the OAO buying VUA to deliver IPTV cannot provide their own multicast on a more economic basis will they buy the Eircom's offering. So the Eircom price will represent the maximum cost. Eircom explained that an OAO using VUA must already have built their own (unicast) backhaul to the eircom NGA exchange sites where they take the VUA service. The incremental cost to such an operator of adding the multicast capability and capacity to their existing network will be very small as most such backhaul networks are substantially over provisioned. However, Eircom stated that even substantial capacity increases add little extra cost. Eircom therefore proposes that its price should initially be set to recover the incremental cost of adding the multicast services to an NGN core transmission network (using WSEA logical pricing as the agreed surrogate for eircom NGN costs) that has as the anchor service the unicast transmission of Bitstream traffic.

10.600 **Vodafone** believes that Multicast should be offered as a standalone service and treated accordingly. Vodafone provided its views in relation to each of the questions that ComReg asked regarding multicast. The non-confidential views are set out in the non-confidential version of the responses which are published in ComReg Document No 12/97. In addition, Vodafone stated that with regards to Multicast backhaul careful attention needs to be paid to how this is treated to avoid a situation where over-recovery occurs. According to Vodafone there are two elements at play:

- The cost of the multicast service itself
- The bandwidth used by Multicast which is not then available to other services – this may then artificially increase the number of backhaul links required

10.601 Vodafone believes that this again highlights how a single charge for usage of all types would be more granular, representative and accurate as a measure than two separate charges of a link (WEIL) and usage (95th percentile billing per MB).

10.602 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.18.6 ComReg Assessment of Responses and Final Position:

- 10.603 Having considered the views of respondents and given that it is now clearer what Eircom's plans are in terms of Multicast, ComReg has decided that the SEO incremental costs of an OAO providing the multicast service in the WBA market should be included as part of the NGA Margin Squeeze Model. This cost has been added to the NGA Margin Squeeze Model to ensure that there is no margin squeeze between retail and NGA Bitstream Multicast and between VUA Multicast and NGA Bitstream Multicast.
- 10.604 ComReg considers that an OAO will use its own backhaul network in the provision of a Multicast service via NGA Bitstream, and therefore only the incremental costs of the service should be recovered in the context of Multicast provided over NGA Bitstream. ComReg is of the view that it is important that the multicast price does not disincentivise investment in the IPTV platform or in VUA. This is further discussed below in the context of VUA and Multicast.
- 10.605 In relation to the point raised by Vodafone on over-recovery of costs, it is important to clarify that the incremental costs of an OAO providing a Multicast service are included in the NGA Margin Squeeze Model and therefore this should constrain Eircom at the retail level. As a consequence, this should ensure that there is no discrimination between Eircom and an OAO. The incremental costs are only taken into account given that the OAO will already have its own backhaul for broadband services and therefore multicast is just an over the top service.

10.19 Wholesale Margin Squeeze test from VUA to SLU

10.19.1 ComReg's Preliminary View from Consultation Document:

10.606 In ComReg Document No 12/27 we considered that it would not seem reasonable to provide 'entry assistance' through an SEO-based Margin Squeeze test between VUA and SLU. We proposed to use the EEO costs of Eircom, given that Eircom is currently the only operator providing the SLU service and in general the same costs would apply if another SLU operator were to provide it. Generally there are no economies of scale or scope differences to be considered in this regard.

10.607 We proposed that the EEO costs would be based on Eircom costs for:

- The link between end users and cabinets i.e. the SLU monthly rental charge.
- The link between the cabinet and the exchange.

10.608 For Multicast services, we welcomed the views of Industry on whether the price of VUA should increase where Multicast services are provided. We considered that VUA is largely based on the access network, the DSLAM and the aggregation node and all of these costs are not dependent on the traffic carried but instead are based on the number of users. In addition, we also considered whether the cost of multicast services should be the same as the cost for Multicast services provided with NGA Bitstream.

10.609 Figure 15 in ComReg Document No 12/27 set out the proposed cost categories for determining the cost stack for VUA in the context of FTTC and FTTH. Please refer to subsection 11.10 of ComReg Document No 12/27 for further details.

10.610 In ComReg Document No 12/27, ComReg set out that the NGA Margin Squeeze Model selects cabinets with more than 50 working lines, based on the NGA rollout plan announced by Eircom but this may be further adjusted when Eircom's rollout takes place.

10.611 We also discussed that the NGA Margin Squeeze Model contains a number of assumptions in terms of the rate of migration from DSL to NGA. We assumed that a high proportion of Eircom's customers would be migrated over to the NGA network, instantaneously, once the NGA network is in place. This would account for approx. 50% of DSL lines. We also assumed that all DSL lines would be migrated over to the NGA network over the next 7 years. These assumptions have been used in the model to calculate a cost per user on a DCF basis.

10.612 The more significant cost categories were discussed under the relevant headings as summarised below. It is important to note that many of the input details of the NGA Margin Squeeze Model are confidential and therefore cannot be disclosed publicly.

Local loop - Capital costs - FTTC and FTTH:

10.613 In ComReg Document No 12/27 we proposed that the model for FTTC would reuse many of the copper local loop costs to determine the price for VUA, including distribution cables, final drops and trenches for E and D-side.

10.614 ComReg considered that the E-side cables would be replaced by fibre (small cable) and also the demand would be split between fibre and copper. In addition, a number of assumptions are made in order to calculate the cost of these cables per line and per month, as follows:

- The share of E-side cable costs from the LLU model
- Typical difference between a 500 copper pair cable and a 24 fibre pair cable in terms of costs per metre (smaller cable for FTTC can be used between the cabinet and the exchange because one fibre can aggregate traffic from several end users) can be up to 90% cheaper for fibre. This is consistent with information obtained by TERA in respect of other jurisdictions.
- Take up of NGA and economic depreciation.

10.615 We welcomed the views of Industry on whether it believed that the cost per metre for fibre could be up to 90% cheaper.

10.616 For FTTC take-up, we proposed that the model take account of the average of two cases:

- Immediate migration where all lines are migrated as soon as FTTC is available
- Slow migration, where approximately 50% of DSL lines are migrated in 2012 and a regular increase in order to have all lines migrated over the next 7 years.

10.617 On the other hand for FTTH the model did not reuse much of the copper local loop costs. The only costs reused in the context of FTTH are trenches and ducts. Similar to FTTC, we proposed that the model makes a number of assumptions as follows:

- Take up (see proposal above for FTTC)
- Cost differences between copper and fibre.

- 10.618 For costs of FTTH, the model assumes that the costs of installation and material for fibre are lower than for copper of a similar size, by up to 35% because fibre is cheaper than copper. This is based on evidence from other jurisdictions. We invited any evidence OAOs may have from their international experience.
- 10.619 In ComReg Document No 12/27 we noted that large scale deployment of FTTH by Eircom was not envisaged and therefore the unit costs could vary significantly when compared to other countries.
- 10.620 We proposed an adjustment to the NGA Margin Squeeze Model to the VUA cost stack for the weighting factor that was applied in the context of the LLU pricing Decision in 2010 (ComReg Decision D01/10). Please refer to subsection 11.10.4 of ComReg Document No 12/27 for the background details on the weighting factor. In essence, given that VUA is recognised by Eircom as a replacement for LLU we considered that the probability weighting factor should also be applied to VUA for the same reasons that it was applied to LLU. Given that Eircom's NGA rollout plans for FTTC (VUA) are likely to replicate the LLU footprint (and beyond) we considered that the probability weighting factor is also relevant in the context of VUA. If this was not the case then we believed that this calls into question the relevance of the probability weighting factor for LLU price going forward. In ComReg Document No 12/27 we discussed that if the probability weighting factor was not applied to the VUA costs for the reason that no rural lines were expected to be included as part of the VUA rollout then we considered that the probability weighting factor should be amended in the CAM for LLU, especially when considering the fact that LLU is not used outside large exchanges. This would have the impact of reducing the LLU price by approximately €0.80.

Faults:

- 10.621 For VUA Eircom proposed to include the cost of faults as part of the rental charge.
- 10.622 We considered that the line fault index ('LFI') used in the LLU Decision should also be applied in the context of NGA. An LFI consistent with the one faced by operators in the context of LLU and used to calculate LLU prices should be used in the context of FTTC, given that these are not new lines. On the other hand a lower LFI should be applied for FTTH, given that these are new lines. It was proposed that LFI data gathered by ComReg as part of the LLU review for new lines should be used in the context of FTTH.

Digital subscriber line access multiplexer ('DSLAM'):

10.623 In ComReg Document No 12/27 we proposed that for DSLAMs the NGA Margin Squeeze Model would take account of the following parameters:

- The maximum capacity of a DSLAM in terms of the number of lines, as provided by Eircom.
- The size of cabinets and likely cabinets to be unbundled are based on information from the LLU project where exchanges with lines below 2,500 are excluded and the cabinets associated with these exchanges were used for SLU pricing purposes, where the cabinets had at least 300 lines.

10.624 This point was not relevant for FTTH as it is deployed directly from the MDF.

10.625 For each site, it was proposed that the model would take account of the number of cabinets depending on the number of lines for that site. In addition, the model assumed that no additional 'ESB connection' and 'Existing copper cabinet remediation' charges were required for the second and following cabinets.

10.626 Economic depreciation (or DCF approach) was also considered in the model. In order to derive the monthly cost per subscriber of a DSLAM the following information was calculated:

- Sum of discounted costs
- Sum of discounted revenues is calculated assuming a certain price per line and per month
- The price per line and per month is set so as to verify the equation sum of discounted costs = sum of discounted revenues.

10.627 The proposed NGA Margin Squeeze Model assumed a lower number of DSLAMs compared with Eircom but with a higher fill rate. In addition, the model would calculate a higher number of FTTH subscribers but a lower number of FTTC subscribers.

Optical Line Terminal ('OLT'):

10.628 As discussed in ComReg Document No 12/27, we proposed that the model would include a number of dimensioning rules to estimate the equipment required for OLT. This included the following:

- Line cards: The model assumed that X users are multiplexed per fibre and each card can host up to X fibres. Therefore, each line card can stack up to X subscribers.

- Shelves: The model assumed that each shelf can host up to X line cards and any additional shelf will require X additional redundant racks.
- Network cards: The model assumes that at least X redundant network cards are used and that additional pairs of network cards may be added if the total required bandwidth for the subscribers in the OLT exceeds X Gbps.

10.629 Similar to the unit cost for the DSLAMs, Eircom provided the unit cost information for the OLT. The model would include the gross replacement cost ('GRC') for the line cards, switches and network costs, a proposed 8 year asset life for each asset category and a reasonable mark-up for operating costs.

10.630 Economic depreciation has also been taken into account in the model for OLTs in line with the proposed approach on economic depreciation for the DSLAMs.

Aggregation Node:

10.631 As set out in ComReg Document No 12/27 and similar to the inputs used for the DSLAMs and OLTs, ComReg proposed that the model would take account of the GRC of the ODF and ESS-6, the asset lives, the mark-up for operating costs, and for the ESS-6 equipment the model would account for price trends as well as the power requirements and floor space requirements.

10.632 The model would also include a decision rule for the number of ESS per exchange and ODF per exchange. It was proposed that the economic depreciation would be calculated in the same way as for the DSLAMs and OLTs.

Migrations:

10.633 In ComReg Document No 12/27, it was proposed that for migrations, the NGA Margin Squeeze Model would include the cost of connecting a FTTC premises and a FTTH premises (including the cost of the optical network terminal ('ONT')).

10.634 ComReg proposed that given the additional civil work required in digging the network infrastructure all the way to the home in the case of FTTH, the FTTH migration cost in the model would be up to five times higher than the migration cost for FTTC.

10.635 A tilted annuity was also proposed in the model using an assumption for FTTC and FTTH of 20 years, given Eircom confirmation that FTTC is not an interim technology but like FTTH it is expected to be rolled out in the long term and therefore the cost recovery should be based on this expectation.

10.636 ComReg also noted that the migration costs were currently included as part of the rental charge for VUA, based on Eircom's proposal, but that it would be subject to the outcome of this consultation in terms of how migration costs should be treated.

10.637 In ComReg Document No 12/27 ComReg asked the following questions:

- Q. 48 Do you agree with the approach for determining the cost stack for the VUA product in the WBA market? Please provide reasons for your response.
- Q. 49 Do you believe that the 95:5 probability weighting factor should be included for determining the costs of VUA? If the 95:5 probability weighting is not relevant to VUA, do you consider that the Copper Access Model should be amended to exclude the 95:5 for LLU also? Please provide reasons for your response.
- Q. 50 Do you believe that the price for VUA should increase where Multicast services are provided and if so should the cost for Multicast services be the same as the cost element included for Multicast in the context of NGA Bitstream? Please provide reasons for your response.
- Q. 51 Do you believe that the current LLU charge should be revised to include the cost of fault clearance on the current generation access network so as to ensure consistency with the approach proposed by Eircom for the VUA charge? Please provide reasons for your response.

10.638 The views of respondents to each of the four questions above and ComReg's assessment of those responses and its final position are discussed under the following headings:

- Cost stack for VUA
- Probability weighting factor
- VUA and Multicast
- Consistency of treatment of fault repairs.

Cost stack for VUA:

10.19.2 Views of Respondents:

10.639 In summary, the following gives a high level overview of the views of respondents in relation to the relevant costs for VUA:

- Seven respondents (Eircom, BT, Telefonica, E-net, Imagine, Digiweb and ALTO) generally agree
- One respondent (Vodafone) believes that VUA should be cost oriented and this is discussed further below
- Two respondents (UPC and ECTA) had no specific views
- One respondent (Magnet) made a number of comments as discussed below.

10.640 **Eircom** stated that such a modelled cost stack should not have any role in the ex-ante regulation of a price for a wholesale NGA service during the deployment phase as the model requires many assumptions about future costs and user volumes, and mix of FTTC and FTTH. These may be impossible to validate in advance of significant build and service launch. Eircom made a number of points in relation to the inputs and assumptions to the model both in terms of possible double counting and in some cases an over estimation of costs. Eircom also made the following points:

(1) Eircom's early experience in building the initial NGA cabinets suggests that costs to pass 1 million premises may be of the order of 30% to 40% lower than originally forecast.

(2) For faults, a lower level may be appropriate in the future for NGA services.

(3) There has been significant savings to DSLAM costs and this is reflected in the confidential annex provided.

(4) A different node to the ESS 6 has been deployed in practice and the relevant cost savings have been set out in the separate confidential annex.

(5) Migration costs will be recovered partly from charges raised at the time of migration, and also through the rental charges, the separate confidential annex sets out the cost reductions to the cost stack as a result.

10.641 **BT and ALTO** stated that co-location costs within the exchange should be included as these are considerable for LLU providers and to remove the migration costs as these should be taken at the retail layer.

10.642 **Vodafone** reiterates its views that VUA should be cost oriented.

10.643 In terms of multicast Vodafone believes that:

- Multicast should be provided on a standalone basis as a single product in its own right.

- It would be far more transparent and far less complex to have a single small port charge for 'Multicast enablement' on a per customer basis, rather than complex traffic queues.

- As Multicast is used for the provision of TV services, other costs of providing TV services need to be taken into account and these are significant.

10.644 Vodafone also refers to its earlier reply on migrations. If bulk migrations are to take place (and ComReg/TERA estimate this could be as high as 50% of DSL lines in NGA areas initially) then the previous lifetime of that customer as an ADSL customer is reduced. This means that full recovery as an ADSL customer has not taken place as the typical lifetime is lesser. This cost needs to be factored in to any bulk migration costs. This point has been addressed below.

10.645 **Magnet** is of the view that faults should be charged on a per fault basis rather than a charge included within the overall charge. As the majority of the loop length will be fibre and the last few metres is copper the instances of faults should decrease substantially.

10.646 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.19.3 ComReg's Assessment of Respondents Views and Final Position:

10.647 Having considered the views of respondents, the following sets out the changes to the VUA cost stack since the consultation process:

- **SLU:** Eircom has reduced the price of SLU from €10.53 to €9.03 and therefore this has been updated in the NGA Margin Squeeze Model;
- **Local Loop w/o SLU:** While the overall per unit cost has not changed, there has been an overall reduction in the costs of local loop w/o SLU mainly to reflect the fact that MDF costs included in the Local Loop without SLU should have been removed in the context of FTTC and also to reflect the removal of FTTH given that Eircom do not have any current plans for such a roll-out. This has then been offset by the changes in take-up assumptions, based on a more conservative view on take-up.
- **Faults:** Given the revised per unit fault charge for LLU (of no more than 0.96 cent), there has been a reduction in the per unit fault cost included in the cost stack for VUA in order to ensure consistency.

- **DSLAM:** There has been an increase in the DSLAM / OLT costs mainly due to the change in the appropriate asset lives, given that these assets will be reused after FTTC (where it moves to FTTH technology).
- **Aggregation Node:** There has been a reduction in the aggregation node costs due to a change in the appropriate asset life for ESS-6 and the ODF in the context of NGA, where the costs are now spread over a longer period. These changes are justified given that these assets will still be necessary if FTTC is replaced by FTTH.
- **Migrations:** There has been a reduction in migration costs mainly due to the removal by ComReg of the costs for the NTU installation from the VUA cost stack (which is charged separately by Eircom where an OAO wants Eircom to install the NTU on their behalf). In addition, the migration costs associated with FTTH have also been removed given that Eircom currently has no plans for a FTTH rollout.
- **Design and management:** There has been a reduction in the design and management costs mainly given that the costs are now spread over a longer period of time in line with capital works orders i.e. ducts.

10.648 The costs for VUA must be kept under review by Eircom and updated as appropriate as NGA is rolled out. Please refer to Figure 10.3 below for the outputs of the NGA Margin Squeeze Model. It is important to note that these may change once NGA is rolled out and costs, volumes, usage, etc become known.

10.649 ComReg remains of the view that the link between SLU and VUA is important in order to support competition and to support the principle of technological neutrality. Vodafone stated that it “...fully support the link between SLU and VUA in determining the controls to be used and we believe that this link should be maintained to preserve the ladder of investment towards an eventual “copper switch off” (outside the scope of this consultation) over time.”

10.650 The Wholesale Margin Squeeze test between SLU and VUA is based on EEO costs given that generally there are no economies of scale or scope differences to be considered in this regard because there is a high probability that OAOs would not unbundle a cabinet which Eircom intends to unbundle or has already unbundled. Therefore, in areas where an OAO has unbundled cabinets, it will have the same economies of scale as Eircom because it will be the only operator present there and an EEO approach is therefore reasonable.

10.651 The rationale for maintaining an economic space between VUA and SLU is to ensure that VUA is not priced so low that it would disincentivise investment by alternative infrastructure operators during the transition to NGA, especially investment in LLU (which is in the process of being expanded). SLU and LLU are both priced on a cost oriented basis by reference to the same BU-LRAIC plus cost model. If a reduction to the SLU price is required under this test so also would a reduction be required to the LLU price, as appropriate. Therefore, it is important to note that there is a ceiling for WBA NGA prices calculated by reference to a margin test against retail prices. Copper and fibre based services are priced consistently relative to their cost of provision which implies a lower bound on NGA prices below which they cannot fall without a corresponding reduction in LLU (and SLU) prices. This will ensure a technology neutral approach and the consistency of copper and fibre pricing which we believe is required in order to enhance the competitive constraints on Eircom and this is the primary reason for the test. This has been discussed earlier in this chapter under subsection 10.6.3.

10.652 ComReg considers that by including the fault costs in the VUA charge, Eircom will recover all of its fault costs. In addition, OAOs will be given the option of a monthly fault charge or a one-off fault charge on the access network for LLU so that the charging regime for fault repairs is consistent between VUA and LLU. Please refer to subsection 10.19.9 below for details of the fault repair charging options for LLU.

10.653 In relation to the Eircom response, ComReg considers that given the uncertainty around the costs and the demand for NGA services, it is important that the NGA Margin Squeeze Model is kept under continuous review by Eircom and updated as appropriate to reflect the reality of the costs, demand, usage, etc for NGA services. ComReg and its consultants TERA have reviewed all of the comments made by Eircom in its response relating to the VUA costs and where relevant changes have been made to the cost stack for VUA (as already set out above). In relation to Eircom's point on faults, if fault rates are lower in the future for NGA services then Eircom should adjust it accordingly. In any case, the current cost of faults is consistent with the faults in the context of LLU and Bundles.

10.654 In relation to Vodafone's point about bulk migrations and customer lifetimes, the fact that the ADSL customer lifetime is reduced is a consequence of technology enhancement, which is an ongoing reality in telecoms and which operators must factor into their business plans and forecasts and also in the asset lives they use. In this specific case, all operators using Eircom's infrastructure are at the same juncture regarding the move from current generation to next generation. If operators do not wish to migrate to NGA services instantaneously then they may consider increasing their ADSL customer lifetimes until they migrate to NGA. However, ComReg considers that the customer lifetime in the context of NGA will need to be monitored as the NGA is rolled out. Vodafone concerns on Multicast have already been addressed above in subsection 10.19.7.

10.655 BT and ALTO believe that co-location costs within the exchange should be included as these are considerable for LLU providers and to remove the migration costs as these should be taken at the retail layer. ComReg agrees that the co-location costs should be taken into account and this has been reflected in the NGA Margin Squeeze Model where the VUA cost stack also includes floor space costs. Migrations are discussed below.

Probability weighting factor:

10.19.4 Views of Respondents:

10.656 In summary, the following gives a high level overview of the views of respondents in relation to the probability weighting factor:

- Three respondents (BT, E-net and ALTO) agree
- Four respondents (Eircom, Magnet, Imagine and Digiweb) disagree
- Four respondents (Vodafone, Telefonica, UPC and ECTA) have no comments.

10.657 **Eircom** believes that ComReg cannot take this same approach for VUA because to do so would require calculation of possible VUA costs for those areas where Eircom does not intend to build any NGA. However, in the NGA context, Eircom stated that an analogous approach might be to consider whether an OAO might buy a mix of VUA and Bitstream, and whether the costs of VUA would differ at those sites where OAOs are likely to prefer Bitstream. Eircom also stated that it is premature to impose linkages between VUA and SLU or LLU until real data is available, and the benefits or otherwise of the probability approach can be properly assessed. On the proposed amendment to the LLU price regarding the 95:5, Eircom set out the likely impact if 'no probability' were applied or if a probability weighting of '100%:0%' were applied. Eircom stated that if the weighting for LLU is not removed, but is retained or amended, the proposal for consistency should likewise apply to SLU (if it is used as a metric). Rather than the average costs used to set the existing SLU price of €10.53, the price should exclude (or give a low weighting to) the costs of lines longer than 1.5km (unlikely to be unbundled as SLU for VDSL) or lines in small cabinets or in areas where NGA is unlikely. Such an adjustment would result in SLU prices falling by more than twice the probable reduction in the LLU price. Overall, Eircom agreed that a consistent approach is required but it cautioned against and opposed any piecemeal charges without a full and proper RIA.

10.658 **Magnet** disagrees and raised a number of points which ComReg has considered and which are not relevant to the probability weighting.

10.659 **Imagine** has disagreed stating that the rollout of NGA will be limited to a subset of exchanges/areas and the rollout excludes those areas that would be deemed unlikely to be feasible – therefore there is no need to apply any weighting factor.

10.660 For further details on the views of respondents please refer to the non-confidential responses which are published in ComReg Document No 12/97.

10.19.5 ComReg's Assessment of Responses and Final Position:

10.661 Having considered the views of respondents, ComReg has decided that the same probability weighting factor should be applied to VUA in order to be consistent with SLU (and LLU). In any event, the CAM will be kept under review and Eircom is free to make pricing proposals to ComReg in this regard where it believes that wholesale prices require amendment.

10.662 Given that VUA is a replacement for LLU according to Eircom, we consider that the probability weighting factor should also be applied to VUA for the same reasons that it was applied to LLU. Therefore, the weighting calculation will take account of the cost of lines covered by those exchanges likely to be virtually unbundled and a lower weighting factor to the cost of lines covered by those exchanges that were unlikely to be virtually unbundled.

10.663 Eircom discusses the possibility of applying a weighting in the NGA areas between exchanges where an OAO uses VUA and exchanges where an OAO uses Bitstream. However, ComReg considers that this approach is not reasonable since ComReg's objective is to incentivise OAOs to use VUA rather than Bitstream in all NGA exchanges in the medium / long term. Those are the same exchanges used for setting the maximum LLU price based on the exchanges likely to be unbundled in the medium term.

10.664 Eircom also calls for the SLU price to be amended to take into account:

- small lines
- large cabinets
- areas where NGA is likely to be deployed.

10.665 However, ComReg considers that Eircom's approach would lead to a situation where, in a given area, there would be 3 access input costs: one for FTTH lines, one for FTTC lines, one for long lines and small cabinets. This would create complexity and increase the digital divide. Therefore, having a single access input cost in each exchange area is the preferable approach.

VUA and Multicast:

10.19.6 Views of Respondents:

- 10.666 The views of respondents were mixed in relation to whether the price for VUA should increase where Multicast services are provided and if so should the cost for Multicast services be the same as the cost element included for Multicast in the context of NGA Bitstream.
- 10.667 **Eircom** believes that VUA and multicast services are quite independent and that there is no basis for tying the price of a local access service (VUA) to the availability of a new conveyance service (multicast). Eircom believes that the OAO taking the VUA service has already built a backhaul network to avail of VUA at the Eircom NGA exchange site. Eircom stated that this backhaul network can be developed to offer multicast services for a small investment compared with that required to put the initial backhaul network in place. Eircom stated that where the OAO buying VUA wishes to inject their own multicast stream at the Aggregation Node serving the NGA at that site, a service called Virtual unbundled Access Multicast (VAM) is implemented on behalf of the OAO to ensure that separate Virtual Private LAN Service (VPLS) switching is available for the OAO multicast traffic. Eircom proposes to raise a small connection fee to recover the cost of configuring the VPLS. This same cost will be recovered from the connection fees for the multicast service sold to NGA Bitstream Plus customers – including to Eircom CSB. Eircom also confirmed that the implementation of the multicast proposed by Eircom has no impact on the costs to eircom of the VUA services provided at that site – other than the configuration of the VPLS capability.
- 10.668 **BT** and **ALTO** believe that the price for VUA should increase where multicast services are added to VUA. BT stated that this aligns with the regulatory principle of cost causation and it is concerned that no charge would imply the cost is being unreasonably bundled into another charge. With regards to whether the cost element for Multicast should be the same in the case of Bitstream plus and VUA, BT believes that at a service level the answer is clearly no as the Bitstream plus solution includes significant backhaul and the multicast service as associated service management costs. ALTO stated that the Multicast for VUA should be the same as the cost element included for Multicast in the context of NGA Bitstream. However, ALTO does not agree to the costs being loaded into access.
- 10.669 **Vodafone** referred to the main points in its response to Question 48.

10.670 In addition, Vodafone is of the view that their scheme proposed that all backhaul traffic (regardless of type) is charged at the same level as unicast traffic and that a small monthly fee is charged on a per customer basis for 'Multicast enablement' (and indeed for 'QoS enablement'). Vodafone also added that the scheme outlined by it will also ensure cost orientation and can be reviewed and refined as costs change over time. This also makes sense as traffic is traffic and each packet has to be looked at even if it's to determine that it has no CoS 802.1p marking. The logical outcome of this is that Multicast is provided as a separate product that sits on top of VUA and is charged on a per port basis along with the standard backhaul charges.

10.671 **Magnet** and **Imagine** did not believe the price of VUA should increase where a multicast service is provided. Magnet is of the view that the VUA price should not increase as multicast is just data or information carried over broadband and the equipment is in the exchange already. However, Magnet noted that the VUA charge will increase due to bandwidth usage by the customer as well as the requirement for a higher class of service to ensure packet delivery. It is not multicast itself that causes a price increase but the customers use of bandwidth and the requirement for a higher class of service to ensure optimal service delivery.

10.672 **e|net** is of the view that the provision of Multicast functionality within the VUA product changes the product architecture in a fundamental way to the degree that a new product is created and the pricing of such a product needs to reflect this fact.

10.673 **Digiweb** stated that any increase in cost should be minor where multicast is provided as the service support costs for it are marginal.

10.674 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.19.7 ComReg's Assessment of Responses and Final Position:

10.675 Having considered the views of respondents ComReg has decided that the Multicast service provided over VUA (which Eircom calls VAM) should recover the SEO incremental costs of the VAM service.

10.676 In line with the ladder of investment concept, OAOs must be incentivised to use VUA rather than Bitstream and this concept also applies in relation to VUA with IPTV/multicast. Operators must have the incentive to use VUA to provide IPTV rather than purchasing Eircom's multicast Bitstream offer. In order to ensure that these incentives are maintained, it is necessary that the incremental cost borne by an operator using VUA (or VAM) to provide IPTV / multicast is lower than the cost it would bear if it purchased Eircom's multicast Bitstream offer. Otherwise, this operator may prefer to use Eircom's multicast Bitstream offer. ComReg has calculated the incremental cost of providing IPTV using VUA to the cost of Eircom's multicast Bitstream offer through a BU-LRAIC model developed for NGA Leased Lines (by injecting IPTV traffic into the model and looking at the increase in network costs). It appears that this incremental cost is lower than Eircom's multicast Bitstream offer.

Consistency of treatment of fault repairs

10.19.8 Views of respondents:

10.677 The views of respondents were mixed on whether the current LLU charge should be revised to include the cost of fault clearance on the current generation access network so as to ensure consistency with the approach proposed by Eircom for VUA.

10.678 **Eircom** stated that it does not believe that the LLU price should be increased to recover the costs of fault clearance. This feature of the LLU price structure was put in place to minimise costs and reward efficient behaviour by OAOs connecting their broadband electronics to Eircom copper loops. In the case of VUA, Eircom stated that it provides both the physical access infrastructure and the broadband electronics and Eircom has sufficient capability and incentive to ensure that fault reports are sufficiently tested before deploying scarce staff resources.

10.679 **BT** and **ALTO** believe that the costs for repair should be factored in for LLU.

10.680 **Vodafone** believes that the correct approach is to make a distinction between POTS based FTTC, Standalone FTTC and FTTH. Please refer to Vodafone's proposals set out in the non-confidential responses which are separately published in ComReg Document No 12/97.

10.681 Vodafone agrees that the current LLU price control should be modified to incorporate the cost of fault clearance and that any such approach should use an LFI related only to the LLU exchanges which ComReg has previously identified as being likely for LLU deployment. Further the LFI used should reflect not the actual performance of Eircom in these exchange areas but the LFI of an efficient operator which has properly invested in its access network.

10.682 **Magnet**, **Imagine** and **Digiweb** believe that the fault costs should remain separate.

10.19.9 ComReg's Assessment of Responses and Final Position:

10.683 Having considered the views of respondents, ComReg has decided that there should be consistency between the treatment of fault costs between NGA services and current generation services. Given that Eircom have included the fault costs as part of the VUA charge ComReg believes that the access seeker should have the option to pay for faults on a monthly recurring basis for current generation services (i.e. LLU). The option of paying a one-off fault charge will also remain in place.

10.684 Therefore, for current generation services in the WPNIA market ComReg considers that for now Eircom should offer access seekers (or OAOs) the option of either:

- (1) A monthly fault charge of no more than €0.96 cent per customer line or
- (2) A one-off per event fault charge of no more than €110 (excl. line test) / €117 (incl. line test).

10.685 The rate of €0.96 cents is consistent with the fault rate for the Market 4 Margin Squeeze Test in the context of bundles, which was recently notified to the European Commission. However, ComReg is of the view that the efficient cost of faults should be kept under review by Eircom and further work is required in this regard.

10.686 In order to ensure that other operators carry out the necessary checks to ensure that the fault is not on their end before they report a fault to Eircom wholesale, ComReg considers that Eircom should be allowed to charge for the costs involved at its end where the fault is subsequently on the OAOs network. In the event that the fault is on the OAOs network then Eircom should be allowed to charge the OAOs a charge of no more than €100. However, this needs to be kept under review by Eircom and ComReg reserves its right to intervene in this regard if necessary. Eircom should ensure that the ARO price list is updated to reflect these options with the associated fault repair charges.

10.687 ComReg will further review the approach for fault repair charges in 2013.

10.19.10 ComReg's Decision:

In relation to fault repair charges for Current Generation WPNIA services and facilities, Eircom shall offer the access seeker the option of either

(i) A monthly fault charge of no more than €0.96 (excl. VAT) per customer line or

(ii) A one-off charge of no more than €110 (excl. line test) and no more than €117 (incl. line test).

In the event that the fault is on the access seekers network, Eircom shall charge the access seeker a charge of no more than €100.

10.20 Outputs from the NGA Margin Squeeze Model

10.20.1 ComReg's Preliminary View from Consultation Document:

10.688 As pointed out in ComReg Document No 12/27, Eircom would have the flexibility to set its own retail prices. Depending on the retail price set, Eircom would determine wholesale prices in line with the NGA Margin Squeeze Model. However, as Eircom will be subject to a number of margin squeeze tests, it can set the prices for NGA Bitstream and VUA at prices above the proposed outputs where the retail margin squeeze test allows it. However, ComReg stated that Eircom cannot price below these outputs without the appropriate adjustment to the SLU (and where appropriate to the LLU) access price in the NGA Footprint Areas, or without adjusting the underlying assumptions used to arrive at the relevant costs stacks. Any such changes must be supported with robust data/cost models.

10.689 ComReg stated that the SLU price (€10.53) is the main input to the cost stack for the NGA services in the NGA Margin Squeeze Model, therefore if Eircom reduces the SLU price (of €10.53), the modelled outputs for the NGA products (VUA, NGA Bitstream, End-to-End NG Bitstream) would need to reduce by the same amount.

10.690 In ComReg Document No 12/27 ComReg set out in Figure 16 the proposed outputs of the NGA Margin Squeeze Model. The SLU price is the starting point in the cost stack and the additional assumed costs for each of the other NGA services are added to the SLU price to determine the output costs of that particular service based on the NGA Margin Squeeze Model.

10.691 In ComReg Document No 12/27 ComReg explained that it was not proposing to set absolute prices as part of any decision on NGA. The numbers produced from the NGA Margin Squeeze Model were only the output of the various cost stacks assumed for each service along the value chain. ComReg was of the preliminary view that as volumes and costs became more stable and certain, Eircom may present a compliant Margin Test Model with proposed revised wholesale prices which reflect such changes.

10.692 Please refer to Figure 16 in ComReg Document No 12/27 for details on the proposed outputs of the NGA Margin Squeeze Model.

10.693 In ComReg Document No 12/27 ComReg asked the following question:

Q. 52 Do you agree with the proposed outputs from the NGA Margin Squeeze Model? Please provide reasons for your response.

10.20.2 Views of Respondents:

10.694 In summary, the following gives a high level overview of the responses in relation to the outputs of the NGA Margin Squeeze Model:

- One respondent (Eircom) is of the view that a number of the outputs need adjustment but the general form is appropriate
- Two respondents (BT and Vodafone) raised a number of issues while Imagine is of the view that the prices are too high
- Four respondents (Magnet, ALTO, E-net and Digiweb) agrees
- Three respondents (Telefonica, UPC and ECTA) had no specific views.

10.695 **Eircom** stated that a number of the outputs require adjustment to reflect the cost drivers more completely but the general form of the outputs is appropriate. However, Eircom reiterated its views that the appropriate form of price control for the wholesale services arising from its NGA investment is not the rigid hierarchy of ex-ante margin tests at every rung of the relevant value chains, from unbundled copper products up to retail bundles but a single test between eircom retail services and the core wholesale input for NGA - namely the VUA service.

10.696 **BT** stated that it reserved its position in this regard until it had completed a full review of the further consultation on bundles. However, it raised the following comments:

1. There is scope to reduce the sub-loop price of €10.53 as ComReg have based their cost oriented price regulation on greater than 2500 line exchanges, however LLU has only been deployed to greater than 4000 line exchanges suggesting the sub-loop and full unbundled prices are too high.
2. €9.23 is too low particularly if it includes a partial allocation of migration costs as BT estimate these at €233 per order.
3. Backhaul price is closer to €5 than €3.48 proposed by ComReg. There are significant economies of scale in backhaul as the 95th percentile does not scale in a linear way to customer count e.g. statistical gain. The backhaul costs should be based on the average usage costs per user incurred by a typical ISP.

4. 'LL w/o SLU' @ €1.09 should be €1.88 to sum to ULMP cost of €12.41. BT assume that this cost is included because all standalone VUA ports are to retain their copper path to the exchange for connection to the MELT test head in the exchange, where the OLT input should be transparently based on a regulated wholesale product available to all SLU operators.
5. Aggregator node costs should relate to the Unicast service only, with the optional Multicast Aggregator node costs priced and recovered separately.

10.697 **Vodafone** reiterated its view that VUA pricing should be cost oriented and the proposed price control based 'margin squeeze' test and model is inherently flawed in principle. Notwithstanding that view, Vodafone believes that an output from a model which states the VUA price only in terms of a recurring monthly charge sets an inappropriate constraint on VUA pricing. Vodafone referred to Question 10 for further discussion on this point and stated that pricing for VUA should be capable of emulating the commercial envelope that an Access Seeker would obtain from actual unbundling. This would involve a mix of rights of access, committed uptake, upfront payments (capable of being capitalised) and a lower recurring charge. Vodafone states that this pricing should also reflect a lower risk premium for Eircom

10.698 In terms of the model Vodafone noted that Figure 16 of the consultation states the outputs of the model for a 'Standalone' NGA service. Based on the structure of the table Vodafone stated that it expects that the model would also yield constraints for 'POTS based' NGA where the access path costs are modelled on WLR and this would yield a price floor for NGA Bitstream ports equal to the VUA costs plus SLU line share costs. On this basis this would give a port price floor of approximately €8.90. Vodafone also referred to a recent presentation to Industry where Eircom proposed indicative pricing for POTS based VUA of €23 and further indicated that a reduction of WLR pricing in NGA areas only might be made to support this. Vodafone stated that it strongly disagrees with any sub-national pricing of a national product simply to give eircom a regulatory support because it chooses not to reduce the underlying ULMP pricing to meet its target retail price.

10.20.3 ComReg's Assessment of Respondents Views and Final Position:

10.699 Since publication of the consultation and having considered the views of respondents there have been a number of changes to the NGA Margin Squeeze Model, as discussed above in relation to each of the cost stacks for the relevant NGA products. The changes to the NGA Margin Squeeze Model also include the recent price reduction by Eircom to its SLU price. Please see Figure 10.3 below for overall changes to the cost stacks for VUA, NGA Bitstream and End-to-end Next Generation Bitstream since the consultation. However, it is important to note that the table below sets out the outputs of the NGA Margin Squeeze Model based on current models and assumptions only and these are subject to change going forward as the rollout of NGA takes place and the actual costs, volumes, usage / throughput, etc become known.

10.700 Eircom recently published its proposed prices for NGA services on its Eircom wholesale website¹⁰³.

10.701 With regard to the point made by Vodafone that the NGA pricing should be cost oriented, please refer to subsection 10.4.3 above for ComReg's consideration on why a cost orientation approach is not considered appropriate. In relation to Vodafone's point regarding their views that pricing for VUA should be capable of "emulating the commercial envelope that an Access Seeker would obtain from actual unbundling", ComReg would like to clarify that there is nothing preventing operators from co-investing or entering investment arrangements with Eircom in terms of NGA so long as these arrangements are notified to ComReg in advance and Eircom comply with the obligation of non-discrimination. Please refer to subsection 10.23 below for a discussion on co-investment.

¹⁰³ <http://www.eircomwholesale.ie/Reference-Offers/Proposals/>, please refer to "Proposed_Bitstream Price List v7.17" for the main NGA proposed prices.

Figure 10.3: Indicative outputs from the NGA Margin Squeeze Model:

Please note: The numbers below are not NGA prices – please refer to Eircom’s Wholesale website for Eircom NGA Prices¹⁰⁴

Product	Draft model in ComReg Document No 12/27	Model at date of Decision	Reasons for changes
SLU price	10.53	9.03	Please refer to subsection 10.19.3
	↓ plus	↓ plus	
Local Loop E-Side costs	1.09	1.09	Please refer to subsection 10.19.3
	↓ plus	↓ plus	
VUA costs	8.14	6.50	Please refer to subsection 10.19.3
VUA	19.76	<u>16.62</u>	
	↓ plus	↓ plus	
NGA Bitstream costs	3.48	2.01 ¹⁰⁵	Please refer to subsection 10.18.3
NGA Bitstream	23.24	<u>18.63</u>	
	↓ plus	↓ plus	
End-to-end Next Generation Bitstream costs	0.86	0.72¹⁰⁶	Please refer to subsection 10.17.3
End-to-end NG Bitstream	24.10	<u>19.35</u>	
Maximum ceiling ¹⁰⁷		<u>X minus Y</u>	
Retail costs		Y	
Retail Price		X	

¹⁰⁴ <http://www.eircomwholesale.ie/Reference-Offers/Proposals/>

¹⁰⁵ There is a separate usage cost of €8.14 per Mbps.

¹⁰⁶ There is a separate usage cost of €3.60 per Mbps, therefore the overall cost for End-to-end NG Bitstream will vary depending on usage.

¹⁰⁷ The wholesale price ceiling is derived from the standalone published NGA retail broadband price for each product (or in the absence of a published price the assumed headline price) minus the relevant retail costs based on the NGA Margin Squeeze Model.

10.702 Eircom must keep the NGA Margin Squeeze Model under review as NGA is rolled out and Eircom become aware of the actual costs and demand for NGA services. ComReg will also continue to monitor Eircom's compliance with the NGA Margin Squeeze Model and we reserve our rights to intervene if any issues of non-compliance arise.

10.703 It is important to note that there is a ceiling for WBA NGA prices calculated by reference to a margin test against retail prices. Copper and fibre based services are priced consistently relative to their cost of provision which implies a lower bound on NGA prices below which they cannot fall without a corresponding reduction in LLU (and SLU) prices.

10.704 ComReg has considered each of BT's points below:

1. In relation to its point on the scope to reduce the SLU price, Eircom has recently published its proposal to reduce the price of SLU by €1.50 and the LLU price by €2.50, on its Eircom Wholesale website. Please also refer to ComReg Information Notice 13/01¹⁰⁸ in this regard.
2. Regarding the costs of migrations, please refer to ComReg's consideration of this point at subsection 10.13.
3. In relation to BT's point on backhaul, the NGA Margin Squeeze Model includes backhaul costs plus a separate usage cost of €8.14 per Mbps.
4. In relation to the point regarding the costs of the copper path to the exchange, fibre is cheaper than copper and only small fibre cables are necessary for VUA because the fibre between the DSLAM and the exchange can aggregate traffic from several customers. The copper path on the E-Side should however be recovered by WLR when bundled with VUA.
5. Multicast costs have already been considered above in subsection 10.18.5 and subsection 10.19.7.

10.705 In response to the issues raised by Vodafone, ComReg has already considered the point regarding cost orientation in subsection 10.4.3 above. Vodafone also raises the point that when WLR and VUA are bundled, that the port for VUA should be around €8.90. However, ComReg would like to point out that between VUA and WLR there are some double counting of costs (faults, copper D-Side, trenches) and therefore the cost of the port should be lower.

¹⁰⁸ Information Notice No 13/01 entitled "Price reductions to local loop unbundling (LLU) and sub loop unbundling (SLU); dated 11 January 2013.

10.21 Other Ancillary Charges – WBA Market

10.706 As already discussed in Chapter 5 on the Access Obligation, in addition to VUA and NGA Bitstream Eircom are also required to provide and grant Access to OAOs to the following particular services and facilities:

- Backhaul for Next Generation Bitstream and VUA, including backhaul based on Ethernet technology
- Co-location
- Interconnection, including interconnection based on Ethernet technology, to include the following:
 - i. In-building handover
 - ii. In-span handover
 - iii. Customer-sited handover
- Migrations
- In Premises Service(s) as described in the Access Obligation in Chapter 5 above.

10.707 For the avoidance of doubt ComReg would like to point out that the services / facilities listed above will be subject to a cost orientation obligation, with the exception of In-Premises services. In addition, all connection fees and any other ancillary charges associated with current generation and next generation WBA (other than the rental charge for NGA Bitstream and VUA) should also be subject to a cost orientation obligation.

10.708 The cost orientation obligation should ensure that these essential ancillary services / facilities for the provision of current generation and next generation are not priced in a discriminatory manner and that there is a level playing field for all operators to compete. The obligation also ensures that Eircom will recover the cost of provision of the service plus a reasonable rate of return. The costs associated with these services / facilities should be consistent with the cost models / pricing structures already in place in Market 4 and Market 6, where these services specifically relate.

10.709 In relation to In-premises services, ComReg considers that for now no price control obligation is considered necessary. The work associated with In-Premises services is ongoing and a significant amount of dialogue has taken place in this regard at the Industry Fora. In any event, Eircom should ensure that the charges for In-Premises services are reasonable and non-discriminatory.

10.21.1 ComReg's Decision:

- 1. With regard to the charges for Associated Facilities other than In Premises Services, Eircom shall ensure that the charges are cost oriented.**
- 2. For the avoidance of doubt, the provision of In-Premises Services is not subject to a price control obligation, although prices are subject to a non-discrimination obligation.**
- 3. With regard to charges associated with Co-location, In-building handover, In-span handover and Customer-sited handover, Eircom shall ensure that the charges are cost oriented.**
- 4. Eircom shall ensure that all charges for current generation and next generation associated with connections and any other related ancillary WBA services (excluding the prices for the monthly rental of Next Generation Bitstream and VUA) are cost oriented.**

10.22 Price control period and future reviews

10.22.1 ComReg's Preliminary View from Consultation Document:

10.710 In ComReg Document No 12/27 we considered that at least a three year price control period is a reasonable time period to allow for the transition of services to the new fibre based network.

10.711 While the outcome and length of the transition to NGA is to a certain extent subject to the commercial decision of Eircom, we considered that a price control period of at least three years should allow sufficient time for deployment of Eircom's NGA network as well as allowing operators sufficient time to make informed business decisions regarding migration.

10.712 At the end of the price control period, we would assess and consider the extent of the Eircom rollout as well as the level of take-up by OAOs for the new NGA based services. At this point it would also be necessary to consider whether any changes are required to the methodologies and pricing principles currently set out in the consultation.

10.713 In ComReg Document No 12/27 we also proposed to continue to monitor the progression of Eircom's NGA investment and OAOs migration programme to ensure that the price control period remedies remain consistent with ComReg's regulatory principles and objectives. We proposed to continue to monitor the following:

- Eircom's NGA investment and roll-out to date and the amount of investment committed;
- Any relevant issues in terms of products and process;
- Eircom's and OAOs' migration programme from copper to fibre;
- The appropriateness of the various analytical stages of the margin squeeze test (including cost inputs);
- Eircom's compliance with the NGA Margin Squeeze Model;
- Eircom's commercial decision regarding the outcome of the transition;
- Any relevant Market Analyses carried out by ComReg in the next three years.

10.714 In ComReg Document No 12/27 ComReg asked the following question:

Q. 53 Do you agree with the proposed price control period should be at least three years in the context of NGA services in the WPNIA and WBA markets? Please provide reasons for your response.

10.22.2 Views of Respondents:

10.715 In summary, the following gives a high level overview of the respondents views regarding the three year price control period:

- Six respondents (Eircom, BT, ALTO, E-net, Imagine and Digiweb) disagree and suggest alternative timeframes
- Two respondents (Vodafone and Magnet) agree
- Three respondents (Telefonica, UPC and ECTA) did not provide any views.

10.716 **BT** and **ALTO** are of the view that given the huge uncertainty around Eircom's deployment of NGA a three year price control appears inflexible and BT suggests that ComReg should as a minimum create one year review windows in case of the need to adjust.

10.717 **Eircom** believes that the price controls proposed by ComReg are far too complex, inflexible and prescriptive and are unsustainable over a three-year period. Eircom suggests that it would be prudent to provide for periodic refinement within a given structure, to allow for necessary corrections in the light of experience. Eircom believes that a far superior approach would be to apply less intrusive price regulation, at least until experience provides evidence that a rigid form of price control is necessary in the new environment. With experience, ComReg would be well placed to craft a form of control that would replicate market forces as nearly as possible whilst avoiding unintended consequences driven by inappropriate regulation. In that case, a three year period of review would provide the right combination of stability and confidence on the one hand, and the capacity to respond to events in an unpredictable world on the other.

10.718 **Vodafone** believes that on balance the proposed three year price control seems to strike the appropriate balance but suggested that ComReg include the prospect of reopening the price control arrangements in the event of certain behaviours or outcomes being observed in the market. These include: (1) a substantial technology shift that casts doubt on the appropriateness of Eircom's proposed technology solution and (2) evidence that Eircom's pricing is not being constrained in the retail market.

10.719 **Magnet** agrees with a review in year 3 and to push it to year 5 considering potential exit from exchanges by Eircom. Magnet referred to ComReg Document No 12/63 regarding the proposal for the LEA area and stated that it is imperative that ComReg revisits the pricing methodology for WPNIA products and services. **E-net** and **Imagine** suggests a price control period of 5 years which could be reviewed midway to take account of market developments, while **Digiweb** suggested a price control of at least two years.

10.22.3 ComReg's Assessment of Respondents Views and Final Position:

10.720 Having considered the views of respondents, ComReg has decided that the price control should apply until at least the next market review. ComReg has a statutory obligation to perform a market analysis every 3 years. The principles and obligations specified in this Decision shall apply until at least the next market review. However, this does not fetter ComReg's future discretion regarding the appropriate obligations that should apply in the context of NGA services in the WBA and WPNIA markets.

10.721 In the intervening period ComReg will consider any exceptional circumstances that may occur. Exceptional circumstances shall be reviewed on a case-by-case basis by ComReg. Examples of exceptional circumstances may include the following:

- A substantial technology shift that casts doubt on the appropriateness of Eircom's technology solution for NGA
- Significant delay by Eircom in the rollout of NGA
- Subsequent evidence that Eircom's pricing is not being constrained in the retail market
- Material changes to the assumptions and inputs to the NGA Margin Squeeze Model.

10.722 ComReg considers that this timeframe should allow for the launch and rollout of NGA services and it should also allow sufficient time to gain knowledge on the demand and costs of NGA services. ComReg considers that over the next 18 months to two years, the market will be in transition towards NGA. ComReg intends to keep the market under review during this time.

10.723 ComReg is of the view that Eircom's point about the price control has already been sufficiently addressed earlier in subsection 10.4.

10.23 Co-investment/risk sharing options

10.23.1 ComReg's Preliminary View from Consultation Document:

10.724 In ComReg Document No 12/27, ComReg discussed the relevance of co-investment/risk sharing to NGA under the following headings:

- Relevance of co-investment/risk sharing to NGA
- Potential co-investment/risk sharing arrangements.

Relevance of co-investment/risk sharing to NGA:

10.725 As recognised by ComReg in ComReg Document No 12/27, co-investment opportunities may share the risk and cost faced by each respective party in the arrangement. Consequently, co-investment arrangements may incentivise investment in business ventures that might not otherwise occur (or on a smaller scale) due to the initial financial outlay or perceived financial risk.

10.726 In ComReg Document No 12/27 we considered that co-investment opportunities should be encouraged and explored by interested parties. In order to ensure regulatory consistency we proposed that such co-investment agreements should be subject to review and approval by ComReg (e.g. the regulatory principle of non-discrimination would be relevant in the context of any volume discounts — in particular if any co-investment agreements are reached with Eircom's retail arm).

Potential co-investment/risk sharing arrangements:

10.727 In ComReg Document No 12/27, ComReg set out a number of possible co-investment/risk sharing options and we sought the views of interested parties. We also invited respondents to provide us with the details of any reasonable options that it believed was relevant in the context of co-investment in relation to NGA. The possible options considered by ComReg were as follows:

1. An OAO takes a percentage stake in the NGA investment and does not pay any rental charge on its volumes over a set period of time;
2. An OAO takes a percentage stake in the NGA investment and pays a rental charge on its volumes in excess of the forecasts from the initial agreement;
3. An OAO takes a percentage stake in the NGA investment and pays a rental charge on all its volumes but gets revenues from rentals; and
4. An OAO takes a percentage stake in the NGA investment financed by a capital instalment and lower rental charge on all of its volumes.

1. An OAO takes a percentage stake in the NGA investment and does not pay any rental charge on its volumes

10.728 In ComReg Document No 12/27 ComReg discussed that under this scenario an OAO (say OAO 'A') takes a percentage stake in the NGA investment. The quantum of the investment by OAO 'A' may be based on the derived value and volumes it expects to attain as a result of the NGA investment in the medium to long term. OAO 'A' will not incur a rental charge on any volumes it actually attains. Consequently, OAO 'A' may adjust its derived value of its investment based on this arrangement (i.e. irrespective of its actual volumes attained OAO 'A' has lower risk — in that there is no rental charge on its volumes).

10.729 ComReg Document No 12/27 discussed the impact on the OAO and Eircom where volumes are lower than forecast and where volumes are higher than expected. Please refer to subsection 11.8 of ComReg Document No 12/27 for further details.

10.730 ComReg considered that the risk with this option is that an OAO would always have incentives to lower its share of co-investment.

2. An OAO takes a percentage stake in the NGA investment and pays a rental charge on its volumes in excess of its forecasts

10.731 As discussed in ComReg Document No 12/27, under this scenario, OAO 'A' takes a percentage stake in the NGA investment. The quantum of the investment by OAO 'A' may be based on the derived value and volumes it expects to attain as a result of the NGA investment in the medium to long term. OAO 'A' will incur a rental charge on actual volumes in excess of its forecasted amount. Consequently, OAO 'A' may adjust its derived value of its investment based on this arrangement.

10.732 ComReg Document No 12/27 discussed the impact on the OAO and Eircom where volumes are lower than forecast and where volumes are higher than expected. Please refer to subsection 11.8 of ComReg Document No 12/27 for further details.

10.733 ComReg recognised that in such a case, incentives to co-invest may be too low and therefore this option could be modified as follows:

- To allow OAO 'A' to further co-invest ex post rather than paying a rental charge;

- To allow OAO 'A' to pay the rental charge only if the number of customers it has is significantly higher than its share of co-investment (for example, if its share of co-investment is 20% and its market share is 21%, then no rental charge is due).

3. An OAO takes a percentage stake in the NGA investment and all investor pay a rental charge on all their volumes and the corresponding revenue is then shared between co-investors

10.734 As discussed in ComReg Document NO 12/27, under this scenario, OAO 'A' takes a percentage stake in the NGA investment. The quantum of the investment by OAO 'A' may be based on the derived value and volumes it expects to attain as a result of the NGA investment. OAO 'A' will incur a rental charge on actual volumes attained. Consequently, OAO 'A' may adjust its derived value of its investment based on this arrangement (i.e. OAO 'A' has not been able to mitigate any of its commercial risk as it faces a rental charge on all of its volumes).

10.735 ComReg Document No 12/27 discussed the impact on the OAO and Eircom where volumes are lower than forecast and where volumes are higher than expected. Please refer to subsection 11.8 of ComReg Document No 12/27 for further details.

10.736 ComReg also considered that this option may give too low incentives for OAOs to be commercially active but this option allows a limit to the risks faced by the co-investors because the risk of commercial non success is partly eliminated.

4. An OAO takes a percentage stake in the NGA investment financed by a capital instalment and lower rental charge on all of its volumes

10.737 As discussed in ComReg Document No 12/27, under this scenario, OAO 'A' takes a percentage stake in the NGA investment. The quantum of the investment by OAO 'A' may be based on the derived value and volumes it expects to attain as a result of the NGA investment. OAO 'A' percentage stake will be financed in two tranches. The first tranche will be financed by a capital injection (say 50%) by OAO 'A', the second tranche will be financed through a rental charge on actual volumes attained by OAO 'A'. The higher capital injection is, the lower the rental charge could be. The rental charge revenues would be shared amongst co-investors.

10.738 Both parties are now sharing the capital risk of the NGA investment however, with respect to the other scenarios identified above (i.e. options 2 and 3) both parties will face a lower commercial risk as a result of the agreement. This is due to the fact that, irrespective of the actual volumes attained by OAO 'A', the quantum of the rental charge over time will equal the residual value of OAO 'A' investment stake (in this case the remaining 50%). The rental charge incurred by OAO 'A' would probably be lower than that under previous scenarios (which would reflect the lower risk by OAO 'A' and Eircom).

10.739 In any event, ComReg proposed in ComReg Document No 12/27 that Eircom would be obliged to ensure that where it offers lower access prices to the unbundled fibre loop in return for up-front commitments on long-term or volume contracts, that such prices would not be unduly discriminatory. Therefore, Co-investment / risk sharing agreements between parties, with respect to NGA investments, would be subject to pre-notification to ComReg.

10.740 In ComReg Document No 12/27 ComReg asked the following question:

Q. 32 Which option do you consider may be appropriate regarding potential co-investment in the context of NGA? Please provide reasons for your response.

10.23.2 Views of Respondents:

10.741 **Eircom** stated that to date no other operator has indicated any willingness to jointly invest in NGA. Eircom believes that the regulatory assessment of factors that affect jointly shared risk would be extremely challenging and complex in practice. Eircom also stated that the arrangements described in the consultation are primarily addressed at risk sharing and would not be expected to result in a reduction in overall risk of NGA investment. While these arrangements may make investment possible, they would not impact the return on investment required for risk investment, i.e. the risk per unit of investment would not be expected to be reduced. Eircom stated that no description is provided to the review process or criteria that would be applied and as a consequence the draft obligation will serve to increase investment uncertainty, rather than reduce it, and will mitigate co-investment initiatives. The draft decision instruments should be modified to make explicit provision for co-investment in WPNIA and WBA by making it clear that lower prices can be offered to co-investors and by specifying the process and criteria that would be applied in reviewing co-investment arrangements.

10.742 **BT, Telefonica** and **ALTO** considered that the various options should be left on the table and any co-investment should be transparent and comply with the Regulations/Competition Law and transparency obligations.

10.743 **Vodafone** is of the view that ComReg should seek to ensure that the right regulatory framework is in place to support infrastructure investments. Vodafone believes that co-investment could take the following general forms:

- Direct – A direct shared investment to build a network – that may or may not include the incumbent;
- Indirect – VUA with an anchor tenant & volume commitments
- Hybrid – A mix of direct and indirect investment, possibly regionally based.

10.744 While Vodafone agree that the outcomes proposed by ComReg are possible it believes that they are somewhat prescriptive and do not describe the full set of co-investment options that may emerge.

10.745 **Magnet** believes that Option 4 may be the most appropriate as it is an upfront investment which shows a willingness by the investor to invest in the product but also gives a benefit to the investor allowing the investor hedge their bets if they do not meet a designated volume threshold as outlined in option 2 and 3.

10.746 **E|net** and **Digiweb** stated that it is important that any agreements in this area are subject to pre-notification to ComReg.

10.747 For full details of the responses please refer to the non-confidential responses which are published separately in ComReg Document No 12/97.

10.23.3 ComReg's Assessment of Responses and Final Position:

10.748 There have been no developments in terms of co-investment arrangements, however ComReg would welcome investment from others but would require a detailed understanding of any such arrangements well in advance of any agreement to ensure no anti-competitive effects might occur and that Eircom continue to comply with its regulatory obligations, namely its non-discrimination and price control obligations.

10.23.4 ComReg's Decision:

Eircom shall notify ComReg, in advance, of any potential co-investment arrangements that may take place between Eircom and another party and confirm to ComReg that it is in compliance with its obligation of non-

discrimination.

Chapter 11

11 Regulatory Impact Assessment

11.1 As already set out in ComReg Document No 12/27, a Regulatory Impact Assessment (“RIA”) is an analysis of the likely effect of new regulation or regulatory change. The RIA should help identify regulatory options, and should establish whether regulation is likely to have the desired impact. The RIA is a structured approach to the development of policy, and analyses the impact of regulatory options on different stakeholders.

11.2 In the RIA we assess the impact of the obligations, in accordance with specific regulatory Guidelines. This assessment includes the likely impact of our decisions on stakeholders and competitors based on an assumption that the decision further ComReg’s statutory regulatory objectives.

11.3 The legislative basis upon which ComReg must consider the imposition of Remedies, is under Regulation 6 of the Access Regulations, Regulation 8(6) of the Access Regulations, Regulation 12 (4) of the Access Regulations, Regulation 13 of the Access Regulations, and Section 12(1)(a) of the Communications Regulations Acts 2002 to 2011. These principles were considered by ComReg in the adoption and selection of remedies.

11.1 Steps for assessing regulatory options

11.4 ComReg’s approach to the RIA followed five steps as follows:

Step 1: describe the policy issue and identify the objectives

Step 2: identify and describe the regulatory options

Step 3: determine the likely impacts on stakeholders

Step 4: determine the likely impacts on competition

Step 5: assess the likely impacts and choose the best option.

11.5 In the case at hand, ComReg considers how the necessary access obligations should be practically and fairly supported through transparency, non-discrimination and price control obligations to ensure an effective application of practical remedies.

11.2 Describe the policy issue and identify the objectives

- 11.6 A principal objective in designing the appropriate remedies is the promotion of efficient investment in access network infrastructure and ensuring a safeguard to competition. More importantly, these remedies must be consistent with planned and future NGA deployments, and be consistent with the objectives set out in section 12 of the Communications Regulation Act, which aim to:
- Ensure that there is no distortion or restriction of competition;
 - Encourage efficient investment in infrastructure and promoting innovation;
 - Promote the interests of users within the Community; and
 - Encourage access to the internet at a reasonable cost to end-users.
- 11.7 The measures set out in these Decisions should provide regulatory certainty to market participants, in a context of significant change, and foster next generation investment while facilitating the development of operator strategies.
- 11.8 Regulatory certainty translates to clarity on the wholesale regime within an NGA context. The NGA Recommendation outlines an approach with specific objectives for next generation services and its guidance needs to be considered in the context of the market conditions in Ireland. Please refer to Chapter 3 of this document for further details on the European Commission NGA Recommendation and the more recent draft Recommendation regarding consistent application of non-discrimination and costing methodologies.
- 11.9 In markets where Eircom has significant market power, we do not consider that there is any alternative operator in a position to provide next generation wholesale access for WPNIA or WBA services. While certain parts of the retail market could be serviced by alternative forms of infrastructure such as cable, it is unlikely that an alternative form of next generation wholesale access (with the ubiquity, capacity and scale of the Eircom network) will emerge, particularly in the short to medium term. This means that absent regulation of wholesale NGA inputs, alternative product offerings would be limited to those based on current generation access.

- 11.10 As outlined in the discussion of competition problems in Chapter 3 of this Decision, we believe that Eircom has the potential to foreclose access to the retail markets. Eircom has the incentive to exclude a wholesale entrant and thereby foreclose the downstream market, thus undermining long term wholesale and retail competition. There is, therefore, a clear need for regulated access to products and services in these wholesale markets to enable a number of suppliers of retail services any alleviation of regulation would not be appropriate given the anticipated structure of these markets upon the completion of the planned NGA investment by Eircom. Furthermore, the pricing regime takes into account Eircom's incentive to foreclose and, in particular, the need to incentivise alternative investors in infrastructure by ensuring that the test of economic and technical replicability of product offering is met.
- 11.11 ComReg has made every effort to ensure consistency of its regulatory policy with its peer NRAs in the internal market, while taking account of diverging approaches from regulators responding to specific national circumstances. The measures in these Decisions have taken into account the policy direction stated in European Commission Decisions to NRAs (See Chapter 3) and the Commission responds to ComReg on 17th December with the "Commission Decision concerning Case IE/2012/1404, Wholesale physical network infrastructure access and Wholesale Broadband Access – Remedies in Ireland".
- 11.12 The NGA remedies are intended to encourage initial market entry and to facilitate expansion by competitors wishing to invest in their own current and next generation infrastructure over time. Investment continues to be facilitated at the deepest level of the network where it is economically feasible. This means that legacy LLU and VUA are supported, and are intended to allow OAOs to differentiate their retail and wholesale products significantly. A further objective is to ensure that the correct incentives are in place to stimulate demand and migration from legacy wholesale access to next generation access.
- 11.13 Evidence of pricing constraints in urban areas, at a retail level, and emerging retail and wholesale pricing strategies, mean that a price control in the form of a margin squeeze approach offers the SMP operator appropriate pricing flexibility for retail prices and wholesale inputs when measured against cost based WPNIA inputs. This also facilitates competition and investment. The margin squeeze approach focuses on replicability at each level of the investment ladder and applies a margin squeeze test between; (1) retail to wholesale and (2) wholesale to wholesale. These tests are discussed in detail as part of the price control obligation below and in Chapter 10 of this document.

- 11.14 ComReg is mindful of the need to take a technology-neutral approach, prioritising competition over the support of a particular technology or platform. Alternative investment in the copper network through LLU continues to be both pertinent and relevant, and maintains investment at the deepest layer of the network, thus providing a competitive constraint to Eircom which will remain important for the foreseeable future. ComReg's view is that the margin squeeze approach ensures that wholesale operators, who have invested at a particular level of the investment ladder, are not squeezed out of the market over the period of transition to fibre and while a wider LLU footprint develops. The same considerations apply to the case of VUA, which is intended to ensure that such wholesale operators will be facilitated beyond the transition.
- 11.15 Access to civil engineering infrastructure is crucial for the deployment of parallel fibre networks and is intended to incentivise investment by alternative operators. In particular, duct access provides the opportunity for an alternative operator to deploy its own fibre. This will be particularly relevant where there is demand for, and availability of, SLU. It is a necessary to ensure access to the network infrastructure, providing a path for efficient investment and innovation.
- 11.16 Access to the copper sub-loop is of strategic importance in an NGA context. Historically there has been negligible demand for SLU. This may have been due to an unfavourable trade-off between attainable market penetration, and thus revenues, at the cabinet versus the cost of deploying alternative infrastructure at this network level. However, technical constraints associated with the deployment of vectoring technology means that a deploying operator would need to have exclusive access to the cabinet in order to provide a next generation product at competitive speeds and this would significantly alter the business case for SLU in the NGA context. The approach to SLU amongst Member States is variable and reflective of specific national circumstances. ComReg has focused on meeting our statutory objectives as set out in Regulation 12(4) of the Access Regulation facilitating investment by all market players and attaining the EDA targets. With that in mind, ComReg proposed three options for the future of SLU in the ComReg Document No 12/27 and concludes on a measure which provides sufficient certainty and required flexibility.

11.3 Identify and describe the regulatory options

11.17 In the following section ComReg examines and again sets out its view as to why regulatory forbearance is not appropriate for the purposes of NGA and undertakes an incremental assessment of remedies (from the lightest to the most intrusive). The regulatory options considered by ComReg include:

- Access;
- Non-discrimination;
- Transparency;
- Price control:
 - Is price regulation needed
 - Form of price control – WPNIA and WBA Markets
 - Principles for the margin squeeze tests
 - Pre-notification and compliance obligations
 - Migrations.

11.3.1 Is access regulation needed?

11.18 In ComReg Document No 12/27 we considered the proportionality of access as required by Regulation 12(1) of the Access Regulation and the likely consequences of denial of access, or the imposition of unreasonable terms and conditions for access to the extent that these would:

- hinder the emergence of a sustainable competitive market at the retail level;
- not to be in the interest of end-users; or
- hinder the achievement of the objectives set out in section 12 of the Act of 2002 and Regulation 16 of the Framework Regulations.

11.19 In light of the competition problems, which have been identified, not only through economic theory but also through analysis of the experience across relevant wholesale markets¹⁰⁹, the potential for foreclosure remains. There is a considerable academic literature focused on the ability and incentives of a vertically integrated operator to engage in non-price discrimination¹¹⁰. As noted in the RIA in ComReg Document No 12/27, our analysis of the potential competition problems has been informed, in particular, by Regulation 12(1) of the Access Regulation. Given the clear potential for the SMP operator to foreclose markets ComReg considers that it is necessary to provide access under the terms and conditions set out in this Decision.

11.20 Regulation 12(4) of the Access Regulation asks us to consider the following factors in assessing the proportionality and justification of mandating forms of access in both if the markets under consideration:

- The technical and economic viability of providing access
- The feasibility of providing access in relation to capacity available
- The initial investment of the provider¹¹¹
- The need to safeguard competition
- Any intellectual property rights
- The provision of pan European services.

11.21 These criteria have been evaluated in relation to the forms of access, which are intended to further ComReg's objectives regarding competition and investment in NGA.

¹⁰⁹ See Section 3: Competition Problems, which highlights Compliance investigations which have been pursued by ComReg.

¹¹⁰ "Regulating for Non-price Discrimination: The case of UK Fixed Telecoms"; Cave, Correa & Crocioni.

¹¹¹ This criterion is similar to new Regulation 16 (2) (d) of the Framework Regulations 2011 and ComReg confirms for completeness we also considered this new text in the conclusions reached on this point.

- 11.22 The technical and economical viability of providing access and indeed the feasibility of providing access have been considered for WPNIA and WBA in an NGA context. In the WPNIA market, access to civil engineering infrastructure provides the most relevant form of access in the Irish market which is through ducts and poles. It is a measure that is carried over from the WPNIA Market Decision, ComReg Decision D05/10. This measure has been further specified, where it is envisaged that there may be a greater demand for CEI in an NGA context. Moreover, there will be situations where access to ducts will not be feasible or economic and in those particular instances, a request for dark fibre can be considered.
- 11.23 We have taken into account that the roll out of FTTH will be minimal; the technical and economic viability and the feasibility of access are questionable under these circumstances, though this could be considered in the future. Likewise for access to the terminating segment, as provided for under the NGA Recommendation, ComReg has specified that it is not relevant to the Irish market.
- 11.24 In relation to sub-loop unbundling, ComReg has carefully considered the factors pursuant to Regulation 12 (4) in order to ensure an appropriate regulatory approach for market development. Thus, we set out the circumstances where the technical and economic viability of providing access can be facilitated, where a request for access is reasonable, and outline that in the NGA footprint area, access is unlikely to fulfil the factors under Regulation 12(4). This solution should protect the initial investment of Eircom and competition should be protected through the provision of access through Market 5.
- 11.25 ComReg considers that the investment to be made by Eircom is considered and facilitated through the treatment of SLU and the provision of appropriate regulation of access products in WPNIA and WBA. Moreover, ComReg has taken into consideration the investment of alternative operators in infrastructure and the role of deep infrastructure competition is emphasised in our analysis.
- 11.26 Given that the main forms of next generation access products will occur in Market 5, we consider that provision of access is technically and economically viable and that the provision of access is feasible. Ensuring a safeguard to competition will be provided with fully functioning wholesale access via VUA and Next Generation Bitstream. This approach to the pricing of access, ensuring replicability of retail offerings along with equivalence of inputs, should ensure improved protection for competition.

- 11.27 The impact across other Member States has been taken into account, through our consideration of the upcoming “Recommendation on non-discrimination and costing methodologies” and Commissioner Kroes’ statement on the 12th July 2012. We consider that our approach is consistent with the guidance from the European Commission. We can infer from the comments made to ComReg through the Article 7 Notification process¹¹² that our approach adequately considers the impact on a pan-European basis.
- 11.28 Intellectual property rights are not considered to be a primary concern in the case of NGA.
- 11.29 As already set out in ComReg Document No 12/27, in the Market for WPNIA, we have taken utmost account of the NGA Recommendation when considering the forms of access for next generation WPNIA and WBA. The market reviews for WPNIA and WBA markets, as contained in the WPNIA Decision and the WBA Decision, specified measures applicable for these markets. Though access obligations are in place from these reviews, the onset of next generation services means that the range of demands for access is evolving.
- 11.30 Market conditions are such that Eircom has SMP in the Markets for WPNIA and WBA and it is reasonable to expect that, absent appropriate regulatory intervention, past and entirely new competition problems might emerge as NGA services are developed.
- 11.31 In terms of next generation WBA, the mandated access products are VUA and NGA Bitstream. Should the enhanced wholesale access products not be mandated and made available to entrants, it would close off a superior form of access to OAOs. A situation could not be allowed to develop where Eircom’s downstream arm could avail of a new or innovative access product, at the exclusion of all other operators. A fully functional virtual access product would be essential particularly where SLU is not available.
- 11.32 Access to civil engineering, is a fundamental enabler of infrastructure investment. Access to ducts, for the same purpose, is mandated through ComReg Decision D05/10. We have considered an extension of these provisions for the purpose of NGA WPNIA and find that it is both necessary and proportionate to incentivise infrastructure investment by alternative operators.

¹¹² Case IE/2012/1404

- 11.33 In an alternative scenario, where access to the physical infrastructure was not being provided, no other operator would be able to enter the market at the cabinet (SLU) level. Permitting such an outcome, would entail disregard for the potential competition problems, for the policy guidance from the NGA Recommendation, and most importantly the statutory aims of the Framework Regulation.
- 11.34 ComReg has taken utmost account of the NGA Recommendation in the case of unbundled access to the fibre loop, which is at the lower end of the ladder of investment. Although the investment intentions of Eircom contain only a small portion of fibre to the home, we consider that access to the fibre loop needs to be provided. We are agnostic as to the type of technical solution that Eircom deploys for this purpose. However, we are making provisions for appropriate timelines for notification of such a product. The European Commission has asked ComReg to consider applying a standard of Eol to any unbundled fibre access in the event of a wider deployment of FTTH.
- 11.35 We have examined the issue of mandating access to the terminating segment in the case of FTTH. This measure was advised in the NGA Recommendation but, ComReg believes, is more applicable in Member States with high density population and a wide deployment of FTTH. In the Irish context, we consider it unnecessary and unjustified at this stage of market and product development. However, ComReg may revisit this issue at a future time.
- 11.36 Access to fibre at the node is a critical form of physical infrastructure access. However, this mode of access is likely to be constrained by Eircom's plans to implement vectoring. Eircom has committed to using vectoring, a bandwidth enhancing technology, which allows higher speeds to be offered to end-users, but which precludes more than one operator's active equipment being present in the street cabinet. Based on these considerations, we presented three options in ComReg Document No 12/27 as possible means of ensuring access to the sub-loop in the context of operators' desire to deploy bandwidth enhancing technology. This has been discussed in Section 4.3 of this Decision and is also addressed below regarding Eircom's response to the RIA.
- 11.37 Please refer to Chapter 4 and 5 of this Decision document for a detailed discussion on the Access obligation.

11.3.2 Are non-discrimination obligations required?

- 11.38 As provided for by Regulation 10 of the Access Regulations, a non-discrimination obligation may require Eircom to ensure that it applies equivalent conditions in equivalent circumstances to other undertakings providing equivalent services, and that it provides services and information to others under the same conditions and of the same quality as it provides for its own services or those of its subsidiaries or partners.
- 11.39 An obligation of non-discrimination will apply to all NGA services and processes. In particular, ComReg has assessed the application of the standard of “Equivalence of Inputs” in the context of the non-discrimination obligation. ComReg also considered that where an obligation of “Equivalence of Inputs” can justifiably not be met, then an obligation of “Equivalence of Outputs” will apply. This has been discussed in Chapter 7 of this Decision document.
- 11.40 ComReg’s consideration of an augmented non-discrimination requirement has been influenced by a number of factors. The NGA Recommendation states that a higher standard of non-discrimination should be met for access regulation to civil engineering infrastructure.
- 11.41 Separately, Eircom has instituted a programme of “Wholesale Reforms” and states that it will offer improved conditions for its wholesale access seekers. An opportunity for improvement also arises because of the requirement for systems development to support the new NGA product suite. ComReg’s approach is informed by a general principle that the development of parallel OSS and process solutions for self-supply and wholesale access is an inefficient approach to the provision of NGA products and services; and that common solutions should be implemented as far as possible. However, ComReg recognises that, in practice, there are limits to the application of this principle. Please also refer to the recent European Commission draft recommendation on the preferred model for non-discrimination, which has been discussed in Chapter 3 and Chapter 7 of this Decision document. These elements have been considered in terms of the practical implementation of such a standard and we have been mindful of the principle of proportionality.
- 11.42 The specification of the standard of non-discrimination is likely to improve the functioning of the market, and to align with Eircom’s revised focus on its wholesale customers.

- 11.43 Through the non-discrimination obligation Eircom must provide advance evidence of compliance to ComReg. This is achieved through a detailed notification process. Previously, wholesale products have been launched and issues associated with non-discrimination have emerged thereafter. Although Eircom has remediated these issues in many cases, the costs of such issues have been borne in the intervening period (i.e. between problem identification and remediation) by other market participants. This represents a reactive approach to compliance where impacts are externalised by the SMP operator.
- 11.44 ComReg considers that a proactive approach is more likely to facilitate market entrants and to significantly reduce the impact of non-compliance costs upon them. The requirement on Eircom to provide information detailed below is intended to encourage Eircom's compliance with its revised non-discrimination obligations. The higher standard of non-discrimination required, coupled with the detailed notification process is likely to have a significant impact. This approach is underpinned in the Commissions draft "Recommendation on non-discrimination and costing methodologies", which focuses on the consistent application of effective non-discrimination, and which stresses the adherence to a higher level of equivalence and a tighter non-discrimination obligation¹¹³.
- 11.45 In conjunction with the measures stemming from the WPNIA and WBA Market Reviews and other wholesale obligations, including the ComReg Decision D05/11 on KPIs; transparency as to the quality and timeliness of next generation services supplied in the market requires Eircom to produce KPIs for these products. This is intended to ensure that any discriminatory behaviour can be detected and addressed. This measure will be an extension of the existing process and hence should not pose a significant additional burden on Eircom. ComReg's consideration of this impact is in line with the analysis carried out in D05/11.

11.3.3 Are transparency obligations required?

- 11.46 Transparency is a necessary means of observing price and non-price terms and conditions for next generation WPNIA and WBA products. It is intended to offset the incumbent's first mover advantage. Non-price transparency applies to areas such as access to information in terms of service provision and service assurance, product development including planning dates, IT system development including planning dates.

¹¹³<http://ec.europa.eu/digital-agenda/en/news/commission-seeks-berec-opinion-draft-recommendation-consistent-non-discrimination-obligations>.

- 11.47 In the context of NGA, there are two important aspects to the obligation of transparency in terms of supporting other obligations. The first is to ensure that there is adequate transparency regarding the initial launch of new products offered over the NGA network. The second is to ensure that on an on-going basis, access to NGA products and services is provided in a transparent way and amendments to product design and/or functionality is transparent. To cater for the first situation, we consider that there should be a six month prior notification to industry. Operators will require advance visibility of network upgrades as these may have implications for their own network architecture or future demand for access and interconnect. At an operational level, non-price transparency will be required to facilitate and implement the specifics of the principles of non-discrimination and hence ComReg may specify details which need to be published.
- 11.48 Transparency is needed to support accounting separation obligations, particularly to ensure that cost calculations and prices (i.e. internal price transfers) are visible. This would also allow ComReg to monitor compliance with any non-discrimination obligations, and address potential competition problems relating to cross subsidisation, price discrimination and the application of price squeezes.
- 11.49 Eircom should notify industry with information on changes to the ARO and WBARO two months in advance of a retail launch in order to identify and justify any differences between the services and facilities set out in the ARO and the WBARO and the comparable services and facilities which Eircom provides its own operations. This will ensure that the same information is made available to all market participants at the same time and that alternative operators have sufficient time to prepare internal and strategic plans.
- 11.50 An obligation of non-discrimination needs to be supported by a clear transparency measure. Performance on the obligation of non-discrimination will be greatly enhanced by the prior notification requirements for new product development and the publication of information on differences between the ARO/WBARO services and facilities and self-supply. This would also require the publication of performance metrics showing aggregate performance against the agreed and published service level agreement. Performance in terms of delivering products and services in a non-discriminatory manner should be made available to all market stakeholders through the publication of KPIs showing the relative performance of OAO supply versus self-supply. The transparency obligation requires Eircom to make available pertinent information, for example on network roll out and product development.
- 11.51 The transparency measure takes full account of the NGA Recommendation but again we ensure that proportionality is applied.

11.3.4 Options on whether price regulation is necessary?

11.52 The WBA and WPNIA market analysis Decisions imposed a price control obligation at a high level and these obligations are now being further specified in this Decision.

11.53 The two options considered by ComReg were as follows:

- Price regulation is required
- No price regulation is necessary.

11.54 In summary, an important factor influencing the incentives for Eircom to foreclose third party access, and consequently the rationale for price regulation, is the extent to which the incumbent's behaviour is constrained by alternative platforms, either in the retail market or as alternative suppliers of wholesale inputs. Even when there is no direct competition between different networks (cable versus Eircom's fixed line) at the wholesale level, competition in the retail market could constrain Eircom's wholesale pricing and incentives to offer wholesale services at all.

11.55 As set out in Chapter 10 of this Decision, a price control is deemed necessary. We consider that while the ability of Eircom to overcharge its retail customers (in areas where there is some presence of cable competition — whose offering includes a high speed broadband service) may appear to be limited, the incentive to provide third party access seekers competitive wholesale services on commercial terms together with the incentive to sell wholesale services at preferential prices to those higher up the ladder of investment appears to be weak.

11.56 To date, we have no evidence to justify that Eircom has consistently negotiated reasonable terms and prices with an entrant, absent regulatory intervention. Consequently, we have concluded that there is currently insufficient evidence to indicate that it is in Eircom's interest to provide access on reasonable terms without regulation. Please refer to Chapter 10 for further details.

11.3.5 Options on the form of price control – WBA and WPNIA Markets

11.57 As set out in ComReg Document No 12/27, ComReg considered two main forms of price control in relation to the NGA as follows:

- Retail minus (or in this context a retail margin squeeze test).
- Cost orientation (or also referred to as cost plus).

- 11.58 In assessing the two options we considered that WBA services are likely to be the predominant mode of entry in an NGA context i.e. VUA and NGA Bitstream. In the WBA market we considered the potential of a retail price constraint by cable in the retail fixed broadband market as well the potential for a pricing constraint to be exercised by LLU based competition over traditional copper. Therefore, a margin squeeze approach with pricing flexibility for retail prices and wholesale inputs measured against cost based WPNIA inputs facilitates emerging competition and investment. The margin squeeze approach would focus on both the risk of (1) retail to wholesale margin squeeze and (2) a wholesale to wholesale margin squeeze tests. ComReg's view is that the margin squeeze approach ensures that wholesale operators have sufficient economic space to provide downstream services and thus are not squeezed out of the market over the period of transition to fibre and while a wider LLU footprint develops; the same considerations apply to users of VUA.
- 11.59 A cost orientation obligation in the WBA market does not seem appropriate at this nascent stage of market development. Given the volatility and unpredictability of demand for NGA based services, at both the retail and wholesale level, there are significant risks associated with a cost based approach, which relies on estimates of the likely takeup of NGA based services. This has been discussed in detail in Chapter 10 (subsection 10.4.3). However, a cost orientation obligation is still relevant for any NGA products and services that are launched in the WPNIA market, such as civil engineering access.
- 11.60 These options have been discussed in detail in Chapter 10 of this Decision document and are also discussed below in relation to the impact on stakeholders.

11.3.6 Options for the principles for the margin squeeze tests

- 11.61 The following are the main options that were considered by ComReg for determining the appropriate principles for the margin squeeze tests:
- The margin squeeze tests should be based predominantly on a SEO cost base, which assumes that entrants are currently not likely to be as efficient as Eircom given that they cannot achieve the same scale. ComReg considers that a move toward an entire EEO approach may be relevant once the OAOs have achieved sufficient scale to encourage efficient entry.
 - The retail margin squeeze test should ensure that the ATC (rather than the LRAIC plus cost standard) of the NGA retail broadband product / portfolio of NGA retail broadband products are recovered.

- The portfolio level, as opposed to the product-by-product basis, of aggregation should apply to the retail margin squeeze test which allows the incumbent the flexibility to efficiently price discriminate on individual products so long as Eircom recovers the average costs across the portfolio of NGA retail broadband products.

11.62 We consider that these principles should provide Eircom with sufficient flexibility in its retail pricing while on the other hand the OAOs have ex-ante defined economic space between NGA products to efficiently compete in the downstream markets.

11.63 For consumers, this methodology should balance the availability of next generation and current generation services from a number of operators, which combined with the retail price constraint provided by the cable alternative, should ensure that these services are provided at a competitive price. There may be incremental benefits of price discrimination and flexibility of multiple products at different price points, where this promotes more efficient delivery of products and services.

11.3.7 Options for pre-notification and compliance

11.64 In ComReg Document No 12/27, we considered the following options regarding the obligations for pre-notification and for the provision of a statement of compliance:

- Option 1: Notification of wholesale and retail prices to ComReg with the provision of a statement of compliance for retail prices only
- Option 2: Notification of retail prices with a statement of compliance to ComReg based on materiality and notification for all wholesale prices as well as an overall annual review.

11.65 Option 1 means that Eircom would notify ComReg of retail and wholesale prices but it would only provide a compliance statement for the retail prices, while it would not be required to provide a statement of compliance for wholesale prices.

11.66 Option 2 means that Eircom would be required to notify ComReg of retail and wholesale prices for NGA and provide a statement of compliance for all wholesale prices but for retail it would only be required to provide a statement of compliance where it is expected the retail price will have a material impact on the marketplace. In addition, this option would also require that Eircom provides a detailed statement of compliance on an annual basis demonstrating its compliance with the margin squeeze tests contained in the NGA Margin Squeeze Model.

11.67 These options have been considered in Chapter 10 and are further discussed below.

11.3.8 Options for setting migration charges

11.68 For migration charges we considered a number of options including:

- Option 1: Universal migration charge
- Option 2: Migration charge depending on the stage of investment
- Option 3: Distinct migration charges for current generation and for next generation.

11.69 Option 1 means one common or universal charge regardless of whether the migration was between current generation and next generation products and services and regardless of the type of service.

11.70 Option 2 means that the migration charge would depend on the stage of the ladder of investment which the operator is on. For example, a distinct migration charge may be applied where the operator is migrating between Bitstream services and another charge where an operator is migrating from Bitstream to LLU or from LLU to VUA.

11.71 Option 3 means that the status quo would remain in place for the migration charges for current generation based products and services in the WBA and WPNIA market and that distinct migration charges would be determined for next generation products and services.

11.72 The above options are discussed in detail in Chapter 10 and are also discussed below in terms of the potential impact on the stakeholders.

11.3.9 Determine the likely impacts on stakeholders

11.73 This section summarises the impact of the options above on the various stakeholders. We consider the potential impact that could be incurred by Eircom in complying with the set of obligations as well as the potential benefits that would accrue to Eircom, its wholesale customers, and end users.

11.3.10 Is access regulation needed?

11.74 Impact on Incumbent:

- Eircom may have the incentive and ability to foreclose competition in the wholesale and retail markets. This could be achieved directly, by denial of access; or indirectly, through the provision of sub-standard or discriminatory forms of access.
- Future NGA investments have a degree of regulatory certainty.

11.75 Impact on OAOs:

- Were access to infrastructure not provided, including civil engineering and unbundled access to the fibre loop, no other operator would be afforded the opportunity to invest at the lowest rung of the network for NGA services.
- Access based competition remains important in an NGA environment and will continue to be facilitated through application of the ladder of investment.
- Wholesale access on current generation networks, through LLU will continue to be an important driver of competition, even as NGA networks are deployed, assuming continued retail demand for current generation services. The strength of competition from alternative operators providing more basic services is important in terms of delivering a full suite of current and next generation services to end-users and to service the wholesale broadband access market throughout a transition to a retail market dominated by NGA.
- Given the policy objective of maximising the availability of high speed broadband, any operator that is willing to invest in bandwidth enhancing technologies should be facilitated, as long as fit for purpose NGA wholesale inputs can be provided by that operator to service the retail market.

11.76 Impact on consumers:

- The policy objective is to ensure end-user benefit from higher speeds. Consumers benefit from increased competition in terms of price, quality and choice.
- ComReg is of the view that higher speeds have the potential to benefit all end-users and will allow for the development and availability of a richer range of products and services.
- Depending on consumer demand, it could be considered that the roll out of NGA to certain parts of the country could lead to a widening digital divide. Current generation broadband will continue to be available in all areas but those in NGA footprint areas may have greater choice on product and price.

11.3.11 Are non-discrimination obligations needed?**11.77 Impact on Incumbent:**

- A non-discrimination obligation includes obliging Eircom to ensure that a standard of Equivalence of Inputs will apply to NGA systems and processes and EoO will apply for all other services. ComReg has taken full account of the proportionality of the measure proposed in the consultation and has refined the scope of EoI to Market 5 NGA services. Given that Eircom has offered to ensure EoI for the new systems development for NGA, the costs of this measure have already been foreseen.
- A statement of differences on EoI and EoO will identify differing levels of services and areas for regulatory address and where there are major differences for EoO, ensuring that there is governance and control environment used.
- The analysis required by Eircom in order to determine where EoI or EoO should be applied should not be greater than the burden associated with the existing non-discrimination obligation however as EoO will now apply to all other services, there will be a greater burden placed on Eircom to ensure adequate compliance and control structures are in place.

11.78 Impact on OAOs:

- The application of the *ex ante* non-discrimination obligation seeks to prevent discriminatory behaviour and encourages conditions for competitive dynamics.
- Vodafone highlighted that the non-discrimination and transparency obligations should ensure the principles of:

- Equal access to information
 - Equivalent ordering and information system
 - SLAs and associated targets.
 - Measures such as SLAs, KPIs etc assist transparency in terms of delivering equivalence. These standards should be applied to all wholesale products including civil engineering.
- In general, the consensus from industry has been that greater equivalence is necessary to ensure a level playing field between operators and Eircom's downstream arm.
 - The shift to a fibre network will create an opportunity to deliver higher standards of equivalence to wholesale customers, in particular for new processes and information systems which are developed for NGA.

11.3.12 Are transparency obligations needed

11.79 Impact on Incumbent:

- The operation of the transparency obligation alone is not adequate in providing a means of ensuring *ex ante* that Eircom does not discriminate between OAOs and its own internal operation. It is also required to address the inherent first mover advantage of the incumbent, which is particularly relevant given a step change to NGA.
- Prior notification to ComReg will be required for new product development and prices at the initial launch stage and on an ongoing basis.
- Transparency obligation is a necessary means of ensuring that ComReg and OAOs can observe relevant terms and conditions for Eircom's products, thereby ensuring the effectiveness of the proposed access and non-discrimination obligations and bringing the necessary confidence to potential investors.
- Transparency obligation is also required to monitor and ensure the effectiveness of any price control obligations and to support any accounting separation obligations, as this would allow the calculation of costs and prices to be rendered visible. This would also allow us to monitor the compliance of Eircom's pricing behaviour with any non-discrimination obligations, and address potential competition problems relating to cross subsidisation, price discrimination and the application of price squeezes.

11.80 Impact on OAOs:

- Prior notification of new product development will enable OAOs to compete effectively, allowing sufficient time to develop their own product set, associated processes and marketing requirements, facilitating product to market, in a timeframe commensurate with the incumbent product roll out.
- KPIs enable stakeholders to observe any discriminatory behaviour; they are used as a descriptive measure of the performance of products and indicate the quality and performance achieved.
- Transparency in terms of service delivery may alleviate suspicions or concerns of unfair practices and ameliorate wholesale relations. It will facilitate the timely delivery of competitive access.

11.81 Impact on consumers:

- The measures constitute an additional regulatory burden for ComReg, and this would entail both ComReg's support for the development of measures such as KPIs, and the need to ensure implementation and compliance. However, ComReg believes that these measures are essential for the development of the market, and the ultimate benefit of consumers

11.3.13 Price control obligation**A. Is price regulation needed?****Option 1: Price regulation is needed****11.82 Impact on Incumbent:**

- Incumbent is restricted from foreclosing on OAOs purchasing its wholesale products via margin squeeze.
- Future NGA investments have a degree of regulatory certainty with price regulation; recovery of investment is not constrained by the price control and the incumbent would have sufficient retail and wholesale pricing flexibility to adjust prices to reflect uptake of NGA services.

11.83 Impact on OAOs:

- With price regulation, OAOs face an ex-ante defined economic space, which is expected to provide sufficient margin for entry. The margin squeeze test is designed to encourage efficient entry and provide certainty for those that have invested.

11.84 Impact on consumers:

- Consumers benefit from increased competition in downstream markets (price, quality and choice).

Option 2: Price regulation is not necessary i.e. ex-post monitoring**11.85 Impact on Incumbent:**

- Eircom would have freedom to negotiate wholesale NGA pricing with OAOs. Whilst still subject to competition law, prices would not be subject to any regulatory pressure and/or uncertainty. Insofar as Eircom would exploit the flexibility by charging high or otherwise discriminatory prices from OAOs, this could result in enhanced returns to Eircom in the medium or long term. Even if OAOs would be, to some extent, foreclosed, Eircom would still be in close competition with UPC.

11.86 Impact on OAOs:

- OAOs could face access discrimination subject only to ex-post competition law rulings. For OAOs, the risk in the event of discriminatory conduct is that the ex-post intervention could occur after harm has occurred e.g., after the OAO has decided to not enter or to leave a particular market. In a (still) growing market where customer lifetimes are long and switching costs relatively high, the harm of potential foreclosure would manifest itself over a long period of time—in terms of profits that OAOs would have achieved in the absence of the infringement.

11.87 Impact on consumers:

- Eircom would have more flexibility to compete with UPC in the short term (i.e. it could adjust its pricing without *ex ante* constraints on economic spaces). However, it is not clear whether Eircom would actually price below UPC's offerings and to what extent. A relatively large proportion of Eircom's customer base may not be sensitive to small changes in pricing (to the extent Eircom's customer base consists of many loyal 'non-switchers'). Eircom's incentives to compete fiercely in prices may be diluted insofar as the cohort of customers who are likely to respond to price changes is limited. In the longer term, if the OAOs do not achieve sustainable scale, the retail market may become duopolistic (Eircom and UPC) which in turn may result in consumer harm due to higher prices and lower quality.

B. Form of price control – WPNIA and WBA Markets

Option 1: Retail margin squeeze (with wholesale margin squeeze tests)

11.88 Impact on Incumbent:

- Eircom is allowed pricing flexibility to set the retail prices. The wholesale prices will be set with reference to outputs of the NGA Margin Squeeze Model. Copper and fibre based services are priced consistently relative to their cost of provision which implies a lower bound on NGA prices below which they cannot fall without a corresponding reduction to LLU and SLU prices or where there are material changes to underlying assumptions for usage and costs.
- In order to avoid a margin squeeze Eircom can reduce the wholesale prices for NGA services so long as it reduces the SLU price (and the LLU price where appropriate).

11.89 Impact on OAOs:

- The margin squeeze tests should be sufficient to ensure that entry is possible at prices that are consistent with the outcome of a competitive process. The upfront cost of offering NGA services is likely to be significant at a retail level. Therefore, without sufficient margin at the retail level OAOs might suffer unsustainable losses as a result.
- Where Eircom reduces the SLU price in order to comply with the margin squeeze model, then the OAOs should benefit from lower wholesale prices.

11.90 Impact on consumers:

- For NGA products and services in the WBA market, this option should encourage NGA competition to the benefit of consumers in the NGA areas.
- More competitively priced products in the marketplace, especially in the NGA areas.

Option 2: Cost Orientation – WBA Market

11.91 Impact on Incumbent:

- For WBA, this approach may imply significant uncertainties with respect to the assumptions given the cost and demand uncertainty; alternate

applications of the cost standard will result in differing wholesale access charges and, by implication, different constraints on the ability to match competitor prices in the retail market. A wholesale access charge that is too low hinders investment recovery and could deter the further investments. A wholesale price that is too high would constrain Eircom particularly where there is alternate platform competition (UPC), such that their retail price would be higher than competitors, discouraging takeup of NGA services provided Eircom still has to comply with the margin squeeze test.

11.92 **Impact on OAOs:**

- For WBA this option could mean that the choice of cost standard and the resulting wholesale price will have implications on entry signals. High wholesale access charges may deter entrants from their initial or expanding investments deeper into the network. Similarly to Eircom, OAOs are also likely to be constrained in the retail market by cross-platform competition. In effect the entire platform including Eircom and OAOs would be constrained by a too high or too low access charge, but more likely a high access price where the alternative platform, for example cable is cheaper.
- At the same time, a cost orientated pricing methodology would provide OAOs with a visible price anchor in the market, removing any perceived uncertainty regarding future price levels for the VUA product, based on the margin squeeze approach.

11.93 **Impact on consumers:**

- For WBA, this methodology could hinder NGA competition (and subsequent market outcomes) where wholesale costs are set higher than those that would be supported in the market. Welfare benefits that may arise from NGA based products and services could fail to materialise if a cost plus regime deters investment, due to too low prices arising from incorrect demand assumptions.

Option 2: Cost Orientation – WPNIA Market

11.94 **Impact on Incumbent:**

- For WPNIA products and services in the context of NGA, it allows Eircom to recover its costs plus a rate of return. It also allows flexibility for potential updates to the Copper Access Model.

11.95 Impact on OAOs:

- Promotes more infrastructure intensive entry compared with service based entry in the WBA market.

11.96 Impact on consumers:

- More infrastructure intensive entry should mean more innovative products for consumers.

C. Principles for the margin squeeze tests

Cost base - EEO or SEO?

Option 1: Retail margin squeeze test is based on an EEO cost base

11.97 Impact on Incumbent:

- In general, an entire EEO assumption for the margin squeeze test will imply that entrants could achieve similar economies of scale as the Incumbent. EEO is likely to assume lower retail costs for Eircom thereby allowing a higher wholesale access charge to be set by Eircom.
- For the incumbent the EEO assumption (compared to SEO) is likely to reduce competition in the retail market and/or increase its return from the supply of wholesale services.

11.98 Impact on OAOs:

- An entire EEO cost base would make entry more difficult for entrants, as the resulting wholesale price would be higher, but may incentivise them to invest in their own infrastructure.
- One exception in this context is the margin squeeze test between VUA and SLU where the costs are based on EEO costs given that Eircom are currently the only operator providing the SLU service and in general the same costs would apply if another SLU operator were to provide it.

11.99 Impact on consumers:

- An entire EEO test is likely to result in (marginally) higher prices and less choice in the long run, as it could discourage OAOs to enter the market, due to the higher resulting wholesale input prices. It could also result in a duopoly of operators in certain geographic areas as no OAO could compete using wholesale products provided over Eircom's network.

Option 2: Margin squeeze test is based on a SEO cost base

11.100 Impact on Incumbent:

- The SEO assumes higher costs (compared to EEO) for the incumbent so allowing a lower wholesale access charge to be set by Eircom.
- The SEO should promote competition from OAOs, who would face lower wholesale products from Eircom. This could increase the willingness of OAOs to enter the market using Eircom wholesale inputs.

11.101 Impact on OAOs:

- The SEO assumes that entrants have not yet gained sufficient economies of scale as the incumbent. By using the SEO cost standard in the margin squeeze test, the resulting wholesale prices would be lower, compared to a margin squeeze based on the EEO cost standard.
- This approach encourages entry to the market, by giving rise to lower wholesale prices that enable OAOs to supply wholesale and retail services more competitively based on eircom wholesale inputs.

11.102 Impact on consumers:

- Likely to result in (marginally) lower prices and more choice, due to higher levels of competition from OAOs, compared to EEO. As competition at the retail level becomes more entrenched it may be possible to move to EEO which may see more price benefits for consumers.

Cost standard: LRAIC plus or ATC?

Option 1: Margin squeeze test is based on 'LRAIC plus'

11.103 Impact on Incumbent:

- Allows Eircom to recover all of its average efficiently incurred directly attributable variable and fixed costs and an apportionment of joint and common costs.

11.104 Impact on OAOs:

- The 'LRAIC plus' cost standard allows recovery of the relevant common costs, as well as fixed and variable costs. This is the calculus faced by an

operator when deciding whether to enter or expand a market. This should also ensure efficient entry, compared with the ATC cost standard.

11.105 **Impact on consumers:**

- Allows the promotion of sustainable competition by OAOs to the benefit of consumers.

Option 2: Margin squeeze test is based on ATC

11.106 **Impact on Incumbent:**

- A larger economic space between products is likely to mean easier entry potentially by an inefficient operator. If retail prices are constrained, the low wholesale charges could undermine the recovery of investment. Changes to assumptions that limit the incumbent's pricing flexibility are likely to harm Eircom's ability to match retail prices of alternate platform providers.
- ATC is currently used for legacy Bitstream products under ComReg Decision D01/06.

11.107 **Impact on OAOs:**

- The ATC cost standard may promote further entry given that it includes the costs of 'LRAIC plus' and some additional common costs. However, the ATC may encourage inefficient entry.

11.108 **Impact on consumers:**

- Additional competition may reduce prices or improve choice however marginal changes to investment incentives may decrease the size and scope of the NGA network.

Portfolio or product-by-product:

Option 1: Portfolio

11.109 **Impact on Incumbent:**

- Allows the incumbent flexibility in its retail pricing, enabling Eircom to price some products above and others below ATC. This is likely to imply discounting on products where the competition is most intense, provided

that other products are priced higher, such that the overall average revenue matches ATC. This flexibility may mean that the incumbent can experiment with price discrimination for different product offerings which may improve efficiency, and under certain conditions, can be welfare maximising, particularly in the nascent stages of market development for NGA services.

11.110 **Impact on OAOs:**

- Can encourage efficiency and promote competition between operators in more competitive urban areas.

11.111 **Impact on consumers:**

- Some consumers in intensively competitive areas may be subject to lower retail prices and improved efficiencies.

Option 2: Product-by-product

11.112 **Impact on Incumbent:**

- Ensures sufficient economic space for each NGA offer, but would restrict the ability of the incumbent to price products as flexibly as they would under the portfolio approach. Each product would need to be priced at a retail level to meet the ATC requirement, which would limit the ability of Eircom to adjust pricing in response to market knowledge, in particular during the early stage of take up of next generation products.

11.113 **Impact on OAOs:**

- This could enhance entry and competition, particularly for entrants that may lack economies of scope.

11.114 **Impact on consumers:**

- There may be some gains from improved competition of a product-by-product approach, but these may be offset by a reduction of efficiency.

D. Pre-notification and compliance obligations

Option 1: Notification of wholesale and retail prices and a provision of a statement of compliance for retail prices only

11.115 Impact on Incumbent:

- Given that this option would mean that Eircom could set a revised wholesale price for NGA without a prior provision of a statement of compliance to ComReg this may create issues at a later date if Eircom were potentially non-compliant with the margin squeeze model. If this were to happen Eircom may owe monies to operators from the time the non-compliance began. This would create a lot of uncertainty for the marketplace.

11.116 Impact on OAOs:

- OAOs would have no reassurance that the prices set by Eircom for wholesale NGA services were in compliance with the NGA Margin Squeeze Model.

11.117 Impact on consumers:

- More certainty over retail price levels.

Option 2: Notification of retail and wholesale prices with a statement of compliance for retail prices with material impact and for all wholesale prices as well as an overall annual review

11.118 Impact on Incumbent:

- This option will place an additional burden on Eircom to provide a statement of compliance for all wholesale prices for NGA. However, there are currently only two main NGA products (NGA Bitstream and VUA) therefore the burden will be somewhat limited given that it only relates to these.
- Eircom are required to provide a statement of compliance for all retail prices except where it is expected that take-up for a specific retail NGA offer will not exceed 5k Eircom retail customers. Please refer to Chapter 10 (subsection 10.8.3) for further details.
- A review one year from the date of launch for compliance increases the burden on Eircom to provide a detailed statement of compliance (and supporting information) demonstrating its compliance with the NGA Margin Squeeze Model. This will mean two separate statements of

compliance – the retail statement of compliance will be provided one year from the date of launch of retail services and the wholesale statement of compliance will be provided by Eircom one year from the date of launch of wholesale services. These reviews provide a regular check that Eircom's prices are in line with its margin squeeze obligations. This should also reduce the likelihood of withdrawal of retail products at a later time, where Eircom would be found to be non-compliant. One year from the date of launch of NGA WBA services / retail services, should allow sufficient time for demand for NGA services to emerge. After that annual review, ComReg considers that it is sufficient for it to request Eircom to submit a statement of compliance on an ad-hoc basis rather than annually. This has been discussed in Chapter 10 (subsection 10.8.3).

11.119 Impact on OAOs:

- The statement of compliance for all wholesale prices as well as the review one year from the date of launch and thereafter on the request of ComReg should give OAOs reassurance and a degree of certainty that the prices set by Eircom are in line with its margin squeeze obligations.

11.120 Impact on consumers:

- Less likelihood of withdrawal of retail services and/or significant changes to prices.

E. Migrations

Option 1: Single migration charge

11.121 Impact on Incumbent:

- Eircom recovers its migration costs (and a rate of return) in aggregate.
- However, each migration charge may not be cost oriented which arguably may result in economically inefficient pricing signals.

11.122 Impact on OAOs:

- OAOs will not be unduly discriminated against on price during the transition whether the OAO is migrating between current generation services or to next generation services.
- This option should not act as a barrier to investment for OAOs.

- It may serve to eliminate distortions in OAO behaviour caused by different migration charges for different services.

11.123 **Impact on consumers:**

- May lead to more innovative products and more competition at a retail level where OAOs start to invest.

Option 2: Migration charges depending on stage of investment

11.124 **Impact on Incumbent:**

- Eircom will recover its costs (and a rate of return) based on the extent of physical activity involved for each of the processes involved for the specific migration.

11.125 **Impact on OAOs:**

- The different charges may dis-incentivise investment by OAOs.

11.126 **Impact on consumers:**

- Where OAOs are less likely to invest, this may mean less innovative consumer products and less competition.

Option 3: Migration charges depending on current generation and next generation

11.127 **Impact on Incumbent:**

- The status-quo would remain in place whereby there are separate migration charges for current generation and next generation services.

11.128 **Impact on OAOs:**

- The different charges may dis-incentivise investment by OAOs.
- This option is a barrier to investment by OAOs and may in fact dis-incentivise infrastructure investment.

11.129 **Impact on consumers:**

- Where OAOs are less likely to invest, this may mean less innovative consumer products and less competition.

11.3.14 Assess the likely impact on Competition:

- 11.130 ComReg as an NRA has the responsibility to promote competition in the electronic communications markets. Competition drives choice and value for consumers. This Decision is to stimulate infrastructure investment or to create a path for services based competition to move up the ladder of investment and this is relevant for the transition to fibre. ComReg is also cognisant of the Digital Agenda for Europe and the targets set across all EU member states towards 2020.
- 11.131 The Digital Agenda for Europe sets targets for the deployment and take up of high-speed broadband, and foresees a number of measures to foster the deployment of NGA based on optical fibre and to support the substantial investments required in the coming years. The NGA Recommendation aims at promoting efficient investment and innovation in new and enhanced infrastructure, taking due account of the risks incurred by all investing undertakings and the need to maintain effective competition, which is an important driver of investment over time.
- 11.132 In the WPNIA and WBA Decisions, we expressed the view that the advent of NGA should not be allowed to lead to a restoration of monopoly conditions over the access network. The conditions of competition are not expected to change appreciably where Eircom overlays or replicates its existing access network with fibre and NGA equipment.
- 11.133 Competition and operational issues are likely to centre on the provision of services and processes rather than the actual products. Thus, products and services must be provided on equivalent conditions. The aim is that this will stimulate better conditions for competition. However, we are mindful of encouraging investment at the deepest layer of the network and of ensuring that the decisions that we mandate today will be sufficiently flexible to facilitate evolving market conditions and demand for both current and next generation services.
- 11.134 Access-based competition is central in an NGA environment and will continue to be facilitated through and applying the ladder of investment. Wholesale access on current generation networks, through LLU will continue to be an important driver of competition, even as NGA networks are deployed. The ability of operators to continue to compete with current generation broadband services enables the delivering of a full suite of services to end-users and to service the wholesale broadband access market throughout a transition to NGA.

- 11.135 The price control obligations for NGA, in taking account of the current state of competition in certain areas, should encourage initial entry and expansion by competitors wishing to invest in their own infrastructure over time. Access should be at the deepest level of the network where economically feasible, and to allow Access Seekers to differentiate their products to the extent possible where active access is used. At the same time, regulated pricing should facilitate entry by competitors as efficient as the SMP operator which is consistent with encouraging efficient investment.
- 11.136 A further objective is to ensure that operators have the right incentives to use new NGA services as opposed to lagging on existing legacy wholesale access, where market demand exists for NGA products. This requires that the pricing of each of the platforms (current generation on copper and next generation on fibre), which are to some extent parallel, is consistent and does not lead to a margin squeeze within a platform or between two platforms.
- 11.137 We consider that safeguarding efficient competitors from possible below cost selling by an SMP operator in respect of high-speed broadband products helps to facilitate greater regulatory certainty for longer-term competitive entry and expansion, with positive implications for the price, choice and quality of services ultimately delivered to end-users

11.3.15 ComReg's Assessment of Responses and Final Position on the best option:

- 11.138 In their response to the Consultation, Eircom stated their concerns that the impact of the draft measures have not been fully taken into consideration. Their areas of primary concern include:
- the significant increase in costs resulting from the implementation of EoI
 - constrained and distorted competitive positioning relative to UPC
 - materially constrained retail NGA price freedom
 - loss of NGA sales due to regulatory support for current generation alternatives
 - reduced attractiveness of the NGA business case arising from the above
 - uncertainty arising from SLU proposals which could hamper Eircom's ability to utilise vectoring to enhance broadband speeds and further impact on eircom's ability to compete with other platforms.
- 11.139 Given Eircom's concerns, ComReg considers the specific points raised under the relevant headings.

Proportionality of access:

11.140 Eircom states that regulatory measures need to be appropriate, proportionate and justified. Eircom disagrees that an access measure is required and states that ComReg has not justified why a remedy of access is required. Eircom states that there is no consideration by ComReg of the “proportionality” of a particular remedy. In particular Eircom maintains that the relevant costs in terms of capital outlay, administration and resources, have not been considered. ComReg believes that an access obligation is required by the regulatory objectives set out in section 12 of the Communications Regulation Act, which aims to:

- Ensure that there is no distortion or restriction of competition;
- Encourage efficient investment in infrastructure and promoting innovation;
- Promote the interests of users within the Community; and
- Encourage access to the internet at a reasonable cost to end-users.

Eircom has SMP in the markets as determined in the WBA Decision and the WPNIA Decision. This means that market entry by other players may be significantly constrained by Eircom. Reference by Eircom to high costs associated with capital outlay and so forth underlines the requirement for an NGA access obligation. This is because the costs alluded to would increase the extent of the barriers to market entry and thus reduce the likelihood of effective competition.

11.141 In its response, Eircom argues that it is facing stiff competition from UPC and that this has not been taken into consideration. However, ComReg believes that the competitive constraint from the retail broadband operators has in fact been considered and that this has led to the retail margin squeeze approach for the price control for NGA. The issue on the retail pricing constraint has been discussed in Chapter 10 and also in Oxera’s non-confidential report “Assessment of Retail Pricing Constraints”, which is published separately in ComReg Document No 13/11b. It is also worth re-iterating that all other operators operate in the context of the market power enjoyed by Eircom resulting from its economies of scale, scope and density and the persistent barriers to entry, in the access network.

Access to the Copper Sub-loop:

11.142 Eircom is of the view that no European jurisdiction has found material demand for access to the sub-loop and the cost of provision is considered prohibitive. ComReg considers that the historically low demand for SLU has in fact been taken into consideration. Furthermore, we point to the fact that the measure for SLU manifests only where there is a credible demand for the service and only where this is considered to be reasonable. Therefore, the approach taken by ComReg is flexible and targets only those areas where there is a justifiable need for regulation. Please refer to Section 4.3 of this decision document for further discussion on SLU.

Non-Discrimination:

11.143 Eircom strongly disagrees with the principle of EoI and believes that it far exceeds the requirements of the non-discrimination remedy. Eircom maintains that given advanced availability of wholesale products; industry's input into product design; Eircom's voluntary commitment for product ordering and the gateway; and progress on addressing discrimination with KPIs, all amount to a significant improvement in the standard of the non-discrimination obligation. Therefore, in its view, implementation of EoI across the board is unjustified. ComReg considers that the proportionality of the remedy has in fact been considered in depth. ComReg point to the fact that not only has the potential to foreclose been identified through the market analysis, but there are also actual examples of competition issues that have been documented. Furthermore, Eircom's voluntary commitments to reform are welcome, but as yet remain unproven. ComReg maintains that until there is improved and proper functioning of the wholesale markets, measures to support and raise the standard of the non-discrimination obligation are indispensable. ComReg also points to the fact that a narrower scope of EoI means that it approaches what was voluntarily offered by Eircom and, therefore, entails little additional cost. Moreover, given the flexibility in pricing afforded to access pricing, Eircom must ensure that the standards of equivalence are raised.

Transparency:

11.144 Eircom states its objections to the requirements of the transparency remedies, in light of its voluntary commitments to offering access to the OSS gateway on an EoI basis. Eircom believes that transparency measures should be scaled down, in light of the higher standard of equivalence achievable through EoI for the gateway. However, ComReg would like to remind Eircom that at this stage of development, the standard of equivalence has not been implemented and thus is not proven. Behaviour of the SMP operator must be observable and justifiable and this can only be achieved through appropriate transparency measures. These include transparency measures such as performance

metrics, KPIs, advance notification procedures, and the publication of differences between reference offers and terms and conditions for self-supply. Furthermore, a vertically integrated operator has the potential to have a first mover advantage and advanced publication of price and non-price conditions assists in obviating any such advantage.

Price regulation and margin squeeze test:

- 11.145 Eircom does not dispute the need for price regulation but does not agree with the findings, particularly in terms of price regulation for SLU and civil engineering infrastructure, where it considers there are proportionality issues. In relation to the margin squeeze test Eircom objects to the services included in the margin squeeze test and the second is the method for calculating the appropriate margin, i.e. SEO. Eircom is of the view that operators competing in the downstream market usually form part of an international group and therefore can benefit from Economies of scale.
- 11.146 As already pointed out in Chapter 10 of this Decision document, the margin squeeze is applied between the various products along the value chain to ensure that operators are not squeezed particularly when using LLU and VUA. NGA Bitstream is the regulated wholesale product furthest down the value chain and it is appropriate to evaluate retail prices against it to ensure retailers using Bitstream are not squeezed. In addition, it is necessary to ensure an adequate economic space between NGA Bitstream and VUA. This is in order to protect operators using VUA and to provide the certainty which would encourage other operators to use this service.
- 11.147 In its commentary on the RIA Eircom contest that ComReg has not sufficiently examined the impact of proposed measures on Eircom. The main areas of concern are as follows:

WPNIA – access to the copper sub loop:

- 11.148 Eircom has signalled its intention to use vectoring as means of delivering high-speed broadband products, in conjunction with a FTTC VDSL2 technology. The copper sub-loop is subject to an access obligation from ComReg Decision D05/10. However, the implementation of vectoring would restrict the subsequent unbundling of copper sub-loops at the cabinet and therefore it is necessary to consider the impact of differing regulatory approaches. In the ComReg Document No 12/27, ComReg outlined three potential options for regulation for SLU and through this consultation has evaluated a range of views, within the context of our statutory obligations.

- 11.149 Although there has been minimal demand for access to the copper sub-loop to date, it is necessary to consider the potential impact of an amendment to the SLU obligation in the context of an NGA rollout.
- 11.150 ComReg's position on this access obligation will clearly have a strategic impact on all market players, including Eircom. With that in mind, we have considered the impact on stakeholders in light of all of our statutory regulatory objectives in this area. We are obliged to ensure that there is no distortion to competition while encouraging efficient infrastructure investment and promoting innovation; promoting the interests of users and encouraging access to the internet at reasonable costs.
- 11.151 Our preferred approach is a hybrid of Options A, B and C as presented in ComReg Document No 12/27. Thus it is intended to make SLU available on a reasonable request basis across the national market. Although this is similar to Option A, ComReg considers that a pre-defined NGA area would be difficult to identify with the required certainty and hence could not provide the level of clarity required to foster confident investment in NGA. It would also require micro management of the market which would not be in accord with either the spirit or the letter of the current regulatory framework.
- 11.152 Taking respondents views into consideration, including the current demand for SLU, we consider that the appropriate choice of regulation is to make SLU available on a reasonable request basis. The criteria for reasonableness have been documented in Section 4.3.4. We believe that this approach can facilitate the NGA investment of the SMP operator while safeguarding appropriate opportunities for alternative infrastructures. Therefore, where there is a credible demand for SLU that satisfies the criteria of reasonableness as set out, the request can and should be facilitated. Moreover, as long as there are appropriately priced, alternative forms of equivalent virtual unbundling available, then distortions to competition should not develop. ComReg considers that this approach is the most flexible and appropriate in the particular national circumstances, and that it takes due consideration of the sizeable investment currently being undertaken by the SMP operator. Given emerging demand and competition for retail broadband, ComReg has taken the view that investment in NGA benefits all users of the incumbent's network and that vectoring will form part of the solution for higher bandwidths, at least for the foreseeable future. The pre-eminent policy objective in this context is then the assurance of effective competition and facilitation of alternative operator strategies through the provision of maximal regulatory certainty in the medium term. Furthermore, it is important that any decisions taken by ComReg would not create a distortion to competition. Hence we take note of the point raised by BT which states "...in the absence of vectoring or any other exclusivity, the first to deploy a cabinet significantly

reduces the economic case for a second operator establishing a presence at the same cabinet location. Hence in reality we consider the economics of the market will determine exclusivity rather than technology or regulation". The NGA area where access to SLU will be considered as unreasonable will in fact be where Eircom has either deployed NGA and vectoring, or where it is imminently about to do so, which in practice means that Eircom will have exclusive control of the physical infrastructure in those areas, suggesting continued dominance in Market 4. In order to address any potential negative impact on competition, ComReg provides for VUA access through Market 5 and this will be provided on an EoI basis in the stipulated manner and, at least, EoO elsewhere.

- 11.153 A further consideration, in terms of the evaluation of where potential alternative demand might emerge, is whether demand for SLU is more likely to develop in areas and cabinets where Eircom is not deploying fibre.
- 11.154 Our approach places particular emphasis on the interest of end-users and the European Digital Agenda targets, which requires wide-spread availability of high-speed broadband through a range of providers and thus at competitive prices. We consider that where investment, either by Eircom or by an alternative operator, is credible and committed then this should be facilitated.
- 11.155 Furthermore, Regulation 8(6) of the Access Regulations provides that ComReg must ensure that remedies are based on the nature of the problem identified and are proportionate and justified. Although Eircom will be granted exclusive control of the underlying physical infrastructure in areas where SLU would be unreasonable, i.e. once deployment of NGA and vectoring is deployed or is imminent, our choice of regulation has been influenced by the fact that virtual unbundling offers an alternative network operator a means of delivering broadband access in the downstream markets.
- 11.156 ComReg considers that it would not be appropriate to lift the obligation to provide access to the copper sub-loop in all NGA areas, as outlined in Option B. It is clear that there is a nascent demand for SLU and this may develop as the Eircom roll out progresses. Indeed, where Eircom is opting not to deploy fibre, it may become commercially attractive for another operator that has a network infrastructure to do so. Moreover, Option C, which envisages the status quo, would have created too much uncertainty to foster investment in NGA and this would have affected all market players. Given that investment in NGA will benefit all users of the network; this would represent a sub-optimal solution, which would be likely to stymie investment. It would also affect end-users by preventing the provision of higher speeds through vectoring, and impeding the widespread availability of high speed internet access.

11.157 ComReg has carried out a qualitative assessment of the costs and benefits of the options for SLU but has not carried out a quantitative analysis, given that potential interest and demand for SLU has yet to emerge and is clearly an indispensable input to such quantification.

Non-discrimination and the link to the price control obligation:

11.158 In ComReg Document No 12/27, we specified the regulatory objective of raising the standards applied to non-discrimination based on the historic and potential competition problems were justified. The Commission's consultation on non-discrimination points to the fact that non-price discrimination is difficult to detect and is as harmful as price discrimination. There is extensive academic literature evidencing the incentives of a vertically integrated operator with market power to discriminate and in some circumstances, to foreclose a strategic opponent. The options for regulating for non-price discrimination as suggested in "Regulating for Non-Price Discrimination: The case of UK Fixed Telecoms" that non-price discrimination can be treated differently than price discrimination to tackle what can be described as sabotage "by putting downstream rivals at a disadvantage a vertically integrated operator is able to capture a higher share of the downstream profits¹¹⁴." The authors suggest that tight upstream regulation can actually strengthen the incentives to discriminate, as they compete more intensively in the downstream market and this is compounded where there are large economies of scale at stake and this is echoed in the Commission's draft Recommendation on non-discrimination and costing methodologies. In fact, pursuing a strategy of exclusion on non-price means is likely to be less costly to a vertically integrated operator. However, an alternative approach to tackling non-price discrimination is suggested whereby the behaviour of the vertically integrated operator must be made observable and verifiable. That said, ownership separation can have practical implications and so consideration of remedies which fall short of that are considered.

11.159 The transition to NGA can present the opportunity to address the potential for discriminatory behaviour, particularly by altering the incentives to discriminate. This can be achieved by loosening the upstream price regulation, with a view to influencing the incentive to discriminate, by imposing regulation which ensures that behaviour is both observable and verifiable.

11.160 Based on our understanding of the past and potential competition problems, as noted in Chapter 3, there is a need to change the incentives to discrimination and to couple this with a degree of pricing flexibility to alleviate the pre-disposition to discriminate. We consider that the obligations outline are

¹¹⁴ Regulating for Non-Price Discrimination: The case of UK Fixed Telecoms": Cave, Correa & Crocioni (2006).

proportionate and justified in light of ComReg's objectives as set out in Section 12 of the Communications Regulation Act and Regulation 16 of the Framework Regulations. There is a justified need to ensure that wholesale access is provided, so that foreclosure does not arise and that a suite of remedies will be required to ensure that discrimination, whether pricing or non-pricing, does not occur.

- 11.161 Policy choices to address the competition problems continue to focus on supporting the ladder of investment and to address embedded discrimination. We will enhance Eircom's non-discrimination obligation by, *inter alia*, imposing an obligation of equivalence of input for systems and certain processes for NGA services and, with governance and compliance enforced. We consider this combination of measures to be consistent with the available guidance from the European Commission.
- 11.162 Greater equivalence can be achieved by mandating a structural remedy which mirrors the structural change volunteered by Eircom. This represents a significant change to the implementation of non-discrimination which has been based on behavioural remedies and has failed to deliver full equivalence, as envisaged through Regulation 10 of the Access Regulation. By mandating EoI for NGA services in Market 5, the opportunity to ensure the same terms and conditions, the same timescales and systems and processes to access seekers as given to the downstream arm of the SMP operator.
- 11.163 While ComReg recognises that there are persistent competition problems in the provision of access through legacy systems, we have concerns around the proportionality of imposing EoI for the wholesale physical access infrastructure, including civil engineering infrastructure. Eircom has argued that there will be a disproportionate cost associated with delivering this standard to systems and processes over legacy network elements. However, in view of ComReg's decision to scale back the extent of the standard of equivalency in the WPNIA market, ComReg is mandating observable and verifiable compliance and monitoring processes, with mechanisms in place to prevent a degradation of service levels.
- 11.164 Furthermore, to reinforce the scope and transparency, the obligations will be supported by defined KPIs, performance metrics and SLAs.
- 11.165 In conjunction with a higher and more specific non-discrimination remedy, ComReg provides for a price control which allows a degree of pricing flexibility. In other words, ComReg aims to re-balance the incentives to foreclose, by taking a more flexible approach to upstream regulation. This can only be possible when the following conditions are met, namely strong retail pricing constraints and provision of an access and price control, which ensures technical and economic replicability of retail products. ComReg

believes that the measures set out in this Decision document provide the mechanisms which should ensure technical and economical replicability, including adequate economic space along the layers of the margin squeeze test, and that there are sufficient retail constraints to guard against excessive pricing at the retail level.

- 11.166 We believe that the objectives to create greater equivalence can be achieved through these measures with interdependency between a higher standard of non-discrimination and pricing flexibility. The opportunity which arises from new systems development for NGA ensures that the main form of access product will be supplied on an equivalent basis. This should engender conditions conducive to more intense competition, as long as retail products are economically replicable, at each significant wholesale access point.
- 11.167 The impact on stakeholders has been assessed as part of the decision making process and consultation with industry. We have considered the costs associated with a wider EoI over both WPNIA and WBA and compared them to the competition benefits and have concluded that while it remains an objective to raise the standard of non-discrimination across both markets, we provide the opportunity for this to emerge in the future. Moreover, we take the approach that the burden of proof of EoO must rest with Eircom, ensuring prevention rather than detection of discriminatory behaviour.
- 11.168 In terms of mandating EoI for Market 5, we should point out that given that next generation envisages new systems development, this measure will be at no additional cost to the SMP operator; moreover, Eircom has offered to provide EoI, voluntarily. There are costs associated with more stringent compliance and monitoring but as Eircom appealed to ComReg to take into account the proportionality of EoI for both markets, it can only be considered as both necessary and entirely justified to identify, verify and control where differences in service levels emerge.
- 11.169 Furthermore, the impact and costs associated with imposing a margin squeeze obligation are less onerous than imposing strict cost orientation which would require developing a detailed cost model and would drive wholesale access costs to the appropriate cost orientated rate.
- 11.170 Alternative operators, in particular Vodafone, argue that the price control should be strict cost orientation. However, ComReg has considered the dynamic at the retail level; the fragility and scale of NGA investment and the uncertainty of demand for high-speed broadband and concludes that a margin squeeze price control (albeit with stringent compliance) is appropriate at this stage of market development. However, it should be noted that protecting the alternative investment in infrastructure is essential to the future

competitiveness of the wholesale markets and the measures in this Decision aims to support the alternative infrastructure investors.

11.171 Given the scope of the non-discrimination, ComReg aims to ensure that the impact on competition will be positive and greatly enhanced, in comparison to the prevailing standards on current generation access. That said, whether or not a more level playing field is likely to emerge, can only be envisaged where infrastructure investors are not squeezed and in fact the retail products are replicable. Given the dynamic aspect of these tests, compliance of the price control is envisaged at the retail and wholesale level.

Price control obligation:

11.172 As recognised by Oxera in the Oxera report, there is currently insufficient evidence that it is actually in Eircom's interest to provide access on reasonable terms without any price regulation. However, rather than a stringent cost-based pricing obligation, a margin squeeze-based control would seem more appropriate for the price control period, primarily because:

- Where NGA is deployed, Eircom is likely to face retail pricing constraints from both LLU operators for current generation products and UPC's cable offerings (which offer speeds equivalent to or higher than Eircom's NGA products), which removes the concern that Eircom would set retail prices at an excessive level in the absence of a price control obligation;
- Monitoring of margin squeeze allows retail (and wholesale) price discrimination by Eircom, which may be necessary to gauge demand for next generation services during the early roll out period;
- There is some demand uncertainty surrounding NGA investments, although this is limited by the defensive nature of these investments, and the costs of NGA deployment are also unknown to some extent.

- 11.173 For those main reasons it would seem reasonable and appropriate to apply the margin squeeze test throughout the supply chain—i.e. between the retail and the wholesale market and between the various wholesale products whereby the SLU cost oriented price is the key cost input to the cost stack for VUA in the margin squeeze model, given that it reflects the cost from the home to the cabinet. The pricing approach therefore ensures that copper and fibre based services are priced consistently relative to their cost of provision which means that NGA prices in Market 5 cannot fall below a certain level without a reduction to the SLU and LLU prices (in Market 4). Please refer to Chapter 10 for further discussion on the pricing approach. We recognise that this should ensure consistency with Regulation 13(3) of the Access Regulations which states that ComReg shall ensure that any cost recovery mechanism or pricing methodology serves to promote efficiency and sustainable competition and maximise consumer benefits.
- 11.174 It is also worth noting that there has also been a shift in the European's Commissions thinking regarding the approach pricing regime for NGA. While the 2010 NGA Recommendation (from the European Commission) stipulated that cost orientation should apply in the context of NGA access pricing, in July 2012 the European Commission outlined in a statement to industry (see Section 3 of this document) that the key to stimulating investment and innovation while ensuring a safeguard for competition was a more flexible pricing regime provided there are market conditions and effective non-discrimination remedies, to safeguard a level playing field. Therefore, the European Commission envisages a departure from imposing a strict cost orientation obligation to a more flexible pricing approach in the presence of strong retail pricing constraints and equivalence, guaranteed through EoI. In fact, in the European Commission's response to the draft measures notified by ComReg on NGA, it agrees with ComReg's approach on the price control obligation while inviting ComReg to revisit the margin squeeze tests once the Recommendation on the costing methodologies is in place.
- 11.175 For NGA products and services in the WPNIA market, the cost orientation obligation will continue to apply. At this point Eircom have no plans to roll-out any significant level of FTTH.

- 11.176 This decision does not set absolute prices but rather the outputs of the NGA Margin Squeeze Model are based on the various cost stacks assumed for each service along the value chain. Eircom will have the flexibility to set the retail prices based on market demand, and the competitive situation. Depending on the retail price set, Eircom would determine the wholesale prices in line with the NGA Margin Squeeze Model. However, as Eircom will be subject to a number of margin squeeze tests, it cannot price below these outputs without the appropriate adjustment to the SLU (and to the LLU price as appropriate) access prices or where there is justifiable changes to the assumptions made to the cost stacks in the NGA Margin Squeeze Model.
- 11.177 The Retail Margin Squeeze test will be largely based on a SEO cost base with some retail costs based on EEO costs as appropriate, while the wholesale margin squeeze tests will be based entirely on a SEO cost base (except that the VUA to SLU test is based on EEO costs). This has been discussed in detail in Chapter 10. Our decision on NGA relates to standalone NGA retail broadband offers only and therefore, the portfolio approach will only apply to NGA retail broadband offers. Please refer to subsection 10.8.3 in Chapter 10 for further discussion on the portfolio approach.
- 11.178 The portfolio approach gives Eircom flexibility so long as the average retail prices recover at least the average retail and wholesale costs for those NGA retail broadband products. In the early days of NGA rollout, actual demand for NGA based products will be uncertain and ComReg believes that Eircom should be given the flexibility to price specific products above or below retail costs (provided it meets the overall portfolio margin squeeze test) so that Eircom can alter prices in response to actual take-up of NGA products. Since Eircom faces retail pricing constraints from the cable operator (and for current generation broadband products from OAOs), this pricing flexibility is unlikely to lead to excessive prices.
- 11.179 Where an NGA retail broadband product is sold in a bundle with voice which is regulated as part of Market 1, then it is subject to the obligation not to unreasonably bundle and it must pass the same tests prescribed under the bundles regime. Please refer to subsection 10.12.3 in Chapter 10 above.

- 11.180 Eircom will be required to notify ComReg of its NGA broadband retail offers at least 5 working days before the retail prices are expected to come into effect. In addition, Eircom will provide a statement of compliance for the NGA retail broadband offer to demonstrate that the price complies with the Retail Margin Squeeze test, except where the customer base is expected to be less than 5,000 Eircom retail customers. The provision of a statement of compliance is consistent with the approach in place for the past number of years for legacy Bitstream services under ComReg Decision D01/06. ComReg considers that this approach ensures that a product offering either about to be launched by Eircom or already launched in the market is not anti-competitive and is in compliance with the price control obligations imposed on Eircom. In addition, it allows ComReg to take action where appropriate and to ensure that products launched by Eircom can be replicated by other operators and are beneficial to consumers and the marketplace.
- 11.181 ComReg considers that the 5,000 threshold will allow Eircom some flexibility to test the demand for the NGA broadband retail products but Eircom must continue to monitor retail subscriber numbers for NGA broadband services on a monthly basis. Once any standalone NGA broadband retail offering reaches the 5,000 retail subscribers, then ComReg must be notified and a statement of compliance must be provided. Please refer to Chapter 10 (subsection 10.8.3) of this Decision document for further details.
- 11.182 For NGA wholesale products, Eircom are also required to notify ComReg of its wholesale prices in advance (3 months or 4 months in the case of a price increase). Eircom are also required to provide a statement of compliance. However, given that this only relates to two wholesale products i.e. NGA Bitstream and VUA, the obligation should not be overly burdensome.
- 11.183 In addition, Eircom will be subject to a retail and wholesale compliance review one year from the date of launch of retail NGA services and wholesale NGA services. Any review thereafter will be on the request of ComReg. ComReg may also intervene on an ex-post basis should any issues of non-compliance come to light either through its own reviews or if raised by another operator.
- 11.184 For migrations, we have reconsidered our position since the consultation. ComReg has decided that for now there should be separate charges for current generation migrations and next generation migrations, instead of a universal charge. As already set out in Chapter 10, Eircom will be required to ensure that the migration charges are cost oriented and ComReg will review the migration charges in detail in early 2013 as rollout costs become known. Please refer to Chapter 10, subsection 10.13 for a further discussion on this point.

- 11.185 ComReg considers that the further specification of the price control obligation in the WPNIA and WBA markets in the context of NGA meets the six principles of “Better Regulation” for the reasons set out below.
- 11.186 ComReg considers that the review has been *necessary* for a number of reasons. The previous market analysis for WPNIA and WBA set out high level remedies in terms of the obligations in the context of NGA. This Decision now further specifies the relevant obligations that Eircom should comply with in the context of its NGA rollout and the need for consistency, where appropriate with current generation products and services. In addition, this Decision also further specifies the details of the margin squeeze tests that Eircom should comply with. We consider that this Decision should provide a reasonable framework for promoting NGA investment and provide regulatory certainty to market players in the context of both current generation and next generation services.
- 11.187 ComReg considers that it has been *effective* in its review by ensuring that the remedies further specified in this Decision are consistent with its regulatory objectives. Given the different levels of investment required between the products in the WPNIA and WBA markets, ComReg believes that the pricing measures set should encourage operators onto the ladder of investment, encourage infrastructure investment while promoting sustainable competition in the retail market. This should also ensure consistency with Regulation 13(3)¹¹⁵ of the Access Regulations. In particular, ComReg determined a Retail Margin Squeeze test and wholesale margin squeeze tests to assess the appropriate economic space between the retail to wholesale products and between the wholesale products in the given markets so as to achieve its objectives. The assessment of the appropriate economic space between the retail and wholesale products and between the wholesale products in the WBA market and from the WBA market to the WPNIA market should ultimately promote retail competition. In time this should promote further wholesale competition as operators gain scale and further invest in their own networks.

¹¹⁵ ComReg shall ensure that any cost recovery mechanism or pricing methodology serves to promote efficiency and sustainable competition and maximise consumer benefits.

- 11.188 ComReg considers that it has been *proportionate* in its review. Given that the main NGA products and services are contained within the WBA market and given that Eircom are given some degree of pricing freedom, subject to margin squeeze obligations, it is considered proportionate to impose a set of regulatory measures in the WBA market which is consistent with our regulatory objectives. It is important that the appropriate regulatory incentives are put in place for market players which should promote investment in NGA where appropriate. Ultimately, our objective is to incentivise more infrastructure intensive investment, rather than reseller models, as this should lead to more innovative products and services and ultimately a more competitive marketplace. We believe that the balanced approach taken on the pricing for WBA should be a step towards achieving those objectives.
- 11.189 ComReg considers that it has been *transparent* in further specifying the obligations in the context of NGA in the WPNIA and WBA markets. ComReg published a preliminary consultation in May 2011. Given the advancements since the First NGA Consultation, this recent consultation process (ComReg Document No 12/27) has given Eircom, the Industry and other interested parties transparency of the process and the opportunity to provide their views on the methodologies and principles relevant to the NGA products and services in the WPNIA and WBA markets.
- 11.190 ComReg considers that it has been *accountable* in its review and that it has provided all of the relevant detail, reasoning and information necessary to justify its approach, including an assessment of the likely impact for stakeholders and competition. We have also clearly shown how the measures are linked to our regulatory objectives under Section 12 of the Communications Regulation Act and under Regulation 13 of the Access Regulations. In addition, we have taken into account the NGA Recommendation with clear reasoning where we are deviating from it.
- 11.191 ComReg considers that its review is *consistent* in that we have imposed a Retail Margin Squeeze test for NGA in the WBA market which is consistent with the retail-minus approach under ComReg Decision D01/06 for legacy products in the WBA market. In addition, we have also imposed margin squeeze tests between wholesale products in other wholesale markets e.g. the recent decision on leased lines (ComReg Decision No D02/12). In addition, the margin squeeze tests are also consistent with work completed in other jurisdictions.

Conclusion

- 11.192 Having considered the impacts on stakeholders and competition, including the impact on the development of competition within the internal market and ultimately the impact on end users, it is ComReg's position that regulatory forbearance is not appropriate or and that the measures provided for represent the most justified, reasonable and proportionate of the available regulatory approaches.
- 11.193 Furthermore, ComReg considered the impact on Eircom, other Service Providers and consumers, in its structure and approach to remedies. ComReg is ultimately required to consider which *ex ante* obligations are most appropriate to the particular market circumstances in a national context, taking into account the potential competition problems and ComReg's statutory objectives: Pursuant to Section 12 of the Communications Regulation Acts 2002 to 2011, ComReg's statutory objectives 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. As regards price control obligations, Article 13(2) of the Access Directive requires that "...any cost recovery mechanism or pricing methodology that is mandated serves to promote efficiency and sustainable competition and maximise consumer benefits". Recital 20 of the Access Directive explains further that "[t]he method of cost recovery should be appropriate to the circumstances taking account of the need to promote efficiency and sustainable competition and maximise consumer benefits". ComReg was also mindful to ensure a consistent regulatory approach and to ensure no discrimination in the treatment of undertakings providing electronic communications networks and services (pursuant to Regulation 16 of the Framework Regulations). ComReg confirms, it also took account, in acting in the pursuit of its objectives as set out in Section 12 of the Act and Regulation 16 of the Framework Regulations, the importance of promoting efficiency, sustaining competition, promoting efficient investment and innovation whilst giving the maximum benefit to end-users, as more particularly set out at Regulation 6 of the Access Regulations.

Annex: 1 Decision Instrument – WPNIA Market

Decision Instrument - Wholesale Physical Network Infrastructure Access Market

1. STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

1.1 This Decision Instrument is made by the Commission for Communications Regulation (“ComReg”) and relates to the market for wholesale physical network infrastructure access identified by the European Commission in its Recommendation of 17 December 2007 on relevant product and services markets within the electronic communications sector susceptible to *ex ante* regulation¹¹⁶ (“the Recommendation”) and as defined by ComReg in the Response to Consultation and Decision Document entitled “Wholesale (Physical) Network Infrastructure Access (Market 4)” (ComReg Document No.10/39), (Decision No. D05/10).

1.2 This Decision Instrument is made:

- i. Pursuant to and having regard to the functions and objectives of ComReg as set out in Sections 10 and 12 of the Communications Regulation Acts 2002 to 2011¹¹⁷, Regulation 6(1) of the Access Regulations¹¹⁸ and Regulation 16 of the Framework Regulations¹¹⁹; and
- ii. Having, where appropriate, pursuant to Section 13 of the Communications Regulation Acts 2002 to 2011 complied with the policy directions made by the Minister for Communications, Marine and Natural Resources¹²⁰; and
- iii. Having taken the utmost account of the European Commission’s Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks¹²¹; and

¹¹⁶ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 344, 28.12.2007, p. 65).

¹¹⁷ Communications Regulation Act 2002 (No. 20 of 2002), as amended by the Communications Regulation (Amendment) Act 2007 (No. 22 of 2007), the Communications Regulation (Premium Rate Services and Electronic Communications Infrastructure) Act 2010 (No. 2 of 2010) and the Communications Regulation (Postal Services) Act 2011 (No. 21 of 2011).

¹¹⁸ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the Access Regulations).

¹¹⁹ European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), (the Framework Regulations).

¹²⁰ Policy Directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004.

¹²¹ European Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (2010/572/EU) (OJ L 251/35).

- iv. Having had regard to the market definition, market analysis and reasoning set out in the Response to Consultation and Decision Document entitled "Wholesale (Physical) Network Infrastructure Access (Market 4)" (ComReg Document No.10/39), (Decision No. D05/10)¹²²; and
- v. Having regard to the analysis and reasoning set out in the preliminary consultation entitled "Next Generation Access (NGA) Remedies in Wholesale Regulated Markets - WPNIA and WBA Remedies in an NGA environment" (ComReg Document No. 11/40); and
- vi. Having taken account of the submissions received from interested parties in response to "Next Generation Access (NGA) Remedies in Wholesale Regulated Markets - WPNIA and WBA Remedies in an NGA environment" (ComReg Document No. 11/40) following public consultation pursuant to Regulation 12 of the Framework Regulations; and
- vii. Having regard to the analysis and reasoning set out in "Next Generation Access ("NGA"): Proposed Remedies for Next Generation Access Markets" (ComReg Document No. 12/27); and
- viii. Having taken account of the submissions received from interested parties in response to "Next Generation Access ("NGA"): Proposed Remedies for Next Generation Access Markets" (ComReg Document No. 12/27) following public consultation pursuant to Regulation 12 of the Framework Regulations; and
- ix. Having regard to the analysis and reasoning set out in the response to consultation and the Final Decision document entitled "Next Generation Access ("NGA") Remedies for Next Generation Access Markets" (Document No. 13/11) (ComReg Decision No. D03/13); and
- x. Having notified the draft measure and the reasoning on which same is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States in accordance with Regulation 13 and 14 of the Framework Regulations and having taken the utmost account pursuant to Regulation 13(6) of the Framework Regulations of any comments made by the European Commission, BEREC and any national regulatory authority in another EU Member State in accordance with Regulation 13 of the Framework Regulations; and
- xi. Pursuant to Regulations 8, 9, 10, 11, 12, 13, 18 and 24 of the Access Regulations and Regulations 25, 26 and 27 of the Framework Regulations.

¹²² Market review, Wholesale (Physical) Network Infrastructure Access. Further Response to ComReg Document No. 08/104, Response to ComReg Document No. 09/42 and Decision.(Decision No. D 05/10) (ComReg Document No. 10/39).

- 1.3 The provisions of the Response to Consultation and Final Decision document entitled “Market Review: Wholesale Broadband Access (Market 5)” (ComReg Document No. 11/49), (ComReg Decision No. D06/11), the Preliminary Consultation entitled “Next Generation Access (NGA) Remedies in Wholesale Regulated Markets - WPNIA and WBA Remedies in an NGA environment” (ComReg Document No 11/40) and “Next Generation Access (“NGA”) Proposed Remedies for Next Generation Access Markets” (Document No. 12/27) and Final Decision document entitled “Next Generation Access (“NGA”) Remedies for Next Generation Access Markets” (ComReg Document No. 13/11) (ComReg Decision No. D03/13) shall, where appropriate, be construed with this Decision Instrument, (however if a conflict arises between this Decision Instrument and any other Decision Instrument (including as hereby amended), the most restrictive provision shall apply to Eircom).

PART I - GENERAL PROVISIONS (SECTIONS 2 AND 3 OF THE DECISION INSTRUMENT)

2. DEFINITIONS AND INTERPRETATION

2.1 In this Decision Instrument, unless the context otherwise suggests:

“**Access**” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time; for the purposes of this Decision Instrument Access shall include (but shall not be limited to) Access to Associated Facilities and Interconnection where appropriate;

“**Access Reference Offer**” or “**ARO**” is the latest version of the offer of contract by Eircom to OAOs in relation to Current Generation WPNIA and shall include Next Generation WPNIA (but which may from time to time be amended). For the avoidance of doubt the ARO includes the documents which are expressly referred to as being part of the ARO. To the extent that there is any conflict between the ARO and Eircom’s obligations now set out herein, it is the latter which shall prevail;

“**Access Regulations**” means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011), as may be amended from time to time;

“**Access Seeker(s)**” means an OAO that is party to the Access Reference Offer (ARO), or, an OAO that has not yet accepted the ARO, but has entered into a Non-Disclosure Agreement with Eircom;

“**Associated Facilities**” shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“**Authorisation Regulations**” means the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011), as may be amended from time to time;

“Backhaul” means the provision of dedicated transmission capacity (contended or uncontended in accordance with an OAO’s requirement) by Eircom at various bandwidths, using an appropriate mechanism (e.g. Ethernet or fibre) between an OAO’s equipment at the Co-Location site and the OAO’s nominated Point of Handover or between an OAO’s equipment at the Co-Location site and the Eircom Exchange;

“BEREC” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EC) No. 1211/2009 of the European Parliament and of the Council of 25 November 2009;

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

“Civil Engineering Infrastructure” (also known as passive infrastructure) means physical local loop facilities deployed by Eircom to host Local Loop cables such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean or above-ground assets such as sub-ducts, ducts, manholes and poles;

“Co-Location” shall have the same meaning and description as under Part B “Co-location services” of the Schedule to the Access Regulations (as may be amended from time to time), save that it includes for the purposes of this Decision Instrument, access to the MDF and/or to the ODF as applicable, at an Exchange;

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Acts 2002 to 2011;

“ComReg Decision No. D01/10” means ComReg Document No. 10/10 entitled “Response to Consultations and Final Decision – Local Loop Unbundling (“LLU”) and Sub Loop Unbundling (“SLU”) Maximum Monthly Rental Charges” dated 9 February 2010;

“ComReg Decision No. D08/10” means ComReg Document No. 10/67 entitled “Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited” dated 31 August 2010;

“ComReg Decision No. D05/11” means ComReg Document No. 11/45 entitled “Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets” dated 29 June 2011;

“ComReg Document No. 05/24” means the Response to Consultation entitled “Guidelines on the treatment of confidential information” dated 22 March 2005;

“ComReg Decision No. D03/13” means ComReg Document No. 11/13 entitled “Next Generation Access (“NGA”) Remedies for Next Generation Access Markets”;

“Copper Access Model” means the modelling tool which is applied to determine the cost of provision of local loop unbundling in Ireland based on efficient BU-LRAIC plus

costs of Eircom's network to derive the maximum allowable Local Loop Unbundling and Sub Loop Unbundling monthly rental charges as is more particularly described in ComReg Decision No. D01/10;

"Dark fibre" is optical fibre that is currently installed in the access network but is not in use. For the purposes of this Decision Instrument, Dark fibre shall mean unlit Eircom fibre in Eircom's access network;

"Duct access" means access to the Eircom duct network;

"Effective Date" means the date set out in Section 15 of this Decision Instrument;

"Eircom" means Eircom Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls Eircom Limited and its successors and assigns;

"End User" for the purposes of this Decision Instrument shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

"Equivalence of Outputs" means the provision of products, services, facilities, and information by the SMP operator to OAOs such that such products, services, facilities, and information are provided to OAOs in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP operator provides to itself, albeit potentially using different systems and processes;

"Ethernet" means a technology that supports data transfer between network nodes at Layer 2 of the open systems interconnection (OSI) reference model;

"Exchange" means an Eircom network premises or equivalent facility used to house network and associated equipment and includes a Remote Subscriber Unit (RSU). The Exchange usually, but not always, houses the Metropolitan Point of Presence (MPoP);

"Fibre to the cabinet" or **"FTTC"** means fibre to the cabinet which is a variant of the FTTC access network architecture where the node used to house active equipment is the street cabinet. The connection between the cabinet and the End User premises is by way of a copper sub-loop;

"Fibre to the Node" or **"FTTN"** means an access network architecture whereby active equipment is installed in an access network node (a street cabinet in the case of FTTC). The active equipment is connected to the Exchange and/or MPoP using fibre optic cable;

"Framework Regulations" means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), as may be amended from time to time;

"Geographic Number Portability" or **"GNP"** means a facility that allows an End User to retain his/her telephone number when changing or switching service provider and describes the process used for this when the number concerned is a geographic number;

“Interconnection” shall have the same meaning as under Regulation 2 of the Access Regulations as may be amended from time to time, and for the purposes of this Decision Instrument includes, but is not limited to, the Eircom WEIL (Wholesale Ethernet Interconnect Link) Service;

“Key Performance Indicator(s)” or **“KPI(s)”** means a measure(s) of the standard(s) of product, service or facility provided by Eircom to OAOs and by Eircom to itself through self-supply;

“Local Loop” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time;

“Local Loop Unbundling” or **“LLU”** means the final section of Eircom’s access network that provides access into premises (whether residential, business or other premises). It runs between the local exchange and the relevant customer premises. LLU occurs where an OAO rents access to the local loop and uses it to supply services to its customers either on a wholesale or retail basis;

“Local Sub-Loop” shall have the same meaning as in the Schedule to the Access Regulations, as may be amended from time to time;

“(the) Market” means the market for wholesale physical network infrastructure access (including shared or fully unbundled access) (WPNIA) at a fixed location in Ireland, provided over Current Generation WPNIA and over Next Generation WPNIA and, including the self-supply of Current Generation WPNIA and Next Generation WPNIA by Eircom as more particularly described in Section 4 of ComReg Decision No. D05/10;

“MDF” means the main distribution frame;

“Metropolitan Point of Presence” or **“MPoP”** means the point of inter-connection between the access and core networks. It is equivalent to the MDF in the case of the copper access network. All NGA Subscribers’ connections in a given area are centralised to the MPoP on an optical distribution frame (ODF);

“Migration(s)” includes Bulk Migrations and means where the upstream wholesale input used to supply a retail service is changed whilst maintaining services to the end-user, irrespective of whether or not the supplier at the retail level changes. For the avoidance of doubt, Migrations include but are not limited to migrations:- (i) between all Next and/or Current Generation WBA services in any direction; (ii) between Next or Current Generation WPNIA and Next or Current Generation WBA in any direction; (iii) between SB-WLR and Current or Next Generation WBA in any direction (iv) between SB-WLR and Next or Current Generation WPNIA in any direction;

“(Bulk) Migration” means the facility whereby an OAO can have multiple Migrations facilitated via a single request;

“Next Generation Access” or **“NGA”** means wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over exclusively copper access networks;

“(Next Generation) Bitstream” means a Next Generation WBA product provided by Eircom in the wholesale broadband access market. i.e. a WBA product provided using NGA;

“Node” means any location or concentration point in the access network served from an Eircom exchange which houses VDSL2 equipment for the purpose of providing high speed services to End-Users. A street cabinet is a specific type of Node used by Eircom as part of their NGA FTTC implementation;

“Non-Disclosure Agreement” means the non-disclosure agreement contained within the ARO;

“ODF” means the optical distribution frame;

“OSI” means open systems interconnection;

“OSS” means operational support systems;

“Other Authorised Operator(s)” or “OAO(s)” means an Undertaking that is not Eircom, providing an electronic communications network or an electronic communications service authorised under Regulation 4 of the Authorisation Regulations, as may be amended from time to time;

“Performance Metric(s)” means the aggregate performance levels achieved by Eircom within a specified period, as calculated in accordance with the methodology and service parameter definitions set out in its Service Level Agreements;

“Point of Handover” means the physical point at which two networks are interconnected to allow traffic to pass between these networks;

“SB-WLR” means single billing wholesale line rental;

“Service Level Agreements” or “SLAs” are legally binding contracts between Eircom and OAOs in relation to the service levels which Eircom commits to from time to time, as more particularly set out in the ARO and relevant Annexes. To the extent that there is any conflict between the SLAs and Eircom’s obligations now set out herein, it is the latter which shall prevail;

“Shared Sub-Loop Unbundling” means the provision to a beneficiary of access to the local Sub-Loops on Eircom’s network, authorising the use of the non-voice band frequency spectrum of the twisted metallic pair; the local Sub-Loops continue to be used by Eircom to provide the telephone service to the public. It includes the provision of access to a tie cable or other connection and appropriate handover for the purposes of making use of Eircom’s Sub Loops from an adjacent cabinet;

“Significant Market Power operator” or “SMP operator” means Eircom;

“Sub-Loop” means the portion of the local loop which runs from a street side cabinet or Node to a home or premises;

“Sub-Loop Unbundling” also known as “SLU” is an implementation of unbundled access to the Sub-Loop. It excludes the portion of the Local Loop between the Exchange and street (side) cabinet. SLU is contained in the market for Wholesale (Physical) Network Infrastructure Access (Market 4) as set out in ComReg Decision No. D05/10. It includes the provision of access to a tie cable or other connection and

appropriate handover for the purposes of making use of the Sub Loop from an adjacent cabinet;

“Subscriber(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“Unbundled access to the fibre loop” means unbundled access to the optical fibre lines in both the feeder and drop segments of the access network;

“Undertaking(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations as may be amended from time to time;

“VDSL” means very-high-bit-rate digital subscriber line;

“WBA” means wholesale broadband access comprising non-physical or active network access including “Bitstream” access at a fixed location. It includes Current Generation WBA and Next Generation WBA and is synonymous with the Market;

“Wholesale Ethernet Interconnection Link” or **“WEIL”** is the interconnection service provided by Eircom which provides a handover for various wholesale products including its NGA and NGN wholesale products;

“(Current Generation) WBA” means WBA provided over Eircom’s current generation copper access network infrastructure and its Associated Facilities (including self-supply by Eircom for the purpose of serving its downstream markets) that is copper based;

“(Next Generation) WBA” means WBA provided over Eircom’s next generation access network infrastructure and its Associated Facilities (including self-supply by Eircom for the purpose of serving its downstream markets). Eircom’s next generation access network infrastructure includes access paths that are either exclusively fibre or a combination of fibre and copper;

“Current Generation WPNIA” means WPNIA provided over Eircom’s current generation copper access network infrastructure and its Associated Facilities (including self-supply by Eircom for the purpose of serving its downstream markets) and includes but is not limited to those facilities and services and variants of those, which are specified in the current Version 2.0 of Eircom’s ARO, as may be amended from time to time;

“Next Generation WPNIA” or **“NG WPNIA”** means WPNIA provided over Eircom’s next generation access network infrastructure and its associated facilities (including self-supply by Eircom for the purpose of serving its downstream markets). Eircom’s next generation access network infrastructure includes access paths that are either exclusively fibre or a combination of fibre and copper;

“WPNIA” means wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location. It includes Current Generation WPNIA and Next Generation WPNIA and is synonymous with the Market as set out in ComReg Decision No. D05/10.

3. SCOPE AND APPLICATION

- 3.1 This Decision Instrument applies to Eircom in respect of activities falling within the scope of the Market.
- 3.2 This Decision Instrument is binding upon Eircom and Eircom shall comply with it in all respects.
- 3.3 This Decision Instrument relates to:
- (i) the imposition, amendment and withdrawal, pursuant to Regulation 8 of the Access Regulations of certain obligations and definitions contained in the Decision Instrument in ComReg Decision No. D05/10;
 - (ii) the further specification, of the SMP obligations for Next Generation WPNIA as set out in the Decision Instrument in ComReg Decision No. D05/10, pursuant to Regulation 18 of the Access Regulations, as more particularly set out in Sections 5 to 11 of this Decision Instrument; and
 - (iii) the imposition, amendment and withdrawal, pursuant to Regulation 8 of the Access Regulations of certain obligations in Decision Instrument in ComReg Decision No. D01/10.
- 3.4 If a conflict arises between this Decision Instrument and any other Decision Instrument (including as hereby amended), the most restrictive provision shall apply to Eircom, or as will be otherwise determined at the discretion of ComReg.

PART II – AMENDMENT OF SMP OBLIGATIONS (i.e. amendments to ComReg Decision No. D01/10 and ComReg Decision No. D05/10)

- 4.1 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, Section 2.1 of Decision Instrument contained in Section 7 of ComReg Decision No. D01/10 is amended by the insertion of the following additional definitions to Section 2.1:

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

“Copper Access Model” means the modelling tool which is applied to determine the cost of provision of local loop unbundling in Ireland based on efficient BU-LRAIC plus costs of Eircom’s network to derive the maximum allowable Local Loop Unbundling and Sub Loop Unbundling monthly rental charges as is more particularly described herein (as amended);

“Local Loop” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time;

“Margin Squeeze Test” means a wholesale margin squeeze test between VUA and SLU based on an Equally Efficient Operator cost base, as more particularly set out in Section 11.14 of the Decision Instrument for Wholesale Broadband Access NGA which is contained in Annex 2 of ComReg Decision No. D03/13 (ComReg Document No. 13/11);

“Sub-Loop” means the portion of the local loop which runs from a street side cabinet to a home or premises;

“Virtual Unbundled Access” or **“VUA”** means the wholesale active access product proposed by Eircom. It is an enhanced Layer 2 product which allows the handover or interconnection of aggregate End Users’ connections at the local exchange. It allows a level of control to the access seeker similar to that afforded by the access seeker connecting their own equipment to a full(y) unbundled Local Loop.

- 4.2 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, in Section 2.1 of Decision Instrument contained in Section 7 of ComReg Decision No. D01/10, the definitions of “LLU” and “SLU” are withdrawn and replaced with the following definition, to be inserted in Section 2.1:

“Local Loop Unbundling” or **“LLU”** means the final section of Eircom’s access network that provides access into premises (whether residential, business or other premises). It runs between the local exchange and the relevant customer premises. LLU occurs where an OAO rents access to the local loop and uses it to supply services to its customers either on a wholesale or retail basis;

“Sub-Loop Unbundling” or **“SLU”** is an implementation of unbundled access to the Sub-Loop. It excludes the portion of the local loop between the Exchange and street (side) cabinet. SLU is contained in the market for Wholesale (Physical) Network Infrastructure Access (Market 4) as set out in ComReg Decision No. D05/10. It includes the provision of access to a tie cable or other connection and appropriate handover for the purposes of making use of the Sub Loop from an adjacent cabinet.

- 4.3 Pursuant to Regulations 8 and Regulation 13(1) of the Access Regulations, Section 4.1 of Decision Instrument contained in Section 7 of ComReg Decision No. D01/10 is hereby withdrawn and replaced as follows:

“4.1 (i) Eircom is hereby directed to charge the following price for SLU monthly rental to OAOs, whichever is the lower:

(a) SLU – € 10.53 per line per month¹²³;

¹²³ This “ceiling” price was reduced by Eircom on 11 January 2013, as more particularly set out in ComReg Information Notice 13/01.

or

(b) *The SLU maximum monthly rental charge as amended based on changes made by Eircom to the main parameter(s) of the Copper Access Model as set out in this Decision. Any such amendment or changes would be subject to prior review by ComReg;*

or

(c) *The revised charge derived by the application of the Margin Squeeze Test between the VUA monthly charge and the SLU monthly charge based on the NGA Margin Squeeze Model (which is more particularly described in Section 11.14 of the Decision Instrument at Annex 2 to ComReg Decision No. D03/13) in relation to Wholesale Broadband Access. Any such amendment or changes would be subject to prior review by ComReg.*

4.1 (ii) *Eircom is hereby directed to charge the following price for LLU monthly rental to OAOs, whichever is the lower:*

a) *€ 12.41 per line per month¹²⁴;*

or

b) *The LLU maximum monthly rental charge as amended based on changes made by Eircom to the main parameter(s) of the Copper Access Model as set out in this Decision. Any such amendment or changes would be subject to prior review by ComReg.*

4.1 (iii) *Eircom shall ensure that any reduction to the SLU monthly rental charge, in accordance with Section 4.1 (i)(c), is consistently applied to the LLU monthly rental charge at 4.1 (ii), where appropriate, using the Copper Access Model.*

4.4 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, Section 2.1 of the Decision Instrument contained in Appendix C of ComReg Decision No. D05/10 is amended by the insertion of the following additional definitions to Section 2.1:

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

¹²⁴ This “ceiling” price was reduced by Eircom on 11 January 2013, as more particularly set out in ComReg Information Notice 13/01.

“Civil Engineering Infrastructure” (also known as passive infrastructure) means physical local loop facilities deployed by Eircom to host local loop cables such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean or above-ground assets such as sub-ducts, ducts, manholes and poles;

“Copper Access Model” means the modelling tool which is applied to determine the cost of provision of local loop unbundling in Ireland based on efficient BU-LRAIC plus costs of Eircom’s network to derive the maximum allowable Local Loop Unbundling and Sub Loop Unbundling monthly rental charges as is more particularly described in ComReg Decision No. D01/10 (as amended);

“Co-Location” shall have the same meaning and description as under Part B “Co-location services” of the Schedule to the Access Regulations (as may be amended from time to time), save that it includes for the purposes of this Decision Instrument, access to the main distribution frame (MDF) and/or to the optical distribution frame (ODF) as applicable, at an Exchange;

“Dark fibre” is optical fibre that is currently installed in the access network but is not in use. For the purposes of this Decision Instrument, Dark fibre shall mean unlit Eircom fibre in Eircom’s access network;

“Duct access” is access to the Eircom duct network;

“Exchange” means an Eircom network premises or equivalent facility used to house network and associated equipment and includes a Remote subscriber Unit (RsU). The Exchange usually, but not always, houses the Metropolitan Point of Presence (MPoP);

“Local Loop Unbundling” or **“LLU”** means the final section of Eircom’s access network that provides access into premises (whether residential, business or other premises). It runs between the local exchange and the relevant customer premises. LLU occurs where an OAO rents access to the local loop and uses it to supply services to its customers either on a wholesale or retail basis;

“Sub-Loop” means the portion of the local loop which runs from a street side cabinet to a home or premises;
and

“Shared Sub-Loop Unbundling” means the provision to a beneficiary of access to the local Sub-Loops on Eircom’s network, authorising the use of the non-voice band frequency spectrum of the twisted metallic pair; the local Sub-Loops continue to be used by Eircom to provide the telephone service to the public. It includes the provision of access to a tie cable or other connection and appropriate handover for the purposes of making use of Eircom’s Sub Loops from an adjacent cabinet.

- 4.5 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, in Section 2.1 of the Decision Instrument contained in Appendix C of ComReg Decision No. D05/10, the definition of “*Sub-Loop Unbundling also known as SLU*” is withdrawn and replaced with the following definition, to be inserted in Section 2.1:

“Sub-Loop Unbundling” also known as “SLU” is an implementation of unbundled access to the Sub-Loop. It excludes the portion of the local loop between the Exchange and street (side) cabinet. SLU is contained in the market for Wholesale (Physical) Network Infrastructure Access (Market 4) as set out in ComReg Decision No. D05/10. It includes the provision of access to a tie cable or other connection and appropriate handover for the purposes of making use of the Sub Loop from an adjacent cabinet;

- 4.6 Pursuant to Regulation 8 and Regulation 12(1) of the Access Regulations, Section 7.1 and Section 7.2 of Decision Instrument contained in Appendix C of ComReg Decision No. D05/10 are hereby withdrawn and replaced as follows:

7. OBLIGATIONS TO PROVIDE ACCESS

7.1. Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall meet all reasonable requests from OAOs for the provision of Access, including Associated Facilities.

7.2. (a) Without prejudice to the generality of section 7.1 and pursuant to Regulation 13(2) of the Access Regulations, Eircom shall provide and grant Access to OAOs to the following particular products, services and facilities:

- (i) ULMP;*
- (ii) GLUMP;*
- (iii) Shared Access to the local loop;*
- (iv) Sub-Loop Unbundling, combined with GNP where required, and Shared Sub-Loop Unbundling in areas which have been identified as susceptible to form part of a state subsidy scheme;*
- (v) Co-Location;*
- (vi) Cabinet Co-Location;*
- (vii) Migrations;*
- (viii) Civil Engineering Infrastructure including Duct Access where reasonable;*
- (ix) Where Civil Engineering Infrastructure is not available, Dark Fibre where reasonably available; and*
- (x) Access to building and cabinet space.*

7.2 (b) Without prejudice to the generality of section 7.1, pursuant to Regulation 12(1) and 12(2) of the Access Regulations, Eircom shall provide and grant Access to OAOs to the following particular products, services and facilities on a reasonable request basis:

Sub Loop Unbundling and Shared Sub Loop Unbundling in areas which have not been identified as susceptible to forming part of any State subsidy scheme in accordance with and as outlined at paragraph 4.59 of ComReg Document No. D03/13.

- 4.7 Pursuant to Regulation 8, Regulation 9(1) and Regulation 13(1) of the Access Regulations, Section 10.2 of Decision Instrument contained in Appendix C of ComReg Decision No. D05/10 is hereby withdrawn and replaced as follows:

“10.2 (ii) A description of the associated terms and conditions for supply and use, including prices (save and except that, with regard to Civil Engineering Infrastructure and Dark Fibre, prices are not required to be published)”.

- 4.8 Pursuant to Regulation 8 and Regulation 13(1) of the Access Regulations, Section 12 of Decision Instrument contained in Appendix C of ComReg Decision No. D05/10 is hereby amended by the insertion of new Sections 12.5, 12.6, 12.7 and 12.8 (respectively) as follows:

“12.5. For fault repair charges associated with Current Generation WPNIA, Eircom shall offer the Access Seeker the option of either:

- (i) A monthly fault charge of no more than €0.96 cent per customer line;*
- or*
- (ii) A one-off per event fault charge of no more than €110 (excl. line test) / €117 (incl. line test).*

In the event that the fault is on the Access Seeker’s network then Eircom shall charge the Access Seeker a one-off fault charge of no more than €100.”

“12.6 With regard to Civil Engineering Infrastructure as referred to in section 7.2 of this Decision Instrument, Eircom shall base such charges on no more than the BU-LRAIC plus costs in accordance with the Copper Access Model.”

“12.7 With regard to Dark Fibre as referred to in Section 7.2 of this Decision Instrument, Eircom shall base such charges on no more than the BU-LRAIC plus costs in accordance with the Copper Access Model, as adjusted, where appropriate, for fibre costs.”

“12.8 In order to determine a price for Access to Civil Engineering Infrastructure or Dark Fibre (in accordance with Section 7.2) that is compliant with Sections 12.6 and 12.7, Eircom shall negotiate in good faith with Access Seekers in relation to the conclusion of an agreement regarding the prices for Civil Engineering Infrastructure or Dark Fibre. Eircom shall provide an offer price to the Access Seeker within one (1) month from the date an Access Seeker makes an access request to Eircom for Access to either Civil Engineering Infrastructure and/or Dark Fibre.

Negotiations in respect of prices shall be concluded, unless exceptional circumstances arise, within three (3) months of the date the Access Seeker seeks access to Civil Engineering Infrastructure and/or Dark Fibre in accordance with Section 7.2, and which period shall include for the avoidance of doubt requests for information and negotiations regarding price.”

- 4.9 Pursuant to Regulation 8, Regulation 9 (1) and Regulation 10 (1) of the Access Regulations, Section 16.2 contained in the Decision Instrument in ComReg Decision No. D05/10 is hereby withdrawn on the Effective Date, insofar as Section 9 of Decision Instrument to ComReg Decision No. D03/13 comes into effect on the Effective Date.

PART III - SMP OBLIGATIONS IN RELATION TO NEXT GENERATION WPNIA (SECTIONS 5 TO 11 OF THE DECISION INSTRUMENT)

5. SMP OBLIGATIONS IN RELATION TO NEXT GENERATION WPNIA

- 5.1 ComReg is further specifying certain SMP obligations on Eircom in respect of Next Generation WPNIA in the Market in accordance with and pursuant to Regulations 8, 9, 10, 11, 12, 13 and 18 of the Access Regulations, as detailed further in Sections 6 to 11 below.

6. OBLIGATIONS TO PROVIDE ACCESS

- 6.1 Pursuant to Regulation 12(1) of the Access Regulations, Eircom shall meet all reasonable requests from OAOs for the provision of Access, including Associated Facilities.
- 6.2 Without prejudice to the generality of Section 6.1, pursuant to Regulation 12(2) of the Access Regulations, Eircom shall provide and grant Access to OAOs to the following particular products, services and facilities:
- (i) Unbundled access to the fibre loop;
 - (ii) Unbundled access to the fibre loop combined with GNP where required;
 - (iii) Migrations;
 - (iv) Co-Location;
 - (v) Cabinet Co-Location;
 - (vi) Backhaul;
 - (vii) Interconnection;
 - (viii) Civil Engineering Infrastructure including Duct Access where reasonable; and
 - (ix) Where Civil Engineering Infrastructure is not available, Dark Fibre where reasonably available.

- 6.3 Without prejudice to the generality of Section 6.1, pursuant to Regulation 12(1) and 12(2) of the Access Regulations, Eircom shall provide and grant Access to OAOs to the following particular products, services and facilities on a reasonable request basis:

Sub Loop Unbundling and Shared Sub Loop Unbundling in areas which have not been identified as susceptible to form part of any State subsidy scheme in accordance with and as outlined at paragraph 4.59 of ComReg Document No. D03/13.

- 6.4 Eircom shall offer Access to the products, services and facilities described in this Section 6 in accordance with the requirements of this Decision Instrument and any product descriptions and on the terms and conditions which are specified in the current version of the ARO, or elsewhere on Eircom's website as may be amended from time to time. For the avoidance of doubt, however, to the extent that there is any conflict between the ARO and Eircom's obligations now set out herein, it is the latter which shall prevail.

- 6.5 Without prejudice to the generality of the above sections Eircom shall:
- (i) Pursuant to Regulation 12 (2) (b) of the Access Regulations, negotiate in good faith with OAOs requesting Access;
 - (ii) Pursuant to Regulation 12 (2) (c) of the Access Regulations, not withdraw Access to products, services and facilities already granted without the prior approval of ComReg and in accordance with terms and conditions determined by ComReg;
 - (iii) Pursuant to Regulation 12 (2) (e) of the Access Regulations, grant open Access to technical interfaces, protocols and other key technologies that are indispensable for the interoperability of services or virtual network services; and
 - (iv) Pursuant to Regulation 12 (2) (h) of the Access Regulations, provide Access to OSS or similar software systems necessary to ensure fair competition in the provision of services.

7. CONDITIONS ATTACHED TO THE ACCESS OBLIGATIONS

- 7.1 Eircom shall, in relation to the obligations set out under Section 6 grant Access to Next Generation WPNIA and Associated Facilities, pursuant to Regulation 12(3) of the Access Regulations, in a fair, reasonable and timely manner.

- 7.2 Without prejudice to the generality of Section 7.1, Eircom shall:
- (i) Conclude, maintain and keep updated, as appropriate, legally binding SLAs which include provision for associated Performance Metrics with OAOs;

- (ii) Negotiate in good faith with OAOs in relation to the conclusion of legally binding and fit-for-purpose SLAs;
 - (iii) Ensure that all SLAs include provision for service credits arising from a breach of an SLA. Agreed service credits shall be a matter for negotiation between Eircom and Access Seekers and recovery of service credits shall be in the first instance, a matter for the individual Access Seeker and Eircom;
 - (iv) Ensure SLAs should detail how service credits are calculated, to include the provision of an example calculation;
 - (v) Ensure payment of service credits, where they occur, shall be made in a timely and efficient manner.
- 7.3 Where a request by an OAO for provision of Access, or a request by an OAO for provision of information is refused, or met only in part, Eircom shall provide the objective criteria on a timely basis for refusing same to the OAO which made the request.

8. OBLIGATION OF NON-DISCRIMINATION

- 8.1 Eircom shall have an obligation of non-discrimination as provided for by Regulation 10 of the Access Regulations in respect of products, services or facilities referred to in Section 6 of this Decision Instrument.
- 8.2 Without prejudice to the generality of Section 8.1, Eircom shall:
- (i) Apply equivalent conditions in equivalent circumstances to other Undertakings providing equivalent products, services or facilities; and
 - (ii) Ensure that all products, services or facilities and information are provided to other Undertakings under the same conditions and of the same quality as the products, services, facilities and information that Eircom provides to its own services or those of its subsidiaries or partners.
- 8.3 Without prejudice to the generality of Section 8.1 and Section 8.2, Eircom shall provide Next Generation WPNIA products, services and facilities as set out Section 6 of this Decision Instrument on an Equivalence of Outputs basis.
- 8.4 Eircom shall submit to ComReg a written statement of compliance adequately demonstrating its compliance with its non-discrimination obligations at Section 8.3 no later than the later of:
- 30 September 2013 or;
- a. in the case of any offer of a new Next Generation WPNIA product, service or facility, seven (7) months in advance of it being made available;

- b. in the case of any amendment or change to an existing Next Generation WPNIA product, service or facility, three (3) months in advance of it being made available;

or otherwise as or when required by ComReg.

8.5 The statement of compliance referred to in Section 8.4 above shall, for the purposes of this Section 8, include the following:

- (i) A full and true written statement, signed by a person(s) of appropriate expertise and authority within Eircom acknowledging that Eircom is responsible for ensuring compliance with its obligations and confirming to the best of its knowledge that Eircom is in compliance with the obligations set out in Section 8.3; and
- (ii) Documentation which discloses all material facts regarding compliance with its obligations at Section 8.3, and which demonstrates precisely how compliance with these obligations has been achieved. ComReg may require Eircom to supplement the documentation where in ComReg's view it is insufficient or inadequate.

For the avoidance of doubt, this documentation shall set out and demonstrate how compliance with Section 8.3 has been achieved, by reference to the following, in particular;

- (a) the systems and processes which deliver Next Generation WPNIA products, services or facilities, or which are required in order for an OAO to avail of the product, service or facility;
- (b) the governance and control environment policies and procedures in place regarding the supply of products, services, facilities, and information to both Eircom's downstream operations and to OAOs; and
- (c) explanations as to how appropriate controls and governance are maintained over time.

8.6 Without prejudice to Section 8.5, Eircom shall clearly identify, explain, document and demonstrate any and all differences as between systems and processes used to supply OAOs and Eircom's downstream arm. The explanation shall include a description as to how and what controls are in place to ensure an Equivalence of Outputs standard notwithstanding the differences in systems and processes used.

- 8.7 For the avoidance of doubt, Eircom's provision of Next Generation WPNIA, which shall not occur before 20 May 2013, (except as otherwise agreed with ComReg following discussion with industry), shall *inter alia* be on a non-discriminatory and transparent basis pursuant to Section 8.1 and Section 9.1 of this Decision Instrument. If ComReg is not satisfied that the provision of Next Generation WPNIA will be offered in accordance with Eircom's obligations set out under this Decision Instrument then ComReg may direct Eircom, pursuant to Regulation 18 of the Access Regulations, to defer the launch of Next Generation WPNIA products, services or facilities to a later date. In addition and similarly pursuant to Section 8.1 and 9.1 of this Decision Instrument, Eircom may not offer retail services which rely on Next Generation WPNIA inputs in advance of the making available of the Next Generation WPNIA inputs and information to OAOs.
- 8.8 Eircom shall notify ComReg, in writing, in advance of any potential co-investment arrangements in relation to Next Generation WPNIA products, services and facilities that may take place between Eircom and another party and confirm to ComReg that it is in compliance with its non-discrimination obligations.
- 8.9 For the avoidance of any doubt, the obligations set out in this Section 8 shall apply irrespective of whether or not a specific request for products, services or facilities or information has been made by an OAO to Eircom.

9. OBLIGATION OF TRANSPARENCY

- 9.1 Eircom shall have an obligation of transparency as provided for by Regulation 9 of the Access Regulations in relation to Access.
- 9.2 Without prejudice to the generality of the obligation in Section 9.1, pursuant to Regulation 9(2) of the Access Regulations, Eircom shall make publicly available and keep updated on its publically available wholesale website, the ARO which shall include Next Generation WPNIA as specified in Section 6 of this Decision Instrument. The ARO and all associated invoices shall be sufficiently unbundled so as to ensure that OAOs availing of such products, services or facilities are not required to pay for products, services or facilities which are not necessary for the product, service or facility requested. Without prejudice to the generality of the requirement that the ARO be sufficiently unbundled, the ARO shall include:
- i. A description of the relevant offerings broken down into components according to market needs;
 - ii. A description of the associated terms and conditions for supply and use, including prices (save that, with regard to Civil Engineering Infrastructure and Dark Fibre, prices are not required to be published);
 - iii. A description of the technical specifications and network characteristics of the Access being offered; and

- iv. At least the elements set out in the Schedule to the Access Regulations.

With regard to the requirement that all ARO associated invoices be sufficiently unbundled, Eircom shall in particular ensure that its wholesale invoices are sufficiently detailed and clearly presented such that an OAO can both reconcile the invoice to Eircom's price list and efficiently use the wholesale invoice to prepare fully transparent retail or wholesale customer invoices.

- 9.3 In respect of non-pricing amendments or changes to the ARO resulting from the offer of a new Next Generation WPNIA product, service or facility, the following obligations will apply:

Eircom shall, unless otherwise agreed by ComReg, make publically available and publish on Eircom's publically available wholesale website at least six (6) months in advance of coming into effect, any proposed amendments or changes to the ARO or the making available of any Next Generation WPNIA product, service or facility, pertaining to non-price information in respect of product specification, services, facilities and processes resulting from the offer of a new Next Generation WPNIA product, service or facility. Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, seven (7) months prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.

- 9.4 In respect of non-pricing amendments or changes to the ARO resulting from an amendment or change to an existing Next Generation WPNIA product, service or facility, the following obligations will apply:

Eircom shall, unless otherwise agreed by ComReg, make publically available and publish on Eircom's publically available wholesale website at least two (2) months in advance of coming into effect, any proposed amendments or changes to the ARO pertaining to non-price information in respect of product specification, services, facilities and processes resulting from an amendment or change to an existing Next Generation WPNIA product, service or facility (including details of any amendment or change in the functional characteristics of an existing Next Generation WPNIA product, service or facility). Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, three (3) months prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion. Notwithstanding this Section 9.4, material changes or material amendments shall, however, be notified and published in accordance with Section 9.3 or as otherwise agreed with ComReg or at ComReg's discretion.

- 9.5 In respect of pricing amendments or changes to the ARO the following obligations will apply:

Eircom shall make publically available and publish on Eircom's publically available wholesale website at least two (2) months in advance of coming into effect, any proposed amendments or changes to the ARO, in respect of the price for a new Next Generation WPNIA product, service or facility or a price decrease to an existing Next Generation WPNIA product, service or facility. Furthermore, Eircom shall, unless otherwise agreed by ComReg, make publically available and publish on Eircom's publically available wholesale website at least three (3) months in advance of coming into effect, any proposed amendments or changes to the ARO, resulting from a price increase to an existing Next Generation WPNIA product, service or facility. Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, three (3) or four (4) months (as appropriate) prior to any amendments or changes coming into effect. The periods referred to in this section may be varied with the agreement of ComReg or at ComReg's discretion.

- 9.6 Upon, and at the same time and in accordance with the appropriate timeline set out under Section 8.4 of this Decision Instrument, Eircom shall publish information on its publically available wholesale website in respect of Next Generation WPNIA products, services, facilities and processes, which shall be sufficient to identify and justify any permissible differences (in accordance with Section 8.6 of this Decision Instrument), between the products, services, facilities and processes as set out in the ARO and the comparable products, services, facilities and processes which Eircom provides to itself. For the avoidance of doubt Eircom shall keep this information updated as new products, services or facilities are developed or deployed, or existing products, services or facilities are amended.
- 9.7 Eircom shall continue to publish the information and prices specified in the latest version of the ARO as may be amended from time to time, as currently published on its publically available wholesale website.
- 9.8 Eircom shall publish Key Performance Indicators (KPIs) on its publically available wholesale website. The specification of the content of the KPIs shall be in accordance with ComReg Decision No. D05/11.
- 9.9 Eircom shall publish all SLAs (and any updates thereto) on its publically available wholesale website.
- 9.10 Eircom shall be obliged to publish on its publically available wholesale website information about Performance Metrics.

- 9.11 Pursuant to Sections 8.1 and 9.1 of this Decision Instrument, Eircom shall make available on its publically available wholesale website at least six (6) months in advance of implementation (or such period as may be reasonably agreed with ComReg), information regarding the introduction of, changes to, or technical developments relating to Eircom's network, infrastructures or new technologies, as well as sufficient information regarding products, services and facilities which could reasonably be expected to support products, services or facilities in respect of Next Generation WPNIA (or such other information as reasonably required by ComReg), including as regards such products, services or facilities to be offered to Eircom's retail or downstream division. Eircom shall keep this information updated on its publically available wholesale website; however material amendments and changes to information may not be notified by way of such an update, but shall be notified by at least six (6) months in advance as set out herein, or by agreement with ComReg, or at ComReg's discretion.
- 9.12 Where Eircom considers that certain aspects of information to be provided in Section 9 is confidential and/or commercially sensitive Eircom shall without delay, provide ComReg with complete details of the information with reasons justifying why it considers it is confidential and/or commercially sensitive. ComReg will consider the information in accordance with ComReg Document No. 05/24. If ComReg concludes the information is confidential and/or commercially sensitive, that information shall only be made available via Eircom's publically available wholesale website, to that category of OAOs which has signed a Non-Disclosure Agreement ("NDA"), acceptable to a reasonable OAO. The NDA shall be made publically available by Eircom. As and when the commercially sensitive and/or confidential information loses any commercial sensitivity or confidentiality it shall be made publically available on Eircom's wholesale website without delay. The confidential and/or commercially sensitive information shall not be made available by Eircom to its downstream operations until made available to an OAO as set out herein, or as otherwise agreed with ComReg. Information not considered by ComReg to be confidential and/or commercially sensitive shall be published by Eircom in accordance with its obligations under this Section 9.
- 9.13 Without prejudice to the generality of the Section 9.11 Eircom shall in particular make available on its publically available wholesale website in advance of implementation, information regarding its NGA roll out plans, and information relating to wholesale products, services, and facilities such as the expected time for service availability, as follows;
- (i) For the Exchange areas included in Eircom's NGA rollout plan the following details shall also be made publically available on Eircom's publically available wholesale website at least six (6) months in advance of implementation:
 - a. the total number, and location, using geographic coordinates, of cabinets in each Exchange area; and
 - b. details of which specific cabinets will and will not be NGA enabled, as part of Eircom's NGA rollout plan; and

- c. the date for the provision of Next Generation WPNIA products, services and facilities from any cabinet or cabinets (including a Node other than a cabinet from which Eircom may offer NGA products, services or facilities); and
 - (ii) For the Exchange areas included in Eircom's NGA rollout plan Eircom shall publish on its publically available wholesale website on a monthly basis, or as reasonably required by ComReg, in advance of particular cabinets becoming enabled, to update, reconcile or revise any previous announcements or notifications, projections or plans, regarding NGA roll-out, as matters progress in order that accurate, clear and current information is made available in respect of plans for particular cabinets (however material amendments or changes to information may not be notified by way of such an update but shall be notified in accordance with Section 9.13 (i) or by agreement with ComReg, or at ComReg's discretion).
- 9.14 Eircom shall, on a quarterly basis or such other suitably regular basis as may be specified by ComReg, provide details to ComReg in writing of the progress of Eircom's NGA rollout in the previous quarter, including a comparison of Eircom's NGA rollout performance with Eircom's NGA rollout plan. An explanation of the reasons for any differences between the Eircom's NGA rollout plan and its NGA rollout performance at the end of each quarter should be detailed. This should include details of NGA planned rollout and NGA implementation for each cabinet in each Exchange area.
- 9.15 Without prejudice to the generality of the obligation in Section 9.1 Eircom shall, from the Effective Date of this Decision Instrument or, as specified by ComReg in writing from time to time, make public on its publicly available wholesale website, information such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the products, services and facilities referred to in Section 6, and as may be further specified by ComReg from time to time and all other information which may be reasonably required by ComReg or OAOs.
- 9.16 Pursuant to Regulation 9(3) of the Access Regulations, ComReg may issue directions requiring Eircom to make amendments or changes to the ARO to give effect to obligations imposed in this Decision Instrument and, pursuant to Regulation 9(3) of the Access Regulations to publish the ARO with such amendments or changes. ComReg may issue directions to Eircom from time to time requiring it to publish information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use and prices, pursuant to Regulation 18 of the Access Regulations.

10. OBLIGATION OF ACCOUNTING SEPARATION

- 10.1 For the avoidance of doubt and pursuant to Regulation 11 of the Access Regulations, Eircom shall continue to maintain all of the obligations in relation to accounting separation, set out in Annex 2 of ComReg Decision No. D08/10 applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument related to the Market.

11. OBLIGATIONS RELATING TO PRICE CONTROL AND COST ACCOUNTING

- 11.1 Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall continue to comply with all of the obligations in relation to cost accounting in force immediately prior to the Effective Date of this Decision Instrument.
- 11.2 Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall maintain appropriate cost accounting systems in respect of products, services or facilities referred to in Section 6.
- 11.3 Pursuant to Regulation 13 (1) of the Access Regulations, prices charged by Eircom to any other Undertaking for Access to or use of those products, services or facilities including Associated Facilities referred to in Section 6 shall be subject to a cost orientation obligation. For the avoidance of doubt, this shall include all connection charges, fault repair charges and any other related charges.
- 11.4 With regard to Civil Engineering Infrastructure (including Duct Access) as referred to in Section 6.2 of this Decision Instrument, Eircom shall base such charges on no more than BU-LRAIC plus costs in accordance with the Copper Access Model.
- 11.5 With regard to Dark Fibre as referred to in Section 6.2 of this Decision Instrument, Eircom shall base such charges on no more than BU-LRAIC plus costs in accordance with the Copper Access Model, as adjusted, where appropriate, for fibre costs.
- 11.6 In order to determine a price for Access to Civil Engineering Infrastructure (including Duct Access) or Dark Fibre (in accordance with Section 6.2) that is compliant with Sections 11.4 and 11.5, Eircom shall negotiate in good faith with Access Seekers in relation to the conclusion of an agreement regarding the prices for Civil Engineering Infrastructure (including Duct Access) or Dark Fibre. Eircom shall provide an offer price to the Access Seeker within one (1) month from the date an Access Seeker makes an access request to Eircom for Access to either Civil Engineering Infrastructure (including Duct Access) and/or Dark Fibre. Negotiations in respect of prices shall be concluded, unless exceptional circumstances arise, within three (3) months of the date the Access Seeker seeks access to Civil Engineering Infrastructure (including Duct Access) and/or Dark Fibre in accordance with Section 6.2, and which period shall include, for the avoidance of doubt, requests for information and negotiations regarding price.

- 11.7 With regard to Unbundled access to the fibre loop (including combined with GNP where required) as referred to in Section 6.2 of this Decision Instrument, Eircom shall ensure that the charges are cost oriented.
- 11.8 With regard to Co-Location and Interconnection as referred to in Section 6.2 of this Decision Instrument and Shared Sub Loop Undertaking as referred to in Section 6.3 of this Decision Instrument, Eircom shall ensure that the charges are cost oriented.
- 11.9 With regard to Sub Loop Unbundling as referred to in Section 6.3 of this Decision Instrument, Eircom shall ensure that the charges are cost oriented in accordance with ComReg Decision No. D01/10 as amended.
- 11.10 With regard to Backhaul as referred to in Section 6.2 of this Decision Instrument, Eircom shall ensure that the costs are calculated in a manner which is consistent with the methodology used in the Copper Access Model as adjusted, where appropriate, for fibre costs.
- 11.11 With regard to Section 11.3, Eircom shall ensure that the charges for fault repair associated with Next Generation WPNIA products, services or facilities are cost oriented.
- 11.12 With regard to Section 11.3, Eircom shall ensure that the charges for migrations associated with Next Generation WPNIA products, services or facilities are cost oriented.
- 11.13 Eircom shall have an obligation not to cause a margin/price squeeze.
- 11.14 In accordance with the transparency obligation in Section 9.5 of this Decision Instrument, Eircom shall notify ComReg (by email) of all wholesale prices for new Next Generation WPNIA products, services and facilities and for wholesale price changes to existing Next Generation WPNIA products, services and facilities no later than three (3) months before the new price or the revised price is expected to come into effect, save that for a wholesale price increase to an existing Next Generation WPNIA product, service or facility, Eircom shall notify ComReg, by email, no later than four (4) months before the revised price is expected to come into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.

PART IV - OBLIGATIONS AND EFFECTIVE DATE (SECTIONS 12 TO 15 OF THE DECISION INSTRUMENT)**12 STATUTORY POWERS NOT AFFECTED**

- 12.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument).

13 MAINTENANCE OF OBLIGATIONS

- 13.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument, are continued in force by this Decision Instrument and Eircom shall comply with same.
- 13.2 If any section, clause or provision or portion thereof contained in this Decision Instrument is found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that section, clause or provision or portion thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining section(s), clause(s) or provision(s) or portion thereof of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument.

14. AMENDMENT AND WITHDRAWAL OF SMP OBLIGATIONS

- 14.1 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, Section 2.1 of the Decision Instrument to ComReg Decision No. D01/10 is amended by the insertion of new definitions and amendments to existing definitions to Section 2.1 of that Decision Instrument, in the manner provided for by Sections 4.1 and 4.2 of this Decision Instrument.
- 14.2 Pursuant to Regulation 8 and Regulation 13(1) of the Access Regulations, Section 4.1 of the Decision Instrument contained in Section 7 of ComReg Decision No. D01/10, is hereby withdrawn and replaced, in the manner provided for by Section 4.3 of this Decision Instrument.
- 14.3 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, Section 2.1 of ComReg Decision Instrument in ComReg Decision No. D05/10 is amended by the insertion of new definitions and amendment to existing definitions to Section 2.1 of that Decision Instrument, in the manner provided for by Section 4.4 to Section 4.5 of this Decision Instrument.

- 14.4 Pursuant to Regulation 8 and Regulation 12 of the Access Regulations, Section 7.1 to Section 7.2 of the Decision Instrument in ComReg Decision No. D05/10 are hereby withdrawn and replaced in the manner provided for by Section 4.6 of this Decision Instrument.
- 14.5 Pursuant to Regulation 8, Regulation 9 and Regulation 13 of the Access Regulations, Section 10.2 of the Decision Instrument in ComReg Decision No. D05/10 is hereby amended in the manner provided for by Section 4.7 of this Decision Instrument.
- 14.6 Pursuant to Regulation 8 and Regulation 13(1) of the Access Regulations, Section 12 of Decision Instrument in ComReg Decision No. D05/10 is amended in the manner provided for by Section 4.8 of this Decision Instrument.
- 14.7 Pursuant to Regulation 8, 9 and Regulation 10(1) of the Access Regulations, Section 16.2 of the Decision Instrument in ComReg Decision No. D05/10 is hereby amended in the manner provided for by Section 4.9 of this Decision Instrument.
- 14.8 Pursuant to Regulations 8, 9, 10, 11, 12, 13 and 18 of the Access Regulations, the obligations in relation to Next Generation WPNIA set out in Part III of the Decision Instrument in ComReg Decision No. D05/10 (Sections 13 to 18 of that Decision Instrument) is hereby further specified in the manner provided for by Sections 5 to 11 of this Decision Instrument.

15. EFFECTIVE DATE

- 15.1 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom and it shall remain in force until further notice by ComReg.

ALEX CHISHOLM

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE 31ST DAY OF JANUARY 2013

Annex: 2 Decision Instrument – WBA Market

Decision Instrument – Wholesale Broadband Access Market

1. STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

1.1 This Decision Instrument (hereinafter “Decision Instrument”) is made by the Commission for Communications Regulation (“ComReg”) and relates to the market for wholesale broadband access identified by the European Commission in its Recommendation of 17 December 2007 on relevant product and services markets within the electronic communications sector susceptible to *ex ante* regulation¹²⁵ (“the Recommendation”) and as defined by ComReg in the Response to Consultation and Decision entitled “Market Review: Wholesale Broadband Access (Market 5)”, (ComReg Decision No. D06/11), (ComReg Document No.11/49).

1.2 This Decision Instrument is made:

- i. Pursuant to and having regard to the functions and objectives of ComReg as set out in Sections 10 and 12 of the Communications Regulation Acts 2002 to 2011¹²⁶; Regulation 6(1) of the Access Regulations¹²⁷ and Regulation 16 of the Framework Regulations¹²⁸; and
- ii. Having, where appropriate, pursuant to Section 13 of the Communications Regulation Acts 2002 to 2011 complied with the policy directions made by the Minister for Communications, Marine and Natural Resources¹²⁹; and
- iii. Having taken the utmost account of the European Commission’s Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks¹³⁰; and

¹²⁵ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 344, 28.12.2007, p. 65).

¹²⁶ Communications Regulation Act 2002 (No. 20 of 2002), as amended by the Communications Regulation (Amendment) Act 2007 (No. 22 of 2007), the Communications Regulation (Premium Rate Services and Electronic Communications Infrastructure) Act 2010 (No. 2 of 2010) and the Communications Regulation (Postal Services) Act 2011 (No. 21 of 2011).

¹²⁷ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the Access Regulations).

¹²⁸ European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), (the Framework Regulations).

¹²⁹ Policy Directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004.

¹³⁰ European Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (2010/572/EU) (OJ L 251/35).

- iv. Having had regard to the market definition, market analysis and reasoning set out in the Response to Consultation and Decision Document entitled "Market Review: Wholesale Broadband Access (Market 5)", (ComReg Decision No. D06/11), (ComReg Document No. 11/49); and
- v. Having regard to the analysis and reasoning set out in the preliminary consultation entitled "Next Generation Access (NGA) Remedies in Wholesale Regulated Markets - WPNIA and WBA Remedies in an NGA environment" (ComReg Document No. 11/40).
- vi. Having taken account of the submissions received from interested parties in response to "Next Generation Access (NGA) Remedies in Wholesale Regulated Markets - WPNIA and WBA Remedies in an NGA environment" (ComReg Document No. 11/40) following public consultation pursuant to Regulation 12 of the Framework Regulations; and
- vii. Having regard to the analysis and reasoning set out in "Next Generation Access ("NGA") Proposed Remedies for Next Generation Access Markets" (ComReg Document No. 12/27); and
- viii. Having taken account of the submissions received from interested parties in response to "Next Generation Access ("NGA") Proposed Remedies for Next Generation Access Markets" (ComReg Document No. 12/27) following public consultation pursuant to Regulation 12 of the Framework Regulations; and
- ix. Having regard to the analysis and reasoning set out in the response to consultation and the Final Decision document entitled "Next Generation Access ("NGA") Remedies for Next Generation Access Markets (ComReg Document No. 13/11) (ComReg Decision No. D03/13); and
- x. Having notified the draft measure and the reasoning on which same is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States in accordance with Regulation 13 and 14 of the Framework Regulations and having taken the utmost account pursuant to Regulation 13(6) of the Framework Regulations of any comments made by the European Commission, BEREC and any national regulatory authority in another EU Member State in accordance with Regulation 13 of the Framework Regulations; and
- xi. Pursuant to Regulations 8, 9, 10, 11, 12, 13, 18 and 24 of the Access Regulations and Regulations 25, 26 and 27 of the Framework Regulations.

- 1.3 The provisions of the Response to Consultation and Final Decision document entitled “Market Review: Wholesale Broadband Access (Market 5)” (ComReg Document No. 11/49), (ComReg Decision No. D06/11), the Preliminary Consultation entitled “Next Generation Access (NGA) Remedies in Wholesale Regulated Markets - WPNIA and WBA Remedies in an NGA environment” (ComReg Document No 11/40) and “Next Generation Access (“NGA”) Proposed Remedies for Next Generation Access Markets” (Document No. 12/27) and Final Decision document entitled “Next Generation Access (NGA): Remedies for Next Generation Access Markets” (ComReg Document No. 13/11) (ComReg Decision No. D03/13) shall, where appropriate, be construed with this Decision Instrument, (however if a conflict arises between this Decision Instrument and any other Decision Instrument (including as hereby amended), the most restrictive provision shall apply to Eircom).

PART I - GENERAL PROVISIONS (SECTIONS 2 AND 3 OF THE DECISION INSTRUMENT)

2. DEFINITIONS AND INTERPRETATION

2.1 In this Decision Instrument, unless the context otherwise suggests:

“**Access**” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time; for the purposes of this Decision Instrument Access shall include (but shall not be limited to) Access to Associated Facilities and Interconnection where appropriate;

“**Access Regulations**” means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011), as may be amended from time to time;

“**Access Seeker(s)**” means an OAO that is party to the Wholesale Broadband Access Reference Offer (WBARO), or, an OAO that has not yet accepted the WBARO, but has entered into a Non-Disclosure Agreement with Eircom;

“**Associated Facilities**” shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“**Authorisation Regulations**” means the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011), as may be amended from time to time;

“**Backhaul**” means the provision of dedicated transmission capacity (contended or uncontended in accordance with an OAO’s requirement) by Eircom at various bandwidths, using an appropriate mechanism (e.g. Ethernet or fibre) between an OAO’s equipment at the Co-Location site and the OAO’s nominated Point of Handover or between an OAO’s equipment at the Co-Location site and the Eircom exchange;

“**BEREC**” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EC) No. 1211/2009 of the European Parliament and of the Council of 25 November 2009;

“**Bitstream**” means a wholesale broadband product provided in the Market;

“**Bundle**” for the purpose of this Decision Instrument means a package of products or retail services, consisting of more than one service, which is on offer or on sale by Eircom;

“**Co-Location**” shall have the same meaning and description as under Schedule B “Co-location services” to the Access Regulations (as may be amended from time to time) save that it includes for the purposes of this Decision Instrument access to the MDF and/or to the ODF as applicable, at an Exchange to facilitate access to VUA and NGA Bitstream products;

“**ComReg**” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Acts 2002 to 2011;

“**ComReg Decision No. D01/06**” means ComReg Document 06/01 entitled “Retail minus wholesale price control for Wholesale Broadband Access Market” dated 13 January 2006;

“**ComReg Decision No. D08/10**” means ComReg Document No. 10/67 entitled “Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited” dated 31 August 2010;

“**ComReg Decision No. D05/11**” means ComReg Document No. 11/45 entitled “Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets” dated 29 June 2011;

“**ComReg Decision No. D06/11**” means ComReg Document No. 11/49 entitled “Response to Consultation and Decision; Market Review: Wholesale Broadband Access” dated 8 July 2011;

“**ComReg Decision No. D03/13**” means ComReg Document No. 13/11 entitled “Next Generation Access (“NGA”) Remedies for Next Generation Access Markets”;

“**ComReg Document No. 05/24**” means the Response to Consultation entitled “Guidelines on the treatment of confidential information” dated 22 March 2005;

“**Customer-sited handover**” means the connection from the Eircom network to the OAO’s equipment, within the OAO premises;

“**Discount**” means an offer or sale of a product at less than its standard price, for example a price reduction, including a volume related price reduction, a rebate, a reimbursement, a refund, a set-off and any other similar words or expressions;

“**Effective Date**” means the date set out in Section 15 of this Decision Instrument;

“**Eircom**” means Eircom Limited and its subsidiaries, and any Undertaking which it owns or controls, and any Undertaking which owns or controls Eircom Limited and its successors and assigns;

“End User” for the purposes of this Decision Instrument shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“End-to-End Next Generation Bitstream” means the end-to-end resale of Next Generation Bitstream which allows the Access Seeker to purchase Next Generation WBA without the need to have its own infrastructure for example Backhaul and ISP services;

“Equally Efficient Operator cost base” or **“EEO cost base”** is a cost base which is derived from Eircom’s costs and is based on Eircom’s scale of operations;

“Equivalence of Inputs” means the provision of products, services, facilities, and information by the SMP operator to OAOs such that such products, services, facilities, and information are provided to OAOs within the same timescales, at the same price, functionality, service and quality levels and on the same terms and conditions and by means of the same systems and processes as the SMP operator provides to itself. The systems and processes shall operate in the same way and with the same degree of reliability and performance as between OAOs and the SMP operator’s provision to itself;

“Equivalence of Outputs” means the provision of products, services, facilities, and information by the SMP operator to OAOs such that such products, services, facilities, and information are provided to OAOs in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP operator provides to itself, albeit potentially using different systems and processes;

“Ethernet” means a technology that supports data transfer between network Nodes at Layer 2 of the Open Systems Interconnection (OSI) reference model;

“Exchange” means an Eircom network premises or equivalent facility used to house network and associated equipment, and includes a Remote Subscriber Unit (RSU). The Exchange usually, but not always, houses the MPoP;

“Fibre to the Cabinet” or **“FTTC”** means fibre to the cabinet which is a variant of the FTTN access network architecture where the Node used to house active equipment is the street cabinet;

“Fibre to the Node” or **“FTTN”** means an access network architecture whereby active equipment is installed in an access network Node (a street cabinet in the case of FTTC). The active equipment is connected to the Exchange / MPoP using fibre optic cable. The connection between the cabinet and the End User premises is by way of a copper sub-loop;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), as may be amended from time to time;

“In-building handover” means the connection from the Eircom network to the OAO’s equipment within the Exchange, or equivalent facility;

“In-span handover” means the connection between the Exchange and the OAO’s nominated Point of Handover;

“In Premises Service(s)” means associated service(s) provided by Eircom to an Access Seeker which enable or support the provision of NGA WBA services and facilities;

“Interconnection” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time and for the purposes of this Decision Instrument includes, but is not limited to, the Eircom WEIL (Wholesale Ethernet Interconnect Link) Service;

“ISP Services” means the services provided by an internet service provider and in the context of End-to-End Next Generation Bitstream means the provision of internet access and can also include additional services such as the provision of internet addresses and electronic file storage facilities;

“Key Performance Indicator(s)” or **“KPI(s)”** means a measure(s) of the standard(s) of product, service or facility provided by Eircom to OAOs and by Eircom to itself through self-supply;

“Local Loop” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time;

“Margin Squeeze Tests” means the tests used by ComReg to identify a potential (i) Retail Margin Squeeze; (ii) Wholesale Margin Squeeze between End-to-End Next Generation Bitstream and Next Generation Bitstream products; (iii) Wholesale Margin Squeeze between Next Generation Bitstream and VUA products; and (iv) Wholesale Margin Squeeze between VUA and SLU products;

“(the) Market” means the market for wholesale broadband access. The Market is more particularly described in Section 4 of ComReg Decision No. D06/11;

“MDF” means the main distribution frame;

“Metropolitan Point of Presence” or **“MPoP”** means the point of inter-connection between the access and core networks. It is equivalent to the MDF in the case of the copper access network. All NGA Subscribers’ connections in a given area are centralised to the MPoP on an optical distribution frame (ODF);

“Migration(s)” includes Bulk Migrations, and means where the upstream wholesale input used to supply a retail service is changed whilst maintaining services to the end-user, irrespective of whether or not the supplier at the retail level changes.-For the avoidance of doubt, Migrations include but are not limited to migrations:- (i) between all Next and/or Current Generation WBA services in any direction; (ii) between Next or Current Generation WPNIA and Next or Current Generation WBA in any direction; (iii) between SB-WLR and Current or Next Generation WBA in any direction (iv) between SB-WLR and Next or Current Generation WPNIA in any direction;

“(Bulk) Migration” means the facility whereby an OAO can have multiple Migrations facilitated via a single request;

“Multicast” means a service that accepts a single copy of a designated signal from the Access Seeker and distributes the resultant multicast traffic within the Eircom network to multiple End Users;

“Network Termination Unit” or “NTU” means the physical interface which provides the service demarcation or point of handover of the wholesale service within the customer premises;

“Next Generation Access” or “NGA” means wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over exclusively copper access networks;

“Next Generation Bitstream” means a Next Generation WBA product provided by Eircom in the wholesale broadband access market i.e. a WBA product provided using NGA;

“NGA Margin Squeeze Model” means the model, as amended from time to time, used by ComReg and Eircom to monitor compliance with the Margin Squeeze Tests and is based on the following parameters:

- (i) Retail Margin Squeeze based primarily on a SEO cost base with some costs based on an EEO cost base described in subsection 10.16.3, chapter 10 of ComReg Decision No. D03/13 and calculated based on a portfolio of products across average total costs.
- (ii) Wholesale Margin Squeeze between End-to-end Next Generation Bitstream and Next Generation Bitstream based on a SEO cost base.
- (iii) Wholesale Margin Squeeze between the Next Generation Bitstream and VUA products based on a SEO cost base.
- (iv) Wholesale Margin Squeeze between VUA and SLU based on an EEO cost base.

“Node” means any location or concentration point in the access network served from an Exchange which houses VDSL2 equipment for the purpose of providing high speed services to End-Users. A street cabinet is a specific type of Node used by Eircom as part of their NGA FTTC implementation;

“Non-Disclosure Agreement” means the non-disclosure agreement contained within the WBARO;

“ODF” means the optical distribution frame;

“OSI” means open systems interconnection;

“OSS” means operational support systems;

“Other Authorised Operator(s)” or “OAO(s)” means an Undertaking that is not Eircom, providing an electronic communications network or an electronic communications service authorised under Regulation 4 of the Authorisation Regulations as may be amended from time to time;

“Performance Metric(s)” means the aggregate performance levels achieved by Eircom within a specified period, as calculated in accordance with the methodology and service parameter definitions set out in its Service Level Agreements;

“Point of Handover” means the physical point at which two networks are interconnected to allow traffic to pass between these networks;

“Promotion” means an offer in respect of a product which is available for a finite period of time and which offers a tariff reduction;

“Retail Product” for the purposes of this Decision Instrument means any Eircom NGA retail broadband product on offer or on sale which uses Eircom’s network equipment to transmit data signals and shall include existing NGA retail products and new NGA retail products;

“Retail Margin Squeeze” as described in Section 11 of this Decision Instrument means the setting of a retail price either based on a single product which is supported by a single wholesale offering or, the weighted average (by number of subscribers) of the retail products’ individual prices where more than one product is supported by a single offering, by Eircom for a next generation retail broadband product(s) which does not allow another operator, relying on Next Generation Bitstream to provide the same or similar retail product(s) at sufficient margin by reference to the sheet entitled “Retail to NGA Bitstream test” in the NGA Margin Squeeze Model;

“SB-WLR” means single billing wholesale line rental;

“Service Level Agreements” or **“SLAs”** are legally binding contracts between Eircom and OAOs in relation to the service levels which Eircom commits to from time to time, as more particularly set out in the WBARO and relevant annexes. For the avoidance of doubt, however, to the extent that there is any conflict between the SLAs and Eircom’s obligations now set out herein, it is the latter which shall prevail;

“Significant Market Power operator” or **“SMP operator”** means Eircom;

“Similarly Efficient Operator cost base” or **“SEO cost base”** is a cost base which means the costs of a hypothetical operator which shares the same basic cost function as Eircom but does not enjoy the same economies of scale and scope as Eircom;

“Sub-Loop” means the portion of the local loop which runs from a street side cabinet or Node to a home or premises;

“Sub-Loop Unbundling” also known as **“SLU”** is an implementation of unbundled access to the Sub-Loop. It excludes the portion of the Local Loop between the Exchange and street (side) cabinet. SLU is contained in the market for Wholesale (Physical) Network Infrastructure Access (Market 4) as set out in ComReg Decision No. D05/10. It includes the provision of access to a tie cable or other connection and appropriate handover for the purposes of making use of the Sub Loop from an adjacent cabinet;

“Subscriber(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“Undertaking(s)” shall have the same meaning as under the Regulation 2 of the Framework Regulations as may be amended from time to time;

“VDSL” means a very-high-bit-rate digital subscriber line;

“Virtual Unbundled Access” or **“VUA”** means the wholesale active access product proposed by Eircom. It is an enhanced Layer 2 product which allows the handover or interconnection of aggregate End Users’ connections at the local exchange. It allows a level of control to the Access Seeker similar to that afforded to the Access Seeker connecting their own equipment to a fully unbundled Local Loop;

“WBA” means wholesale broadband access comprising non-physical or active network access including “Bitstream” access at a fixed location. It includes Current Generation WBA and Next Generation WBA and is synonymous with the Market;

“(Current Generation) WBA” means WBA provided over Eircom’s current generation copper access network infrastructure and its Associated Facilities (including self-supply by Eircom for the purpose of serving its downstream markets) that is copper based;

“(Next Generation) WBA” means WBA provided over Eircom’s next generation access network infrastructure and its Associated Facilities (including self-supply by Eircom for the purpose of serving its downstream markets). Eircom’s next generation access network infrastructure includes access paths that are either exclusively fibre or a combination of fibre and copper;

“Wholesale Broadband Access Reference Offer” or **“WBARO”** is the latest version of the offer of contract by Eircom to OAOs in relation to Current and Next Generation WBA as may be amended from time to time. For the avoidance of doubt the WBARO includes the documents which are expressly referred to as being part of the WBARO. To the extent that there is any conflict between the WBARO and Eircom’s obligations now set out herein, it is the latter which shall prevail;

“Wholesale Ethernet Interconnection Link” or **“WEIL”** is the interconnection service provided by Eircom which provides a handover for various wholesale products including its NGA and NGN wholesale products;

“Wholesale Margin Squeeze between End-to-End Next Generation Bitstream and Next Generation Bitstream”, as described in Section 11 of this Decision Instrument, means the setting of a wholesale price for End-to-End Next Generation Bitstream which does not allow a SEO relying on NGA Bitstream to provide the same or similar wholesale inputs at sufficient margin by reference to the sheet entitled “E-E NG Bits to NGA Bits test” in the NGA Margin Squeeze Model;

“Wholesale Margin Squeeze between Next Generation Bitstream and VUA”, as described in Section 11 of this Decision Instrument, means the setting of a wholesale price for Next Generation Bitstream which does not allow a SEO relying on VUA to provide the same or similar wholesale inputs at sufficient margin by reference to the sheet entitled “NGA Bitstream to VUA test” in the NGA Margin Squeeze Model;

“Wholesale Margin Squeeze between VUA and SLU” as described in Section 11 of this Decision Instrument means the setting of a wholesale price for VUA which

does not allow an EEO relying on SLU to provide the same or similar wholesale inputs at sufficient margin by reference to sheet entitled "VUA to SLU test" in the NGA Margin Squeeze Model;

"**working day**" means a day other than Saturday, Sunday, a bank holiday or a public holiday.

3. SCOPE AND APPLICATION

- 3.1 This Decision Instrument applies to Eircom in respect of activities falling within the scope of the Market.
- 3.2 This Decision Instrument is binding upon Eircom and Eircom shall comply with it in all respects.
- 3.3 This Decision Instrument relates to:
- (i) the imposition, amendment and withdrawal, pursuant to Regulation 8 of the Access Regulations of certain obligations contained in the Decision Instrument to ComReg Decision No. D06/11 as it relates to Current Generation WBA and Next Generation WBA as more particularly set out in Section 4 of this Decision Instrument;
 - (ii) the further specification pursuant to Regulation 18 of the Access Regulations, of the SMP obligations for Next Generation WBA as set out in Part III of the Decision Instrument in ComReg Decision No. D06/11 as more particularly set out in Sections 6 to 11 of this Decision Instrument; and
 - (iii) the imposition, amendment and withdrawal, pursuant to Regulation 8 of the Access Regulations of certain obligations of the Decision Instrument in ComReg Decision No. D01/06.
- 3.4 If a conflict arises between this Decision Instrument and any other Decision Instrument (including as hereby amended), the most restrictive provision shall apply to Eircom.

PART II – AMENDMENT OF SMP OBLIGATIONS

- 4.1 Pursuant to Regulation 8 and Regulation 13 of the Access Regulations, Section 12 of the Decision Instrument in ComReg Decision No. D06/11 is hereby amended by the insertion of the following additional subsection as new Section 12.5, as follows:
- “12.5: Notwithstanding Section 12.3 and pursuant to Regulation 13(1) of the Access Regulations, Eircom shall have an obligation to ensure that prices charged in respect of current generation Migrations are cost oriented”.*
- 4.2 Pursuant to Regulation 8 and Regulation 13 of the Access Regulations, Section 12 of the Decision Instrument in ComReg Decision No. D06/11 is

hereby amended by the insertion of the following additional subsection as new Section 12.6, as follows:

“12.6: Notwithstanding Section 12.3 and pursuant to Regulation 13(1) of the Access Regulations, with regard to charges for ancillary services including Associated Facilities, connections and any other related charges, Eircom shall ensure that the charges are cost oriented”.

4.3 Pursuant to Regulation 8, Regulation 9 and Regulation 10 of the Access Regulations, Section 15.3 and Section 16.3 contained in the Decision Instrument in ComReg Decision No. D06/11 are hereby withdrawn, insofar as Sections 8 and 9 of Decision Instrument to ComReg Decision No. D03/13 comes into effect on the Effective Date.

4.4 Pursuant to Regulation 8 and Regulation 13 of the Access Regulations, Section 4.5 of the Decision Instrument to ComReg Decision No. D01/06 is hereby amended as follows:

by the deletion of the word *“fifteen”* in Section 4.5.4 and Section 4.5.6 and its substitution by the word *“five”* wherever, and in each place that it occurs.

4.5 Pursuant to Regulation 8, Regulation 9 and Regulation 13 of the Access Regulations, the Decision Instrument to ComReg Decision No. D01/06, Section 4.9 and Section 4.10 are hereby withdrawn and replaced, and a new Section 4.9, 4.10 and 4.11 are inserted, as follows:

“4.9 USAGE RATES

4.9.1 Eircom shall review the usage rate (based on Kbps peak hour usage) for current generation WBA products and services on a quarterly basis and it shall update the WBA cost model from ComReg Decision No. D01/06 for any amendments as a result of its review, as appropriate”.

“4.10 STATUTORY POWERS NOT AFFECTED

4.10.1 Nothing in this decision instrument shall operate to limit ComReg in the exercise and performance of its statutory functions, powers and duties under any primary or secondary legislation (in force prior to or after the effective date of this Decision Instrument) from time to time as the occasion may require.”

“4.11 EFFECTIVE DATE

4.11.1 This Decision Instrument shall be effective from the 13 day of January 2006 until further notice by ComReg”.

PART III – FURTHER SPECIFICATION OF SMP OBLIGATIONS IN RELATION TO NEXT GENERATION WBA (SECTIONS 5 TO 11 OF THE DECISION INSTRUMENT)

5. SMP OBLIGATIONS IN RELATION TO NEXT GENERATION WBA

5.1 ComReg is hereby further specifying and where appropriate amending certain SMP obligations of the Decision Instrument to ComReg Decision No. D06/11 (as amended by this Decision Instrument), on Eircom in respect of Next Generation WBA in the Market, in accordance with and pursuant to Regulations 8, 9, 10, 11, 12, 13 and 18 of the Access Regulations, as detailed further in Sections 6 to 11 below.

6. OBLIGATIONS TO PROVIDE ACCESS

6.1 Pursuant to Regulation 12(1) of the Access Regulations, Eircom shall meet all reasonable requests from OAOs for the provision of Access, including Associated Facilities.

6.2 Without prejudice to the generality of Section 6.1, pursuant to Regulation 12(2) of the Access Regulations, Eircom shall provide and grant Access to OAOs to the following particular services and facilities:

- (i) Next Generation Bitstream combined with Multicast where required;
- (ii) VUA combined with support for Multicast where required;
- (iii) Backhaul for Next Generation Bitstream and VUA, including backhaul based on Ethernet technology;
- (iv) Co-Location;
- (v) Interconnection, including interconnection based on Ethernet technology, to include the following:
 - a. In-building handover;
 - b. In-span handover;
 - c. Customer-sited handover;
- (vi) Migrations; and
- (vii) In Premises Service(s) with respect to the extension of the NTU data port within the premises at the time of installation. All other In Premises Service(s) shall be on the basis of a reasonable request.

- 6.3 Eircom shall offer Access to the services and facilities described in this Section 6 in accordance with the requirements of this Decision Instrument and any product descriptions and on the terms and conditions which are specified in the current version of the WBARO, or elsewhere on Eircom's publically available wholesale website as may be amended from time to time. For the avoidance of doubt, however, to the extent that there is any conflict between the WBARO and related manuals and Eircom's obligations now set out herein, it is the latter which shall prevail.
- 6.4 Without prejudice to the generality of Sections 6.1, 6.2 and 6.3 Eircom shall:
- (i) Pursuant to Regulation 12(2)(b) of the Access Regulations, negotiate in good faith with OAOs requesting Access;
 - (ii) Pursuant to Regulation 12(2)(c) of the Access Regulations, not withdraw Access to services and facilities already granted without the prior approval of ComReg and in accordance with terms and conditions determined by ComReg;
 - (iii) Pursuant to Regulation 12(2)(e) of the Access Regulations, grant open Access to technical interfaces, protocols and other key technologies that are indispensable for the interoperability of services or virtual network services; and
 - (iv) Pursuant to Regulation 12(2)(h) of the Access Regulations, provide Access to OSS or similar software systems necessary to ensure fair competition in the provision of services.

7. CONDITIONS ATTACHED TO THE ACCESS OBLIGATIONS

- 7.1 Eircom shall, in relation to the obligations set out under Section 6 of this Decision Instrument grant Access to Next Generation WBA and Associated Facilities, pursuant to Regulation 12(3) of the Access Regulations, in a fair, reasonable and timely manner.
- 7.2 Without prejudice to the generality of Section 7.1, Eircom shall:
- (i) Conclude, maintain and keep updated, as appropriate, legally binding SLAs which include provision for associated Performance Metrics with OAOs;
 - (ii) Negotiate in good faith with OAOs in relation to the conclusion of legally binding and fit-for-purpose SLAs;
 - (iii) Ensure that all SLAs include provision for service credits arising from a breach of a SLA. Agreed service credits shall be a matter for negotiation between Eircom and Access Seekers and recovery of service credits shall be in the first instance, a matter for the individual Access Seeker and Eircom;
 - (iv) Ensure SLAs should detail how service credits are calculated, to include the provision of an example calculation;

- (v) Ensure payment of service credits, where they occur, shall be made in a timely and efficient manner.

7.3 Where a request by an OAO for provision of Access, or a request by an OAO for provision of information is refused or met only in part, Eircom shall provide the objective criteria on a timely basis for refusing same to the OAO which made the request in a fair, reasonable and timely manner.

8. OBLIGATION OF NON-DISCRIMINATION

8.1 Eircom shall have an obligation of non-discrimination as provided for by Regulation 10 of the Access Regulations in respect of products, services or facilities referred to in Section 6 of this Decision Instrument.

8.2 Without prejudice to the generality of Section 8.1, Eircom shall:

- (i) Apply equivalent conditions in equivalent circumstances to other Undertakings providing equivalent products, services and facilities; and
- (ii) Ensure that all products, services or facilities and information are provided to other Undertakings under the same conditions and of the same quality as the products, services, facilities and information that Eircom provides to its own services or those of its subsidiaries or partners.

8.3 Without prejudice to the generality of Section 8.1 and Section 8.2, Eircom shall provide pre-ordering, ordering, provisioning, fault reporting and repair for Next Generation Bitstream and VUA, as provided for by Sections 6.2 (i) and (ii) of this Decision Instrument, on an Equivalence of Inputs basis.

8.4 Without prejudice to the generality of Section 8.1 and Section 8.2, Eircom shall provide Access, including Associated Facilities, to Next Generation WBA products, services and facilities other than those provided for by Sections 6.2 (i) and 6.2 (ii) of this Decision Instrument on, at least an Equivalence of Outputs basis.

8.5 Eircom shall submit to ComReg a written statement of compliance adequately demonstrating its compliance with its non-discrimination obligations set out at Sections 8.3 and 8.4, no later than the later of:

30 September 2013 or;

- (i) in the case of any offer of a new Next Generation WBA product, service or facility, seven (7) months in advance of its being made available;
- (ii) in the case of any amendment or change to an existing Next Generation WBA product, service or facility, three (3) months in advance of its being made available;

or otherwise as or when required by ComReg.

8.6 The statement of compliance referred to at Section 8.5 shall, for the purposes of this Section 8, include the following:

- (i) A full and true written statement, signed by a person(s) of appropriate expertise and authority within Eircom acknowledging that Eircom is responsible for ensuring compliance with its obligations and confirming to the best of its knowledge that Eircom is in compliance with the obligations set out in Sections 8.3 and 8.4; and
- (ii) Documentation which discloses all material facts regarding compliance with its obligations at Section 8.3 and 8.4, and which demonstrates precisely how compliance with these obligations has been achieved. ComReg may require Eircom to supplement the documentation where in ComReg's view it is insufficient or inadequate;

For the avoidance of doubt, this documentation shall set out and demonstrate how compliance with Section 8.3 and 8.4 has been achieved, by reference to the following in particular;

- (a) the systems and processes which deliver Next Generation WBA products, services or facilities, or which are required in order for an OAO to avail of the product, service or facility;
- (b) the governance and control environment policies and procedures in place regarding the supply of products, services, facilities, and information to both Eircom's downstream operations and to OAOs; and
- (c) explanations as to how appropriate controls and governance are maintained over time.

8.7 Without prejudice to Section 8.6, Eircom shall clearly identify, explain, document and demonstrate the following in particular:

- (i) In respect of the standard of Equivalence of Inputs, any and all differences as between systems and processes used to supply OAOs and Eircom's downstream arm setting out why it believes that any such differences are very minor and insignificant and can be objectively justified; and
- (ii) In respect of the standard of Equivalence of Outputs, any and all differences as between systems and processes used to supply OAOs and Eircom's downstream arm. The explanation shall include a description as to how and what controls are in place to ensure an Equivalence of Outputs standard notwithstanding the differences in systems and processes used.

- 8.8 For the avoidance of doubt Eircom's provision of Next Generation WBA, which shall not occur before 20 May 2013, (except as otherwise agreed with ComReg following discussion with industry), shall *inter alia* be on a non-discriminatory and transparent basis pursuant to Section 8.1 and Section 9.1 of this Decision Instrument. If ComReg is not satisfied that the provision of Next Generation WBA will be offered in accordance with Eircom's obligations set out under this Decision Instrument then ComReg may direct Eircom, pursuant to Regulation 18 of the Access Regulations, to defer the launch of Next Generation WBA products, services or facilities to a later date. In addition and similarly pursuant to Section 8.1 and 9.1 of this Decision Instrument, Eircom may not offer retail services which rely on Next Generation WBA inputs in advance of the making available of the Next Generation WBA inputs and information to OAOs.
- 8.9 Eircom shall publish Key Performance Indicators (KPIs) on its publically available wholesale website. The specification of the content of the KPIs shall be in accordance with ComReg Decision No. D05/11.
- 8.10 Eircom shall notify ComReg in writing, in advance, of any potential co-investment arrangements in relation to Next Generation WBA products, services and facilities that may take place between Eircom and another party and confirm to ComReg that it is in compliance with its obligations of non-discrimination.
- 8.11 For the avoidance of any doubt, the obligations set out in this Section 8 shall apply irrespective of whether or not a specific request for products, services or information has been made by an OAO to Eircom.

9. OBLIGATION OF TRANSPARENCY

- 9.1 Eircom shall have an obligation of transparency as provided for by Regulation 9 of the Access Regulations in relation to Access.
- 9.2 Without prejudice to the generality of the obligation in Section 9.1, pursuant to Regulation 9(2) of the Access Regulations, Eircom shall make publically available and keep updated on its publically available wholesale website, the WBARO which shall include Next Generation WBA as specified in Section 6 of this Decision Instrument. The WBARO and all associated invoices shall be sufficiently unbundled so as to ensure that OAOs availing of such products, services and facilities are not required to pay for products, services, or facilities which are not necessary for the service, product or facility requested. Without prejudice to the generality of the requirement that the WBARO be sufficiently unbundled, the WBARO shall include:
- (i) A description of the relevant offerings broken down into components according to market needs;
 - (ii) A description of the associated terms and conditions for supply and use, including prices; and
 - (iii) A description of the technical specifications and network characteristics of the Access being offered.

With regard to the requirement that all WBARO associated invoices be sufficiently unbundled, Eircom shall in particular ensure that its wholesale invoices are sufficiently detailed and clearly presented such that an OAO can both reconcile the invoice to Eircom's price list and efficiently use the wholesale invoice to prepare fully transparent retail or wholesale customer invoices.

- 9.3 In respect of non-pricing amendments or changes to the WBARO, resulting from the offer of a new Next Generation WBA product, service or facility, the following obligations will apply:

Eircom shall, unless otherwise agreed by ComReg, make publically available and publish on Eircom's publically available wholesale website at least six (6) months in advance of coming into effect, any proposed amendments or changes to the WBARO or the making available of any Next Generation WBA product, service or facility, pertaining to non-price information in respect of product specification, services, facilities and processes resulting from the offer of a new Next Generation WBA product, service or facility. Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, seven (7) months prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.

- 9.4 In respect of non-pricing amendments or changes to the WBARO, resulting from an amendment or change to an existing Next Generation WBA product, service or facility, the following obligations will apply:

Eircom shall, unless otherwise agreed by ComReg, make publically available and publish on Eircom's publically available wholesale website at least two (2) months in advance of coming into effect, any proposed amendments or changes to the WBARO pertaining to non-price information in respect of product specification, services, facilities and processes resulting from an amendment or change to an existing Next Generation WBA product, service or facility (including details of any amendments or changes in the functional characteristics of an existing Next Generation WBA product, service or facility). Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, three (3) months prior to any amendment or change coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion. Notwithstanding this Section 9.4, material changes or material amendments shall, however, be notified and published in accordance with Section 9.3 or as otherwise agreed with ComReg or at ComReg's discretion.

- 9.5 In respect of pricing amendments or changes to the WBARO the following obligations will apply:

Eircom shall make publically available and publish on Eircom's publically available wholesale website at least two (2) months in advance of coming into effect, any proposed amendments or changes to the WBARO, in respect of the price for a new Next Generation WBA product, service or facility or a price decrease to an existing Next Generation WBA product, service or facility. Furthermore, Eircom shall, unless otherwise agreed by ComReg, make publically available and publish on Eircom's publically available wholesale website at least three (3) months in advance of coming into effect, any proposed amendments or changes to the WBARO, resulting from a price increase to an existing Next Generation WBA product, service or facility. Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, three (3) or four (4) months (as appropriate) prior to any amendments or changes coming into effect. The periods referred in this Section may be varied with the agreement of ComReg or at ComReg's discretion.

- 9.6 Upon, and at the same time and in accordance with the appropriate timeline set out under Section 8.5 of this Decision Instrument, Eircom shall publish information on its publically available wholesale website in respect of Next Generation WBA products, services, facilities and processes which shall be sufficient to identify and justify any permissible differences (in accordance with Section 8.7 of this Decision Instrument), between the products, services, facilities and processes as set out in the WBARO and the comparable products, services, facilities and processes which Eircom provides to itself. For the avoidance of doubt Eircom shall keep this information updated as new products, services or facilities are developed or deployed, or existing products, services, or facilities are amended.
- 9.7 Eircom shall continue to publish the information and prices specified in the latest version of the WBARO as may be amended from time to time, as currently published on its publically available wholesale website.
- 9.8 Eircom shall publish Key Performance Indicators (KPIs) on its publically available wholesale website. The specification of the content of the KPIs shall be in accordance with ComReg Decision No. D05/11.
- 9.9 Eircom shall publish all SLAs (and any updates thereto) on its publically available wholesale website.
- 9.10 Eircom shall be obliged to publish on its publically available wholesale website information about Performance Metrics.

- 9.11 Pursuant to Sections 8.1 and 9.1 of this Decision Instrument, Eircom shall make available on its publically available wholesale website at least six (6) months in advance of implementation (or such period as may be reasonably agreed with ComReg), information regarding the introduction of, changes to, or technical developments relating to Eircom's network, infrastructures or new technologies, as well as sufficient information regarding products, services and facilities which could reasonably be expected to support products, services or facilities in respect of Next Generation WBA (or such other information as reasonably required by ComReg), including as regards such products, services or facilities to be offered to Eircom's retail or downstream division. Eircom shall keep this information updated on its publically available wholesale website; however material amendments or changes to information may not be notified by way of such an update, but shall be notified by at least six (6) months in advance as set out herein, or by agreement with ComReg, or at ComReg's discretion.
- 9.12 Where Eircom considers that certain aspects of information to be provided in Section 9 is confidential and/or commercially sensitive Eircom shall without delay, provide ComReg with complete details of the information with reasons justifying why it considers it is confidential and/or commercially sensitive. ComReg will consider the information in accordance with ComReg Document No. 05/24. If ComReg concludes the information is confidential and/or commercially sensitive, that information shall only be made available via Eircom's publically available wholesale website, to that category of OAOs which has signed a Non-Disclosure Agreement ("NDA"), acceptable to a reasonable OAO. The NDA shall be made publically available by Eircom. As and when the commercially sensitive and/or confidential information loses any commercial sensitivity or confidentiality it shall be made publically available on Eircom's wholesale website without delay. The confidential and/or commercially sensitive information shall not be made available by Eircom to its downstream operations until made available to an OAO as set out herein, or as otherwise agreed with ComReg. Information not considered by ComReg to be confidential and/or commercially sensitive shall be published by Eircom in accordance with its obligations under this Section 9.
- 9.13 Without prejudice to the generality of the Section 9.11 Eircom shall in particular make available on its publically available wholesale website in advance of implementation, information regarding its NGA roll out plans, and information relating to wholesale products, services, and facilities such as the expected time for service availability, as follows;
- (i) For the Exchange areas included in Eircom's NGA rollout plan the following details shall also be made publically available on Eircom's wholesale website at least six (6) months in advance of implementation:
- a. the total number, and location, using geographic coordinates, of cabinets in each Exchange area; and
 - b. details of which specific cabinets will and will not be NGA enabled, as part of Eircom's NGA rollout plan; and

- c. the date for the provision of Next Generation WBA products, services or facilities from any cabinet or cabinets (including a Node other than a cabinet from which Eircom may offer NGA products, services or facilities) and
 - (ii) For the Exchange areas included in Eircom's NGA rollout plan Eircom shall publish on its publically available wholesale website, on a monthly basis, or as reasonably required by ComReg, in advance of particular cabinets becoming enabled, to update, reconcile or revise any previous announcements or notifications, projections or plans, regarding NGA roll-out, as matters progress in order that accurate, clear and current information is made available in respect of plans for particular cabinets (however material amendments or changes to information may not be notified by way of such an update but shall be notified in accordance with Section 9.13(i) or by agreement with ComReg or at ComReg's discretion); and
 - (iii) 28 days prior, or as reasonably required by ComReg, to WBA products, services or facilities becoming available from a cabinet, Eircom shall publish on Eircom's publically available wholesale website and provide to Access Seekers particular End-User information regarding the End-User address information, such as information regarding the number of homes passed and line pre-qualification data, and such other information which may be reasonably required by an Access Seeker or ComReg.
- 9.14 Eircom shall, on a quarterly basis or such other suitably regular basis as may be specified by ComReg, provide details to ComReg in writing of the progress of Eircom's NGA rollout in the previous quarter, including a comparison of Eircom's NGA rollout performance with Eircom's NGA rollout plan. An explanation of the reasons for any differences between the Eircom's NGA rollout plan and its NGA rollout performance at the end of each quarter should be detailed. This should include details of NGA planned rollout and NGA implementation for each cabinet in each Exchange area.
- 9.15 Without prejudice to the generality of the obligation in Section 9.1 Eircom shall, from the Effective Date of this Decision Instrument or, as specified by ComReg in writing from time to time, make public on its publically available wholesale website, information such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the products, services and facilities referred to in Section 6 and as may be further specified by ComReg from time to time and all other information which may be reasonably required by ComReg or OAOs.

- 9.16 Pursuant to Regulation 9(3) of the Access Regulations, ComReg may issue directions requiring Eircom to make amendments or changes to the WBARO to give effect to obligations imposed in this Decision Instrument and, pursuant to Regulation 9(3) of the Access Regulations to publish the WBARO with such amendments or changes. ComReg may issue directions to Eircom from time to time requiring it to publish information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use and prices, pursuant to Regulation 18 of the Access Regulations.

10. OBLIGATION OF ACCOUNTING SEPARATION

- 10.1 For the avoidance of doubt and pursuant to Regulation 11 of the Access Regulations, Eircom shall maintain all of the obligations in relation to accounting separation, set out in Annex 2 of ComReg Decision No. D08/10 applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument related to the Market.

11. OBLIGATIONS RELATING TO PRICE CONTROL AND COST ACCOUNTING

- 11.1 Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall continue to comply with all of the obligations in relation to cost accounting in force immediately prior to the Effective Date of this Decision Instrument.
- 11.2 Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall maintain appropriate cost accounting systems in respect of products, services or facilities referred to in Section 6 of this Decision Instrument.
- 11.3 Pursuant to Regulation 13(1) of the Access Regulations, with regard to Next Generation WBA, Eircom shall have an obligation relating to price control and cost accounting.
- 11.4 Pursuant to Regulation 13(1) of the Access Regulations, with regard to Next Generation WBA, Eircom shall have an obligation not to cause a margin/price squeeze.

RETAIL:

- 11.5 Pursuant to Regulation 13(1) of the Access Regulations, with regard to Next Generation WBA, Eircom shall have an obligation not to cause a Retail Margin Squeeze, for the purposes of establishing a wholesale price for products, services, facilities, Promotions, Discounts and Bundles in the market for WBA.
- 11.6 Notwithstanding the generality of Section 11.4 and Section 11.5, Eircom shall ensure that it does not create a Retail Margin Squeeze between:- (i) the retail price of a single Retail Product which is supported by a single wholesale offering or, the weighted average (by number of subscribers) of Retail Products' individual prices where more than one Retail Product is supported by a single offering; and (ii) the price for Next Generation Bitstream. The Retail Margin Squeeze test is based on the NGA Margin Squeeze Model.
- 11.7 Eircom shall notify ComReg (by email) of all retail prices for new Retail Products and for retail price amendments to existing Retail Products no later than 5 working days prior to the date that the new or revised price is to become operative (for the avoidance of doubt the timelines set out at Section 9.5 shall not apply in this respect, where no wholesale price amendment is required).
- 11.8 For the purposes of new Retail Products and for amendments to existing Retail Products, Eircom shall furnish to ComReg, at the same time as it notifies ComReg in accordance with Section 11.7, a detailed written statement of compliance demonstrating Eircom's compliance and proposed compliance with the price control obligation, as more specifically referred to in Section 11.6 of this Decision Instrument, except where a NGA Retail Product will not be purchased by any more than a cumulative total of 5,000 Eircom Retail End Users. The statement of compliance shall include the following:
- (i) A full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control and the obligation referred to in Section 11.6 of this Decision Instrument, which is based on the Retail Margin Squeeze test in the NGA Margin Squeeze Model;
 - (ii) All relevant supporting documentation for the purpose of demonstrating compliance with the price control and the obligation referred to in Section 11.6 of this Decision Instrument and which is based on the Retail Margin Squeeze test in the NGA Margin Squeeze Model; and

- (iii) Demonstration of how any amendments to the price of the equivalent wholesale offering of an existing product are and will be in compliance with the price control and the obligations referred to in this Decision Instrument, based on the NGA Margin Squeeze Model.

11.9 Upon receipt of the statement of compliance referred to in Section 11.8, ComReg shall review the statement of compliance. Within the 5 working day period referred to in Section 11.7, ComReg may do one or more of the following things:

- (i) Provide Eircom with both (a) an appropriate written view, insofar as possible based on the available information provided by Eircom at that point in time, in relation to the statement of compliance referred to in Section 11.8; and (b) written confirmation that the making available or offering for sale of the new or existing Retail Product appears to be in compliance with Eircom's obligations at Sections 11.5 and 11.6. However, any such written view or confirmation provided by ComReg is a *prima facie* view and does not fetter ComReg's future discretion in relation to its statutory powers;
- (ii) Request any further information from Eircom and set a deadline by which such information shall be provided. Eircom shall provide the requested information by the deadline and in such format and to the level of detail as stipulated by ComReg. Upon receipt of the requested information from Eircom and within the 5 working day period referred to in Section 11.7, ComReg may do one or more of the things referred to in sub-sections (i), (iii), (iv) or (v) of this Section 11.9;
- (iii) Inform Eircom in writing that the amendment(s) to either the new or existing Retail Product would in ComReg's view, not be in compliance with the price control obligation and the obligation referred to in Section 11.6 of this Decision Instrument, giving reasons therefor and also more specifically inform Eircom that the amendment or change if made operative will or could result in the issuing of a notification of non-compliance under Regulation 19(1) of the Access Regulations;
- (iv) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the obligation referred to in Section 11.6 of this Decision Instrument, issue a direction or directions to Eircom under Regulation 18 of the Access Regulations, to refrain from making operative the corresponding amendment(s) to the equivalent wholesale offering of any existing or new product, service or facility; or

- (v) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the obligation referred to in Section 11.6 of this Decision Instrument, issue a direction or directions to Eircom under Regulation 18 of the Access Regulations, to refrain from making available or offering for sale, the equivalent wholesale offering of any new product, service or facility.

11.10 For the purposes of Promotions and Discounts and Bundles, the above obligations at Section 11.5 to Section 11.9 will apply with respect to new and existing Retail Products.

11.11 One year from the date of launch of Next Generation Retail Products and thereafter where formally requested by ComReg, Eircom shall submit to ComReg a detailed written statement of compliance demonstrating Eircom's compliance with the Retail Margin Squeeze test at Section 11.6 based on the NGA Margin Squeeze Model referred to in this Decision Instrument. The obligations at section 11.8 and 11.9 of this Decision Instrument shall apply regarding this review.

WHOLESALE:

11.12 Notwithstanding the generality of Section 11.4, Eircom shall ensure that it does not create a Wholesale Margin Squeeze between End-to-End Next Generation Bitstream and Next Generation Bitstream, that is between:- (i) the price for End-to-End Next Generation Bitstream; and (ii) the price for NGA Bitstream based on the NGA Margin Squeeze Model.

11.13 Notwithstanding the generality of Section 11.4, Eircom shall ensure that it does not create a Wholesale Margin Squeeze between Next Generation Bitstream and VUA, that is between:- (i) the price for NGA Bitstream; and (ii) the price for VUA based on the NGA Margin Squeeze Model.

11.14 Notwithstanding the generality of Section 11.4, Eircom shall ensure that it does not create a Wholesale Margin Squeeze between VUA and SLU that is between:- (i) the price for VUA; and (ii) the price for SLU based on the NGA Margin Squeeze Model.

11.15 In accordance with the transparency obligation in Section 9.5 of this Decision Instrument, Eircom shall notify ComReg (by email) of all wholesale prices for new Next Generation WBA products, services and facilities and for wholesale price amendments or changes to existing Next Generation WBA products, services and facilities, no later than three (3) months before the new price or the revised price is expected to come into effect save that, for a wholesale price increase to an existing Next Generation WBA product, service or facility, Eircom shall notify ComReg, by email, no later than four (4) months before the revised price is expected to come into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.

11.16 For all new wholesale prices or amendments to existing wholesale prices associated with Next Generation WBA products, services and facilities, Eircom shall furnish to ComReg, at the same time as it notifies ComReg in accordance with Section 11.15, a written statement of compliance demonstrating Eircom's compliance with the price control and the obligations referred to in Sections 11.12, 11.13 and 11.14 of this Decision Instrument. The statement of compliance shall include the following:

- (i) A full and true disclosure of all material facts for the purpose of demonstrating compliance with the price control and the obligations referred to in Sections 11.12, 11.13 and 11.14 of this Decision Instrument, which are based on the NGA Margin Squeeze Model;
- (ii) All relevant supporting documentation for the purpose of demonstrating compliance with the price control and the obligations referred to in Sections 11.12, 11.13 and 11.14 of this Decision Instrument and which are based on the NGA Margin Squeeze Model;
- (iii) Demonstration of how any amendments to the price of the equivalent wholesale offering of a new or existing product are and will be in compliance with the price control and the obligations referred to in Sections 11.12, 11.13 and 11.14 of this Decision Instrument and which are based on the NGA Margin Squeeze Model.

11.17 Upon receipt of the statement of compliance referred to in Section 11.16, ComReg shall review the statement of compliance and within one (1) month ComReg may do one or more of the following things:

- (i) Provide Eircom with both (a) an appropriate written view, insofar as possible based on the information made available and provided by Eircom at that time, in relation to the statement of compliance at Section 11.16 of this Decision Instrument; and (b) written confirmation that the making available or offering for sale of the new or existing product appears to be in compliance with Eircom's obligations at Sections 11.12, 11.13 and 11.14. However, any such written view or confirmation is a *prima facie* view provided by ComReg and does not fetter ComReg's future discretion in relation to its statutory powers of enforcement;
- (ii) Request any further information from Eircom and set a deadline by which such information shall be provided. Eircom shall provide the requested information by the deadline and in such format and to the level of detail as stipulated by ComReg. Upon receipt of the requested information from Eircom ComReg may do one or more of the things referred in (i), (iii), (iv) or (v) of this Section 11.17;

- (iii) Inform Eircom in writing that the amendment(s) to either the new or existing prices would in ComReg's view, not be in compliance with the price control and the obligations more specifically referred to in Sections 11.12, 11.13, and/or 11.14 of this Decision Instrument, giving reasons therefor and more specifically also inform Eircom that the amendment or change to the existing product or the new product if made operative or available will or could result in the issuing of a notification of non-compliance under Regulation 19(1) of the Access Regulations;
- (iv) For the purposes of further specifying requirements to be complied with by Eircom relating to the price control and the obligations more specifically referred to in Sections 11.12, 11.13, and 11.14 of this Decision Instrument, issue a direction or directions to Eircom under Regulation 18 of the Access Regulations, to refrain from making operative corresponding amendments to the wholesale offering of any existing or new product, service or facility; or
- (v) For the purpose of further specifying requirements to be complied with by Eircom relating to the price control and the obligations more specifically referred to in Sections 11.12, 11.13, and 11.14 of this Decision Instrument, issue a direction or directions to Eircom under Regulation 18 of the Access Regulations, to refrain from making available or offering for sale, the wholesale offering of any new product, service or facility.

11.18 For the purposes of Promotions and Discounts and Bundles, the above obligations at Section 11.12 to Section 11.17 will apply with respect to new and existing Next Generation WBA products, services and facilities.

11.19 One year from the date of launch of Next Generation WBA products, services and facilities and thereafter where formally requested by ComReg, Eircom shall submit to ComReg a detailed written statement of compliance demonstrating Eircom's compliance with the margin squeeze tests at Sections 11.12, 11.13 and 11.14, which are based on the NGA Margin Squeeze Model referred to in this Decision Instrument. The obligations at section 11.16 and 11.17 of this Decision Instrument shall apply regarding this review.

OTHER

11.20 Eircom shall review the usage rate (based on Kbps peak hour usage) for Next Generation WBA products and services on a quarterly basis and it shall update the NGA Margin Squeeze Model for any amendments as a result of its review, as appropriate.

- 11.21 In the event that Eircom provides a Next Generation WBA product for which Eircom does not have an equivalent Retail Product, Eircom shall ensure that the charges are fair and reasonable in accordance with paragraph 10.302 contained in Chapter 10 of ComReg Decision No. D03/13.
- 11.22 With regard to charges associated with Co-Location, In-building handover, In-span handover and Customer-sited handover, Eircom shall ensure that the charges are cost oriented.
- 11.23 With regard to the charges associated with Migrations, Eircom shall ensure that the charges are cost oriented.
- 11.24 With regard to the charges for Associated Facilities other than In Premises Services, Eircom shall ensure that the charges are cost oriented. For the avoidance of doubt this includes all connection charges and any other related ancillary charges (excluding the prices for the monthly rental of Next Generation Bitstream and VUA).
- 11.25 For the avoidance of doubt, In Premises Services are not subject to a price control obligation but are subject to the obligation of non-discrimination as set out at Section 8 of this Decision Instrument.

PART IV - OBLIGATIONS AND EFFECTIVE DATE (SECTIONS 12 TO 15 OF THE DECISION INSTRUMENT)

12. STATUTORY POWERS NOT AFFECTED

- 12.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument) from time to time.

13 MAINTENANCE OF OBLIGATIONS

- 13.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument, are continued in force by this Decision Instrument and Eircom shall comply with same.
- 13.2 If any Section, clause or provision or portion thereof contained in this Decision Instrument is found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that Section, clause or provision or portion thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s) or portion thereof of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

14 AMENDMENT AND WITHDRAWAL OF SMP OBLIGATIONS

- 14.1 Pursuant to Regulation 8 and Regulation 13 of the Access Regulations, Section 12 of Decision Instrument to ComReg Decision D06/11 is amended by the insertion of new Sections 12.5 and 12.6 in the manner provided for by Section 4.1 and Section 4.2, respectively, of this Decision Instrument.
- 14.2 Pursuant to Regulation 8, Regulation 9 and Regulation 10 of the Access Regulations, Section 15.3 and Section 16.3 of Decision Instrument to ComReg Decision No. D06/11, are hereby withdrawn, in the manner provided for by Section 4.3 of this Decision Instrument.
- 14.3 Pursuant to Regulation 8 and Regulation 13, of the Access Regulations, Section 4.5 of the Decision Instrument to ComReg Decision No. D01/06 is hereby amended in the manner provided for by Section 4.4 of this Decision Instrument.
- 14.4 Pursuant to Regulation 8, Regulation 9 and Regulation 13 of the Access Regulations, Section 4.9 and Section 4.10 of the Decision Instrument to ComReg Decision No. D01/06, are hereby amended in the manner provided for by Section 4.5 of this Decision Instrument.
- 14.5 Pursuant to Regulations 8, 9, 10, 11, 12, 13 and 18 of the Access Regulations, the obligations in relation to Next Generation WBA set out in Part III of the Decision Instrument in ComReg Decision No. D06/11 (Sections 13 to 18 of that Decision Instrument) are hereby further specified in the manner provided for by Sections 5 to 11 of this Decision Instrument.

15 EFFECTIVE DATE

- 15.1 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom and it shall remain in force until further notice by ComReg.

ALEX CHISHOLM

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE 31ST DAY OF JANUARY 2013

Annex: 3 Glossary

<u>Acronym</u>	<u>Full title</u>	<u>Description</u>
Bitstream	Bitstream	A wholesale product provided in the wholesale broadband access market.
BRAS	Broadband Remote Access Server	Equipment for providing access to aggregate bitstream or broadband data-streams
Broadband	Broadband	Telecommunication in which a wide band of frequencies is available to transmit information. Because a wide band of frequencies is available, information can be multiplexed and sent on many different frequencies or channels within the band concurrently, allowing more information to be transmitted in a given amount of time
Cable	Cable	A system of providing television to consumers via radio frequency signals. It is transmitted to televisions through fixed optical fibres or coaxial cables as opposed to the over-the-air method used in traditional television broadcasting (via radio waves) in which a television antenna is required.
ComReg	Commission for Communications Regulation	National regulatory agency for Ireland
ADSL	Asymmetric Digital Subscriber Line	A variant of DSL. See below definition.
DSL	Digital subscriber line	Digital Subscriber Line technologies which use traditional copper telephony networks to deliver digital broadband signals.
DSLAM	Digital Subscriber Line Access Multiplexer	Allows telephone lines to make faster connections to the Internet. It is a network device, located near the customer's location that connects multiple customer Digital Subscriber Lines (DSLs) to a high-speed Internet backbone line where multiple data streams are combined into one signal over a shared medium.
DOCSIS	Data Over Cable Service Interface Specification	The international standard that allows for the high-speed transfer of data over a cable network.

ECJ	European Court of Justice	
ECTA	European Competitive Telecommunications association	An association which promotes the regulatory interests of European alternative fixed telecoms operators
ERG	European Regulators Group	Established by the European Commission to provide a suitable mechanism for encouraging cooperation and coordination between national regulatory authorities and the Commission, in order to promote the development of the internal market for electronic communications networks and services, and to seek to achieve consistent application, in all Member States, of the provisions set out in the Directives of the new regulatory framework.
Fibre	Fibre Optic Cable	Optical fibre is a glass or plastic fibre designed to guide light along its length. Optical fibres are widely used in fibre-optic communication, which permits transmission over longer distances and at higher data rates than other forms of communication. Fibres are used instead of metal wires because signals travel along them with less loss, and they are immune to electromagnetic interference.
FTTx	Fibre to the ...	Fibre to the x (FTTx) is a generic term used to refer to any broadband network architecture that uses fibre in the access part of the network, including fibre to the home (FTTH), fibre to the building (FTTB), fibre to the cabinet (FTTC), fibre to the node (FTTN), etc.
FWA	Fixed wireless access	The use of radio links for the transmission of voice and data communications
GB	Gigabyte	The abbreviation 'GB' refers to Gigabyte. Digital information storage capacity is often referred to in terms of gigabytes. Gigabytes are used to store large amounts of information (1 GB = 1,024 megabytes). Usage allowance is the amount of data an ISP allows a customer to download/upload each month/week and is generally measured in Gigabytes (GB).
GPON	Gigabit Passive Optical Network	A FTTH architecture and technology in which the access fibre is arranged in a point to multipoint fashion and where the downstream broadband

		signal is broadcast to a defined number of users and each user is allocated a timeslot in turn to transmit their upstream signal
ISP	Internet Service Provider	A commercial entity that offers its customers access to the Internet
Kb	Kilobits per second	The abbreviation 'kb' refers to kilobit per second and is a unit of data transfer rate equal to 1,000 bits per second
LLU	Local loop unbundling	The regulatory process of allowing multiple telecommunications operator's use of connections from the incumbent's telephone exchange's to the customer's premises.
Local Loop	Local loop	The physical circuit connecting the network termination point at the subscriber's premises to the main distribution frame or equivalent facility in the fixed public telephone network providers network
LS	Line share	Also known as shared access to the Local Loop means the product whereby the high frequency capacity of a line is provided to Other Authorised Operators
LTE	Long Term Evolution	A proposed 4th generation mobile broadband standard, the successor to 3rd generation standards
MB	Megabytes	The abbreviation 'MB' refers to Megabyte and means a unit of data storage capacity equal to one million bytes.
Mb	Megabits per second	The abbreviation 'Mb' refers to megabit per second and is a unit of data transfer rate equal to 1,000,000 bits per second
MDF	Main distribution frames	A signal distribution frame for connecting equipment (inside an exchange) to cables and subscriber carrier equipment (outside an exchange).
MPoP	Metropolitan Point of Presence	Metropolitan Point of Presence or (MPoP) means the point of inter-connection between the access and core networks. It is equivalent to the Main Distribution Frame (MDF) in the case of the copper access network. All NGA subscribers' connections in a given area (usually a town or part of a town) are centralised to the MPoP on an Optical Distribution Frame

		(ODF);
NGN	Next generation networks	The evolution in telecommunication core and access networks that will be deployed over the next 5-10 years. One network transports all information and services (voice, data, and all sorts of media such as video) by encapsulating these into packets
NRA	National regulatory agency	A state or government agency which regulates businesses in the public interest
OAO	Other alternative operators	Operators, other than the incumbent, providing telecommunication services
Ofcom	Office of Communications	National regulatory agency for the United Kingdom
OSI	Open Systems Interconnection	The Open Systems Interconnection (OSI) model was developed by the International Organization for Standardization. It consists of a set of seven "layers" that standardize the functions of a communications system. Each layer defines a different stage in the communications process, in general complexity increases as you move up the layers
OSS	Operational support systems	
Phantoming	Phantoming	Phantoming is a technique which by using a single copper wire as common ground from multiple pairs into a customer premises allows greater bandwidth to be delivered to the end-user than would otherwise be achievable
PSTN	Public switched telephone network	PSTN refers to the international telephone system based on copper wires and carrying analog voice data. This is in contrast to newer telephone networks based on digital technologies such as ISDN
SMP	Significant Market Power	
Satellite	Satellite	Communication that involves the use of an active or passive satellite to extend the range of a communications, radio, television, or other transmitter by returning signals to earth from an

		orbiting satellite.
SLU	Sub loop unbundling	Process by which a sub-section of part of the local loop is unbundled (i.e. The physical circuit connecting the network termination point at the subscriber's premises to the nearest cabinet).
VDSL(2)	Very High Speed DSL	(2 nd Generation) Very High Speed Digital Subscriber Line
WACC	Weighted Average Cost of Capital	The Weighted Average Cost of Capital ("WACC") provides a measure of the appropriate rate of return on capital or investment employed in the production of regulated services
WBA	Wholesale Broadband Access	
WiMax	Worldwide Interoperability for Microwave Access	WiMax is a 4G wireless technology which operates over radio waves.
WPNIA	Wholesale Physical Network Infrastructure Access	Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location, more commonly known as LLU

Annex: 4 Legal Basis

Obligations relating to the market for Wholesale physical network infrastructure access

A 4.1 By ComReg Decision D05/10¹³¹, and pursuant to Regulations 25 to 27 of the 2003 Framework Regulations¹³² ComReg designated Eircom as having significant market power (“SMP”) on the market for Wholesale physical network infrastructure access (the “WPNIA market”).

A 4.2 The effect of the transitional provisions contained in Regulation 40 of the 2011 Framework Regulations and Regulation 24 of the 2011 Access Regulations is that Decision D05/10 is deemed to continue in force as if it was made pursuant to the 2011 Framework Regulations and the 2011 Access Regulations.

A 4.3 Under Sections 6-18 of the Decision Instrument annexed to Decision D05/10, and pursuant to Regulation 10 to 14 of the 2003 Access Regulations¹³³ ComReg imposed obligations on Eircom in respect of Current Generation (Sections 6-12) and Next Generation (Sections 13-18) Wholesale physical network infrastructure access. The following obligations were imposed:

- Obligations to provide access pursuant to Regulation 12 of the 2011 Access Regulations;
- Conditions attached to the Access Obligations pursuant to Regulation 12 (3) of the 2011 Access Regulations;
- Obligations of non-discrimination pursuant to Regulation 10 of the 2011 Access Regulations;
- Obligations of transparency pursuant to Regulation 9 of the 2011 Access Regulations;
- Obligations of accounting separation pursuant to Regulation 11 of the 2011 Access Regulations; and
- Obligations of relating to price control and cost accounting pursuant to Regulation 13 of the 2011 Access Regulations.

¹³¹ Document No.10/39 entitled “Wholesale (Physical) Network Infrastructure Access (Market 4)” dated 20 May 2010.

¹³² European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2007 (S.I. No. 271 of 2007), as amended (the “2003 Framework Regulations”).

¹³³ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2007 (S.I. No. 373 of 2007), as amended (the “2003 Access Regulations”).

A 4.4 Section 13.1 of the Decision Instrument annexed to Decision D05/10 stated that ComReg was imposing certain SMP obligations on Eircom in respect of Next Generation WPNIA services and facilities and that it would consult further on the detail of certain of those remedies (as set out in Sections 13-18 of the Decision Instrument).

A 4.5 Regulation 18 of the 2011 Access Regulations provides a legal basis for ComReg to issue a direction further specifying the obligation. Pursuant to Regulation 8 of the 2011 Access Regulations ComReg is amending, imposing or withdrawing certain Current Generation obligations.

A 4.6 The amendment, imposition, withdrawal and further specification of SMP obligations in relation to WPNIA Market is more particularly set out in the Decision Instrument contained in Annex 1 of this Decision.

Obligations relating to the market for Wholesale Broadband Access

A 4.7 By ComReg Decision No. D06/11¹³⁴, and pursuant to Regulations 25 and 26 of the 2011 Framework Regulations¹³⁵, ComReg designated Eircom as having significant market power (“SMP”) on the market for wholesale broadband access (the “WBA” market).

A 4.8 Pursuant to Regulation 8 of the 2011 Access Regulations¹³⁶ where an operator has been designated as having a significant market power on a relevant market as a result of a market analysis carried out in accordance with Regulation 27 of the 2011 Framework Regulations, the Regulator shall impose on such operator such obligations set out in Regulation 9 to 13 as appropriate.

A 4.9 Under Sections 6-18 of the Decision Instrument annexed to Decision D06/11, and pursuant to Regulation 9 to 13 of the 2011 Access Regulations ComReg imposed obligations on Eircom in respect of Current Generation (Sections 6-12) and Next Generation (Sections 13-18) Wholesale Broadband Access. The following obligations were imposed:

- Obligations to provide access pursuant to Regulation 12 of the 2011 Access Regulations;
- Conditions attached to the Access Obligations pursuant to Regulation 12 (3) of the 2011 Access Regulations;

¹³⁴ Document No 11/49 entitled “Response to Consultation and Decision; Market Review: Wholesale Broadband Access” dated 8 July 2011.

¹³⁵ European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) (the “2011 Framework Regulations”).

¹³⁶ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the “2011 Access Regulations”).

- Obligations of non-discrimination pursuant to Regulation 10 of the 2011 Access Regulations;
- Obligations of transparency pursuant to Regulation 9 of the 2011 Access Regulations;
- Obligations of accounting separation pursuant to Regulation 11 of the 2011 Access Regulations; and
- Obligations of relating to price control and cost accounting pursuant to Regulation 13 of the 2011 Access Regulations.

A 4.10 Section 13.1 of the Decision Instrument annexed to Decision D06/11 stated that ComReg was imposing certain SMP obligations on Eircom in respect of Next Generation WBA services and facilities and that it would consult further on the detail of certain of those remedies (as set out in Sections 13-18 of the Decision Instrument). Regulation 18 of the 2011 Access Regulations provides a legal basis for ComReg to issue a direction further specifying the obligation. Pursuant to Regulation 8 of the 2011 Access Regulations ComReg is amending certain Current Generation obligations.

A 4.11 The amendment, imposition, withdrawal and further specification of SMP obligations in relation WBA Market is more particularly set out in the Decision Instrument contained in Annex 2 of this Decision.

A 4.12 Consultation Requirements

A 4.13 Regulation 12(3) of the 2011 Framework Regulations provides that, except in cases falling within Regulation 13(8) (i.e. exceptional cases involving urgency), before taking a measure which has a significant impact on a relevant market, ComReg must publish the text of the proposed measure, give the reasons for it, including information as to which of ComReg's statutory powers gives rise to the measure, and specify the period within which submissions relating to the proposal may be made by interested parties. Regulation 12(4) states that ComReg, having considered any representations received under Regulation 12(3), may take the measure with or without amendment. Regulation 12 implements Article 6 of the Framework Directive.

A 4.14 Regulation 13(3) of the 2011 Framework Regulations provides that, upon completion of the consultation provided for in Regulation 12, where ComReg intends to take a measure which falls within the scope of Regulation 26 or 27 of the Framework Regulations, or Regulation 6 or 8 of the Access Regulations, and which would affect trade between Member States, it shall make the draft measure accessible to the European Commission, BEREC and the NRAs in other Member States at the same time, together with the reasoning on which the measure is based. Regulation 13 implements Article 7 of the Framework Directive.

Annex: 5 Link to Eircom NGA Prices

Please refer to Eircom's NGA (wholesale) pricing proposals at:

<http://www.eircomwholesale.ie/Reference-Offers/Proposals/>

Annex: 6 Oxera Report: “Assessment of Retail Pricing Constraints”

Please refer to ComReg Document No 13/11b, which has been published separately.

Annex: 7 European Commission Decision on Case IE/2012/1404



EUROPEAN COMMISSION

Brussels,
C(2012)

Commission for Communications
(COMREG)

Block DEF - Abbey Court - Irish
Life Centre, Lower Abbey St.
Dublin 1
Ireland

For the attention of:
Mr Alex Chisholm
Chairperson of the Commission

Fax: +35318788193

Dear Mr Chisholm,

Subject: Commission Decision concerning Case IE/2012/1404, Wholesale physical network infrastructure access and Wholesale Broadband Access – Remedies in Ireland

Comments pursuant to Article 7(3) of Directive 2002/21/EC

I. PROCEDURE

On 16 November 2012, the Commission registered a notification from the Irish national regulatory authority, the Commission for Communications Regulation (ComReg),¹ concerning remedies applied in the market for wholesale physical network infrastructure access at a fixed location (WPNIA) and in the market for wholesale broadband access (WBA)² in Ireland.

The national consultation³ ran from 4 April 2012 to 18 May 2012.

On 27 November 2012, a request for information⁴ was sent to ComReg and a response

¹ Under Article 7 of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive), OJ L 108, 24.4.2002, p. 33, as amended by Directive 2009/140/EC, OJ L 337, 18.12.2009, p. 37, and Regulation (EC) No 544/2009, OJ L 167, 29.6.2009, p. 12.

² Corresponding to market 4 and market 5 in Commission Recommendation 2007/879/EC of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Recommendation on Relevant Markets), OJ L 344, 28.12.2007, p. 65.

³ In accordance with Article 6 of the Framework Directive.

was received on 30 November 2012.

Pursuant to Article 7(3) of the Framework Directive, national regulatory authorities (NRAs), the Body of European Regulators for Electronic Communications (BEREC) and the Commission may make comments on notified draft measures to the NRA concerned.

II. DESCRIPTION OF THE DRAFT MEASURE

II.1. Background

The market for WPNIA in Ireland was previously notified to and assessed by the Commission under case IE/2009/0875.⁵ ComReg designated Eircom Limited as a SMP operator and imposed the obligations of (i) access, (ii) transparency, (iii) non-discrimination, (iv) price control, (v) cost accounting and accounting separation. The Commission invited ComReg to include fibre lines in the relevant market, to revisit its analysis when carrying out its next review of these markets along the lines of the NGA Recommendation once adopted and to notify the details and implementation of the price control obligation and the accounting separation obligation in accordance with Article 7(3) of the Framework Directive.

The market for WBA in Ireland was previously notified to and assessed by the Commission under case IE/2011/1207.⁶ ComReg designated Eircom Limited with SMP and proposed to impose the full set of obligations, including obligations of (i) access, (ii) non-discrimination, (iii) transparency, (iv) accounting separation, and (v) price control and cost accounting. The Commission noted that in relation to next generation WBA, the obligations were defined in general terms and that their implementing details were to be completed. In its comments letter the Commission invited ComReg to analyse markets 4 and 5 together in order to ensure a coherent approach to NGA regulation.

II.2. Regulatory remedies

Appropriate remedies for NGA would according to ComReg's proposal include the following obligations:

Obligation to provide access

In relation to WPNIA, ComReg proposes that Eircom shall have an obligation to provide access to its civil engineering infrastructure (CEI) on an Equivalence of Outputs (EoO) basis.⁷ Where Civil Engineering is not available, Eircom will be required to provide access to dark fibre. Given the lack of demand for FTTH, ComReg proposes to mandate access in principle but without detailing the conditions for the access remedy. As regards the sub-loop unbundling (SLU) remedy, ComReg takes into account the fact that there has been no demand for SLU in the past years while Eircom has stated its intention to deploy next generation access through a FTTC network architecture and to deploy VDSL2 vectoring technology which, at least for the current (first) generation of vectoring technology precludes access by another operator to the copper sub-loop. ComReg proposes that SLU be available nationally on a reasonable request basis except in non-

⁴ In accordance with Article 5(2) of the Framework Directive.

⁵ C(2009) 1283.

⁶ C(2011) 3530

⁷ ComReg explains that EoO is a more proportionate remedy than Equivalence of Inputs (EoI) given the complexity required if Eircom were to disaggregate its legacy CEI topology. ComReg could impose EoI at a later stage in case the proposal proves to be unsatisfactory.

commercial areas identified under a State aid scheme where the availability of SLU would be mandatory.⁸

In relation to WBA, ComReg proposes that Eircom be mandated to provide access to NGA bitstream and to virtual unbundled access (VUA)⁹ with multicast capabilities and *inter alia* co-location and backhaul.

Furthermore, Eircom is subject to an obligation not to withdraw access to services and facilities already granted (e.g. in the case of withdrawal of facilities equivalent access based on at least a virtual product or a fibre unbundling offer should be offered on reasonable request), to ensure migration across and between regulated current generation and next generation products and services, and to provide associated services for NGA on a reasonable request basis (i.e. access obligations relating to in-house wiring and customer premises equipment).

Obligation of transparency

The main transparency requirements to be met by Eircom include inter alia:

- Obligation to publish on its website and keep updated the Access Reference Offer (the “ARO”) and the Wholesale Broadband Access Reference Offer (the “WBARO”) which will contain information relating to Next Generation WPNIA and WBA services and facilities;
- Obligation to make publicly available wholesale pricing and non-price information at least six months prior to the initial launch of the wholesale product (retail launch may not take place in advance of wholesale launch) and, post launch, to make available non-pricing information at least six months prior to an offer of next Generation WPNIA and WBA.
- Obligation to provide changes to the relevant ARO and WBARO to ComReg as part of the notification process (Eircom shall notify ComReg of price and non-price information at least one month in advance of its publication) and to make publicly available price changes;
- Eircom should publish Key Performance Indicators (KPIs) in respect of Next Generation WPNIA and WBA services and facilities and publish actual service standards achieved in the context of service level agreements (SLAs). Furthermore, Eircom must identify and justify any differences of services between the next generation WPNIA and WBA services and facilities provided to access seekers and self-supplied;
- Eircom will have an obligation to make publicly available information on new infrastructures, technologies, services or facilities including, on a quarterly basis, performance related to network roll out and vectoring enablement at the cabinet level.

⁸ A request to Eircom ought to be considered *reasonable* if the following three conditions are met: 1) the request for SLU is at a cabinet in an exchange location where NGA roll out and vectoring enablement has not already taken place and is not imminent or credibly scheduled; 2) There is a commitment to open access by the SLU operator by way of virtual unbundled access and next generation bitstream services; 3) ComReg will also consider the impact on the availability of bandwidths to end users. Where Eircom does not meet its planned rollout commitments ComReg would on request reconsider its position and find a request for SLU *prima facie* reasonable.

⁹ VUA is described as having technical functionality reflecting an active access product closer to a Bistream and distinguishing it from ULL.

Obligation of Non-discrimination

With regard to the non-discrimination obligation, ComReg proposes:

- Eircom shall provide on an EoI basis end-user related pre-ordering, ordering, provisioning, fault reporting and repair for next Generation Bitstream and VUA, including multicast. ComReg finds this to be proportionate and justified and does, in Comreg's view, not create a disproportionate burden to implement.
- All other Market 5 services and associated facilities will be provided on, at least, an Equivalence of Output (EoO) basis.
- Access and voice provided over legacy technology and sold in conjunction with next generation services at the wholesale level must be provided, at a minimum, to an EoO standard. The Market 5 element should be provided on an EoI basis, for pre-ordering, ordering, provisioning, fault reporting and repair and the services provided over legacy technology must be provided at a minimum of EoO.
- All WPNIA services should be delivered to at least an EoO standard.

Furthermore, ComReg stresses that performance on non-discrimination will be closely monitored. Should it become evident that a level playing field for competitors does not develop, as has been evidenced in the past, ComReg will consider the associated cost to industry of not implementing a wider scope of equivalence, and may revisit the level of equivalence required of Eircom.

Obligations relating to price control and cost accounting

ComReg observes that in the case of NGA both the costs and the consumer demand profiles are less well understood than for many current generation services, making the application of a cost orientation obligation more difficult. ComReg considers as a key risk that investment will not happen at all.

Against this background, ComReg proposes to allow additional price flexibility by way of margin squeeze tests for the NGA services in the WBA market. ComReg proposes that a retail margin squeeze approach should be applied along with a number of wholesale margin squeeze tests between the various products along the investment ladder. The proposed margin squeeze approach means that wholesale prices will be priced so as to allow an efficient entrant to compete at the retail level using Eircom's regulated wholesale products.

The margin squeeze tests will include:

(1) *Retail margin squeeze test* between retail next generation broadband product(s) and NGA Bitstream.¹⁰ The retail margin squeeze test for NGA in the WBA market would require that there is sufficient economic space between the price of the regulated wholesale next generation Bitstream product and the price(s) of relevant retail NGA broadband products to allow the necessary additional costs of providing retail products and services to be covered;¹¹

¹⁰ The retail margin squeeze test for NGA services will be assessed on a portfolio basis, where Eircom must ensure that the average of Eircom's retail revenues for its retail NGA broadband products recovers the retail costs in the margin squeeze test. Eircom will have some flexibility to price above or below the retail costs on certain retail NGA broadband products but it must ensure that on a weighted average basis the retail costs plus wholesale input price are covered by the retail NGA broadband revenues.

¹¹ The proposed cost standard for the retail margin squeeze test is a Similarly Efficient Operator (SEO).

(2) *Wholesale margin squeeze test between NGA Bitstream and VUA.*¹² The wholesale margin squeeze test between NGA Bitstream and VUA requires that there is sufficient economic space between the price of the NGA Bitstream product and the price of the VUA product;¹³

(3) *Wholesale margin squeeze test between VUA and SLU.*¹⁴ The wholesale margin squeeze test between VUA and SLU requires that there is sufficient economic space between the price of the VUA product and the price of the SLU product.

In relation to the WPNIA market, ComReg proposes that cost orientation should be the appropriate price control in the context of NGA services. The charges for civil engineering access, dark fibre and SLU Backhaul should be priced at no more than the “BU-LRAIC plus” costs in the Copper Access Model but adjusted where appropriate for fibre costs. For fibre unbundling, ComReg proposes that the cost orientation obligation should apply but it will further specify it at a later stage given that Eircom has no plans at this time to roll out FTTH at any significant level.

Obligation of Accounting Separation

ComReg intends to maintain on Eircom the obligation to have separated accounts for next generation services.

III. COMMENTS

The Commission has examined the notification and the additional information provided by the ComReg and has the following comments:¹⁵

Use of an EoI standard in the application of the non-discrimination obligation

The Commission notes that ComReg proposes to impose a FTTH unbundling obligation should FTTH be rolled out during the life time of the review. However, ComReg concludes on proportionality grounds to mandate only Equivalence of Outputs for FTTH unbundling given the limited rollout of FTTH lines so far planned by the SMP operator.

Against this background, the Commission reminds ComReg that effective non-discrimination is best achieved by the application of Equivalence of Inputs. In this respect the Commission further points out to ComReg that providing wholesale

A SEO means an operator which shares the same basic cost function as Eircom but does not yet enjoy the same economies of scale and scope as Eircom. The Reasonably Efficient Operator (REO) test is similar to the SEO standard.

¹² ComReg considers that without this test there is a real risk that investments made and currently being made by companies such as BT Ireland, Vodafone and Sky could be unfairly undermined by a margin squeeze between NGA Bitstream and VUA prices.

¹³ ComReg proposed that the wholesale margin squeeze test between NGA Bitstream and VUA should be based on the SEO standard.

¹⁴ It is not envisaged that any other operator will unbundle cabinets in parallel to Eircom due to the economics of the business case for such an investment where Eircom has made its intentions clear. Therefore, instead ComReg proposed that the wholesale margin squeeze test from VUA to SLU should be based on the costs of an Equally Efficient Operator (EEO) given that Eircom is currently the only operator providing the SLU service and in general the same costs would apply if another SLU operator were to provide the services.

¹⁵ In accordance with Article 7(3) of the Framework Directive.

inputs consisting wholly or partly of optical elements on an Equivalence of Input basis is likely to be proportionate given the low incremental costs of designing new systems, a consideration also acknowledged by ComReg. As a result, the Commission asks ComReg to reconsider (within an industry forum if suitable) the feasibility and proportionality of mandating Equivalence of Inputs for unbundled FTTH products should FTTH roll-out occur, even on a small scale.

Sub-loop unbundling and vectoring technology

The Commission notes that ComReg proposes not to mandate SLU, in principle, in areas where vectoring enablement has already taken place and is "imminent" or "credibly scheduled". ComReg would monitor the SMP operator's roll out plans' realisation.

Against this background and in order to avoid that the SMP operator unduly pre-empt investment from alternative operators, the Commission welcomes ComReg's commitment to monitor Eircom's FTTC rollout plans. The Commission further asks ComReg to reconsider the imposition of the SLU obligation in those instances where FTTC and vectoring deployment plans do not materialise as announced, and where there is a serious risk that alternative investments are unduly hindered due to the lack of a SLU obligation.

The Commission, in particular, invites ComReg to indicate in a clear and precise way in their final measure the circumstances under which non-SLU obligations might be reviewed.

Margin Squeeze Tests, price flexibility for fibre and the need for a consistent European approach

The Commission agrees with ComReg not to impose cost orientation in market 5 given in particular the strict non-discrimination obligations put in place (Equivalence of Inputs for key products and the application of margin squeeze tests).

The Commission understands that the set of margin squeeze tests developed by ComReg takes into account the specific stage of development of NGA services in the Irish market and that it aims at fostering investments while making sure that market distortions are avoided.

The Commission highlights that the Commission is working towards the adoption of a Recommendation on the consistent application of non-discrimination obligations and cost methodologies to promote competition and enhance the broadband investment environment, which will give some guidance on the design of an *ex ante* economic replicability test. This test should be used in case pricing flexibility is granted to the SMP operator for NGA wholesale inputs in the presence of other competitive safeguards. Accordingly, the Commission invites ComReg to revisit the proposed margin squeeze tests along the lines of the forthcoming Recommendation once adopted.

Pursuant to Article 7(7) of the Framework Directive, the Commission for Communications Regulation (ComReg) shall take the utmost account of the comments of other NRAs, BEREC and the Commission and may adopt the resulting draft measure; where it does so, shall communicate it to the Commission.

The Commission's position on this particular notification is without prejudice to any

position it may take *vis-à-vis* other notified draft measures.

Pursuant to Point 15 of Recommendation 2008/850/EC¹⁶ the Commission will publish this document on its website. The Commission does not consider the information contained herein to be confidential. You are invited to inform the Commission¹⁷ within three working days following receipt whether you consider that, in accordance with EU and national rules on business confidentiality, this document contains confidential information which you wish to have deleted prior to such publication.¹⁸ You should give reasons for any such request.

Yours sincerely,
For the Commission,
Robert Madelin
Director-General

¹⁶ Commission Recommendation 2008/850/EC of 15 October 2008 on notifications, time limits and consultations provided for in Article 7 of Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services, OJ L 301, 12.11.2008, p. 23.

¹⁷ Your request should be sent either by email: CNECT-ARTICLE7@ec.europa.eu or by fax: +32 2 298 87 82.

¹⁸ The Commission may inform the public of the result of its assessment before the end of this three-day period.

Annex: 8 Oxera Report: “Eircom’s next generation access products – Pricing principles and methodologies”

Please refer to ComReg Document No 13/11a, which has been published separately.